SELF STUDY REPORT

FOR

1st CYCLE OF ACCREDITATION

MGM'S COLLEGE OF ENGINEERING AND TECHNOLOGY, KAMOTHE

MGMS COLLEGE OF ENGINEERING TECHNOLOGY, PLOT NO.1 AND 2, SECTOR -1,KAMOTHE, PANVEL ,NAVI MUMBAI, NH-14 SION PANVEL EXPRESSWAY, NAVI-MUMBAI
410209
www.mgmmumbai.ac.in/mgmcet/

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

MGM's College of Engineering and Technology(MGMCET) is governed by Mahatma Gandhi Mission, a Charitable Trust Act 1950 and Societies Regulation Act 1860. Since its inception in 1982, Mahatma Gandhi Mission has developed into an excellent educational group and is totally committed to human resource development. MGM is now a chain of Engineering, Medical, Nursing, Management, Dental, Physiotherapy, Science, Journalism and Fine Arts spread over four educational centres - Navi Mumbai , Nanded, Aurangabad and Noida. In continuation of its proud tradition of enriching the human resource needs of the country, the Mission has set up in 1986, MGM's College of Engineering & Technology, Navi Mumbai. The objective of the institution is to impart value based quality education by combining academics with exposure to industry. With this view in mind it provides state-of-the art infrastructure facilities & academic resources to its students.

College is affiliated to University of Mumbai and approved by AICTE, New Delhi. MGMCET is awarded with 'ISO-9001-2015 Certification' for providing technical education in engineering field as per the guidelines of University of Mumbai. The institute is one of the few engineering colleges to achieve this international standard for implementing and maintaining Quality Management System. The four courses viz. Computer, Electronics & Telecommunications, Biomedical & Civil are accredited by NBA of AICTE. Gold Rank in AICTE-CII survey of Industry linked Technical Institutes 2018 is also yet another rcognition.

The Trust has made phenomenal progress under the leadership of the Chairman, Hon. Shri. Kamal Kishore Kadam, Past-Education Minister, Maharashtra Government. All the founder members are hard core academicians and visionaries inspired by Late Shri. Nanasaheb Kadam, an ardent follower of the Gandhian ideology. The recipient of International Environment Trophy, MGM continues its journey, imparting value based services, creating global technocrats and health care personnel.

Mahatma Gandhi Mission's College of Engineering and Technology aims at sculpting the versatility of the students along with technical expertise in their own streams.

MGM's College of Engineering and Technology is an Institute of opportunities and has tryst with excellence in academics. Keeping in line with this, Institute's focus has been on making the students 'Industry-Ready'.

Vision

To become one of the outstanding engineering institute in India by providing a conductive and vibrant environment to achieve excellence in the field of Technology.

Mission

To empower the aspiring professional students to be prudent enough to explore the world of technology and mould them to be proficient to reach the pinnacle of success in the competitive global economy.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- University approved ‘Research Centre’ of Bio-Medical Engineering Department
- Recognized under 2(f) category under UGC Act
- ‘ISO-9001-2015 Certification’
- BRNS/ICMR funded sponsored projects
- Highly qualified, committed, competent and experienced faculty members.

- Well developed infrastructure with smart seminar halls, class rooms, Auditorium
- Well equipped laboratories with adequate configuration and internet facility.
- PG programs for five department.
- Dedicated faculty and staff with strong work ethics, commitments to quality, positive morale and willingness to recognize weakness and make improvements.
- Updated curriculum with requirement defined by stake holders to successfully implement outcome based education.
- Well equipped & established library with adequate books, journals and e-learning resources.
- Well maintained infrastructure for curriculum, co-curricular and extra-curricular activities which Sports/Professional bodies and clubs.

Institutional Weakness

- Research resources and funding for research scholars being an unaided institute.
- Tie-ups with companies for joint activities.
- Industry Institute Interaction.
- Collaboration with higher level institutes.
- Lack of industrial consultancy.

Institutional Opportunity

- Improvement in research activities with a goal t become a Research Institute.
- Work collaboratively with premier institutes and industry for advance research and academic interaction, through MoUs.
- Collaboration with premier institutions for joint activities.
- Establishing centres of excellence in emerging areas in collaboration with industries.
- Strengthening Alumni base.

Institutional Challenge

- High pace of change in technology leads to obsolescence of lab equipments.
- Declining quality of students admitted because of large overall intake.
- High cost of education.

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

The Institution is affiliated to University of Mumbai and the curriculum and syllabi prescribed by University of Mumbai are strictly adhered to. College follows Outcomes Based Education (OBE) to plan, deliver and assess curriculum as prescribed by university.

Academic planning is done keeping in view Institute Vision, Mission, and PSOs of various programs. The processes are defined for executing academic activities as per the academic planning done before commencement of the each semester.

A detailed and well planned 'Academic Calendar", based on the University of Mumbai Academic Calendar, helps execution of semester activities as per the academic planning done before commencement of the year. The Principal of the institute conducts meetings with Deans and HODs to explore the strategies for the effective implementation of the curriculum. Academic Audit is the part of the process which ensures the quality of the curriculum delivery.

To enhance the academic flexibility, University of Mumbai has introduced Choice Based Credit System (CBCS) implemented in various disciplines as per the syllabus requirements. Experts from Industry and Academia address the students and make them aware of Industry-Ready activities.

Courses relevant to Business Communication and Ethics, Environmental Engineering Renewable Energy Sources, Solid Waste Management Outreach are integrated in all programmes.

The institute makes the provision for the students to undertake field projects and internship at various industry and research organizations. In mid-term and end-term Feedback system of the Institute is in place to collect feedback on curriculum.

Teaching-learning and Evaluation

MGM CET excellence in teaching and learning achieved by recruiting good competent facultymembers. The institute is the part of the centralized admission process of the state government. The admissions strictly followed as per the rules & regulation of Government of Maharashtra.

In order to have smooth conduction of teaching, meticulous planning is done prior to the commencement of semester. Institute practices blend of traditional teaching and student centered learning practices such as Project Based Learning (PBL) and Active Learning.

A feedback mechanism for the faculty by the students facilitates in continuous improvement in teaching learning process. The institute has developed the academic plan, course plan & lesson plans also provides new and up-to-date information, which is beyond the course. These evaluated through performance in various examinations. Course files are prepared and maintained by the faculty which includes syllabus, course plan, teaching materials such as tutorials, assignments, internal test question papers, previous year University question papers

The institute is the part of the centralized admission process of the state government The student centric

methods like experiential learning, participative management & problem solving methods are employed at program level, course level & lesson level. The case studies narrating the student centric methods & innovations are of prime importance to our College. The assessment is essential and vital in learning done by designing reforms in continuous assessment, project assessment and by maintaining the transparency in the assessment system. The assessment is done in all 3 domains of learning viz. Cognitive, psychomotor and affective domain.

Research, Innovations and Extension

Innovation in the field of education results into holistic development of the nation. In view of higher emphasis being laid on the technical development and Digital India movement, engineering colleges have a major role to play.

“Tree with strong roots laughs at the storm”. Keeping this in mind, we nurture our students right from their first year. Through summer training camp, quick learner projects, technical festivals, National science day celebration, voluntary internships it is possible to shape their inquisitive minds and direct them towards higher deliverables. Along with technical expertise our students also participate in various social activities through NSS and college clubs.

Our institute has collaborated with various organization for training in latest topics like cyber forensic security, IOT, etc. which has enabled our students to participate/ win prizes in ‘Hackathon competitions’, ‘SUPRA car design competition’, ‘Avishkar project competition’ etc

MGMCET has always encouraged technical activities by providing requisite infrastructure and necessary funding. The institute has also been promoting faculty for career development programs and sharpen their skills through STTP, FDP, moodle-courses, NPTEL certification courses etc. Our college has introduced weekly 2-hours departmental slot and 2-hours institutional slot which are utilized for industry-institute interaction through expert talks, training sessions enabling our students Industry ready.

Research is an integral part of innovation. The college has recognized and encouraged teachers for obtaining research grants from various government bodies and industries. College motivates and reward faculty and students for publishing their research work in national and international journals, conference, apply for patents etc.

Infrastructure and Learning Resources

The institution has 43 classrooms, 9 tutorial rooms, 8 seminar halls and 82 laboratories as per norms for all the undergraduate and postgraduate programs offered. The college also has a computer centre, a drawing hall, an auditorium and a workshop which are as per norms.

The campus where the institution is located has a large multipurpose playfield which is used for sports activities. There is also a well-equipped gymnasium which is used by the students for their physical fitness. The multipurpose playfield and gymnasium are shared facilities which are available on the campus.

The Central Library of the institution is well equipped with 53395 books, 11580 e-journals, 6072 e-books and a few encyclopedias. KOHA Library Management Software which is fully automated is available for all in-house

library activities and the library also has Online Public Access Catalogue (OPAC). The library has a reading room facility with a seating capacity of more than 150.

The institution has a comprehensive IT policy and continuously updates its IT infrastructure. There are 863 computers available in the institution to cater to the academic and research needs. National Knowledge Network connectivity is available at the institution. ERP and Online Feedback System is being used by the institution.

There are facilities for computer maintenance and electrical maintenance in the institution. For masonry work, plumbing and carpentry work requisitions are sent to the site office located on the college campus. Cleanliness of all the facilities in the institution is maintained by a housekeeping agency.

Student Support and Progression

To ensure the effective communication for the academic support, all the relevant information and schedules are put up on the notice board, college website and through orientation programme. In addition, Institute has various committees and cells like, Scholarships, placement, grievance redressal cell, anti-ranging and different clubs.

These committees and cells are providing the designed input to needy students (.development of students in academics, co-curricular, and extracurricular, activities). Institute has Faculty Member and Mentoring scheme for 20 students one mentor is there. Faculty mentor looks after mentees for overall development such as academics and personal.

The teaching learning process is enhanced by various activities such as Expert Lectures, Industrial Visits, Workshops and Seminars to provide exposure to students to real life aspects/

career guidance/entrepreneurship development. Institute has a mechanism to identify advanced and slow learner students. Advanced learners are encouraged to higher studies/good employment, for poor attainment of slow learners to plan and implement remedial measures.

The Institution facilitates the students for higher level of education and employment by providing employability enhancement activities like guest Lectures, workshops industry visits. These activities enable students to perform well in interviews and in corporate environment.

The institute has an active student council for involving the students in academic, Co-curricular and extracurricular activities under sports, cultural and technical events. Our students have participated at University, National and International Level events. The institute has a registered Alumni Association (**F-13676/1**).MGM alumni association is responsible to foster many activities including guest lectures, placement and career awareness program.

Governance, Leadership and Management

MGMCET management aids in achieving vision and mission through day to day activities of Institution. It gives affordability in education with features like quality academics, infrastructure, research laboratories, industry-interaction, co-curricular and extra-curricular activities.

The governance fosters participative management and plays a significant role to elevate the Institute in preference of stakeholders. The culture of decentralized governance with well-defined inter-relationships is a preparation of the platform for achieving success. Faculty/staff are encouraged to attend/organize workshops, conferences, skill development programs, seminars, projects, consultancies and research papers.

The Institute has clear strategic direction to obtain international benchmarks.

Strategic planning is executed for the development of the institution. Well established processes are implemented to excel in comprehensive development through transparency in academic governance. The established organizational structure executes the smooth functioning of administrative and academic processes assisted with e-governance.

To attract the best talent Institute provides the best of the facilities intellectually simulating environment for Research and Innovation. Institute undertakes joint research with other organizations and Industries establishing research facilities and open innovation centre. Institute with Industrial organizations and professional bodies will coordinate responsibility towards society for development, public awareness and training modules.

The Institute has a well-designed performance appraisal system for faculty . Internal Quality Assurance Cell (IQAC) aims at continuous improvement of quality in the teaching-learning process. IQAC along with college academics gives suggestions based on various stakeholders' feedback to improve the system. The external and internal academic and administrative audit are undertaken periodically to improve institutional activities.

Institutional Values and Best Practices

As an academic Institute in Engineering and Technology Institute promoted advancement in technology along with the safety and security measures like CCTV's, fire and safety system, strict security checks within the campus. Institute supports gender equality and promotes the women empowerment by providing the special facilities for women such as special bus for girls, separate girl's hostel. Women's grievance cell is active in the college to handle the issues related to women harassment. Institute had carried out many activities like Renewable Energy Club (Solar panels and lighting system), Waste management system, Rain water harvesting system, Plastic free campus, Tree plantation for social and environmental responsibility.

We celebrate most of the national festivals like Independence day, Republic day with maximum participation of students and staffs. Institute provides necessary facilities such as ramps, lifts, common room, special washrooms for differently abled persons. Institute also helps the students in their emotional and psychological development by providing counselling from medical practitioners from MGM hospital and the mentors.

Institute celebrates its technical festival "Tech-ManGaLam", project competitions at college and Inter college level annually. Institute supports students in project based learning and gives necessary financial and technological assistance. Institute is fully transparent in the aspects of finance, academics, administration and auxiliary functions. Institute also supports students in developing their co-curricular skills like in sports and cultural. To cultivate students with entrepreneurship and to make them aware of current trend in Industry, the institute organizes workshops, talks with the industry experts, periodic industrial visits and having the collaboration with Industry.

The other best practices followed by Institute are Strict adherence to academic calendar, Centralised class tests and evaluation system, Academic inspections. Many activities are undertaken to make the students Industry

ready such as orientation programs, conferences, project based learning, guidance from industry experts, different club activities. MGMCET has undertaken “Club Activity” under which there are 26 clubs for the students for improving their skills in the areas of their interest.

NAAC

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	MGM'S COLLEGE OF ENGINEERING AND TECHNOLOGY, KAMOTHE
Address	MGMs College of Engineering Technology, Plot no.1 and 2, sector -1,Kamothe, Panvel ,Navi Mumbai, NH-14 Sion Panvel Expressway, Navi-Mumbai
City	Navi Mumbai
State	Maharashtra
Pin	410209
Website	www.mgmmumbai.ac.in/mgmcet/

Contacts for Communication					
Designation	**Name**	**Telephone with STD Code**	**Mobile**	**Fax**	**Email**
Principal	S.K. Narayan khedkar	022-27433403	9619101633	022-27433421	principal.cet@mgmmumbai.ac.in
Professor	K. G. Narayankhedkar	022-651381	9167218577	022-27433420	kgnarayankhedkar@yahoo.com

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 minroity institution	No

Establishment Details	
Date of establishment of the college	28-08-1986

University to which the college is affiliated/ or which governs the college (if it is a constituent college)		
State	**University name**	**Document**
Maharashtra	University of Mumbai	View Document

Details of UGC recognition		
Under Section	**Date**	**View Document**
2f of UGC		
12B of UGC		

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	10-04-2017	12	academic year

Details of autonomy	
Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?	No

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?	Yes
If yes, name of the agency	Board of Research In Nuclear Science
Date of recognition	22-05-2013

Location and Area of Campus				
Campus Type	**Address**	**Location***	**Campus Area in Acres**	**Built up Area in sq.mts.**
Main campus area	MGMs College of Engineering Technology, Plot no.1 and 2, sector -1,Kamothe, Panvel ,Navi Mumbai, NH-14 Sion Panvel Expressway, Navi-Mumbai	Urban	20	19848

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,Bio Medical Engineering	48	HSC	English	60	33
UG	BE,Biotechnology	48	HSC	English	60	27
UG	BE,Chemical Engineering	48	HSC	English	60	35
UG	BE,Civil Engineering Shift I And Ii	48	HSC	English	120	64
UG	BE,Computer Engineering	48	HSC	English	120	69
UG	BE,Electrical Engineering	48	HSC	English	60	39
UG	BE,Electronics And Telecommunication Shift I And Ii	48	HSC	English	180	82
UG	BE,Information	48	HSC	English	60	33

	Technology					
UG	BE,Mechanical Engineering Shift I And Ii	48	HSC	English	120	62
PG	ME,Me In Bio Medical Engineering	24	BE	English	18	1
PG	ME,Me In Chemical Engineering	24	BE	English	18	4
PG	ME,Me In Civil Engineering Structural	24	BE	English	18	18
PG	ME,Me In Computer Engineering	24	BE	English	24	0
PG	ME,Me Electronics And Telecomm	24	BE	English	24	0
Doctoral (Ph.D)	PhD or DPhil,Ph D In Bio Medical Engineering	36	ME	English	10	2

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				16				32				145
Recruited	10	0	0	10	11	3	0	14	75	70	0	145
Yet to Recruit				6				18				0
Sanctioned by the Management/Society or Other Authorized Bodies				0				0				24
Recruited	0	0	0	0	0	0	0	0	13	11	0	24
Yet to Recruit				0				0				0

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				42
Recruited	29	13	0	42
Yet to Recruit				0

Technical Staff				
	Male	**Female**	**Others**	**Total**
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				21
Recruited	18	3	0	21
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	**Professor**			**Associate Professor**			**Assistant Professor**			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	10	0	0	9	3	0	5	3	0	30
M.Phil.	0	0	0	0	0	0	1	0	0	1
PG	0	0	0	2	0	0	82	78	0	162

Temporary Teachers										
Highest Qualification	**Professor**			**Associate Professor**			**Assistant Professor**			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt.	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

Part Time Teachers										
Highest Qualification	**Professor**			**Associate Professor**			**Assistant Professor**			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt.	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

Details of Visting/Guest Faculties				
Number of Visiting/Guest Faculty engaged with the college?	**Male**	**Female**	**Others**	**Total**
	39	10	0	49

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
Doctoral (Ph.D)	Male	0	0	0	0	0
	Female	2	0	0	0	2
	Others	0	0	0	0	0
UG	Male	277	14	0	0	291
	Female	151	1	0	0	152
	Others	0	0	0	0	0
PG	Male	18	0	0	0	18
	Female	4	0	0	0	4
	Others	0	0	0	0	0

NAAC

Provide the Following Details of Students admitted to the College During the last four Academic Years					
Programme		**Year 1**	**Year 2**	**Year 3**	**Year 4**
SC	Male	58	52	30	72
	Female	24	30	35	47
	Others	0	0	0	0
ST	Male	10	15	11	6
	Female	5	2	2	4
	Others	0	0	0	0
OBC	Male	95	88	90	104
	Female	39	37	41	48
	Others	0	0	0	0
General	Male	125	220	237	311
	Female	67	83	69	131
	Others	0	0	0	0
Others	Male	44	43	38	59
	Female	14	21	17	18
	Others	0	0	0	0
Total		481	591	570	800

3. Extended Profile

3.1 Program

Number of courses offered by the institution across all programs during the last five years

Response: 342

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of programs offered year-wise for last five years

2017-18	2016-17	2015-16	2014-15	2013-14
15	15	14	14	14

3.2 Students

Number of students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2850	3112	3366	3191	2770

File Description	Document
Institutional Data in Prescribed Format	View Document

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

2017-18	2016-17	2015-16	2014-15	2013-14
377	377	377	377	377

File Description	Document
Institutional data in prescribed format	View Document

Number of outgoing / final year students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
771	788	798	767	559

File Description	Document
Institutional Data in Prescribed Format	View Document

3.3 Teachers

Number of full time teachers year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
196	193	273	241	241

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of sanctioned posts year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
193	193	241	241	241

File Description	Document
Institutional data in prescribed format	View Document

3.4 Institution

Total number of classrooms and seminar halls

Response: 53

Total Expenditure excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
448.93	690.73	771.75	1140.38	1034.39

Number of computers

Response: 863

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curricular Planning and Implementation

1.1.1 The institution ensures effective curriculum delivery through a well planned and documented process

Response:

Pre-semester activities which begin immediately after the preceding semester is over, start with allocation of courses to the faculty members to enable them plan by preparing lectures plans, laboratory ready activities including up-gradation of existing laboratory manuals, Assignments for the students, Tutorial sheets, up-gradation of existing workbooks, conceiving projects for Advanced Learners, identifying resource persons from industry, Course files, Course Plan etc. with due attention to "Outcome Based Education (OBE)". Faculty members get support for workshop, seminar, conference, induction training program, FDPs etc. during this period. A detailed and well planned 'Academic Calendar", based on the University of Mumbai Academic Calendar, helps execution of semester activities.

Semester activities begin effectively with a full day "Orientation Program" for students of FE, DSE and students of SE, TE and BE of various Departments where the Heads of Departments present 'Departmental Activity Calendar'. Experts from Industry and Academia address the students and make them aware of Industry-Ready activities. Meticulous implementation of Time Table, and adhering to the assignment schedule help achieve quality of teaching-learning process. Academic monitoring takes place in monthly academic committee meetings under the Chairmanship of Principal by reviewing academic activities and ERP data. Committee also reviews academic activities to arrive at new methodologies of teaching.

Continuous assessment of Term Work and well designed and pointed questions on each laboratory experiment make the students ready for oral examination. Rubrics and Blue-Print system brings out total transparency in the assessment system.

Use of Google Class Room and Moodle help paperless activities. Extensive use of ICT, NPTEL, MOOCs and faculty prepared MOOCs help the Teaching-Learning more interacting.Internet and WiFi facilities support these activities. 'Mid-Semester Feed Back' (in addition End-Sem Feedback) helps corrective actions.Institute also monitors at Central Level delivery of curriculum through 'Laboratory Week', 'Tutorial Week' 'ICT Week' etc.

Advanced learners' projects are strictly monitored involving industry experts and concerned faculty. Final review of these projects is done with the help of Industry experts including Alumni towards end of the semester. 'Departmental Activity Calendar' is meticulously implemented by faculty including Industry Visits, Expert Lectures, Workshops on Industry-Ready topics etc and monitored by the Departmental Performance Monitoring Committee (DPMC).

DPMC closely monitors progress and attendance of the students weekly and makes them aware. Parents are also posted with such information. Detailed solutions of five assignments, CIE question papers, University question papers, and Practice question Papers helps slow learners prepare for examination. Special sessions are conducted and Mentor-Mentee meetings help slow learners.

Post-Semester activities focus on further guidance to slow learners. After University exam of a course, concerned faculty maps practice question paper and submit a report. Results Analysis and Attainment of COs are also reviewed by the Academic Committee.

As an outcome of all these efforts is reflected in National recognition through “Times of India Ranking” - 60th Rank in top 150 Engineering Institutes and 44th in top private Engineering Institutes (2018).

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

1.1.2 Number of certificate/diploma program introduced during the last five years

Response: 4

1.1.2.1 **Number of certificate/diploma programs introduced year-wise during the last five years**

2017-18	2016-17	2015-16	2014-15	2013-14
2	1	1	0	0

File Description	Document
Minutes of relevant Academic Council/BOS meetings	View Document
Details of the certificate/Diploma programs	View Document
Any additional information	View Document

1.1.3 Percentage of participation of full time teachers in various bodies of the Universities/ Autonomous Colleges/ Other Colleges, such as BoS and Academic Council during the last five years

Response: 0.44

1.1.3.1 Number of teachers participating in various bodies of the Institution, such as BoS and Academic

Council year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	1

File Description	Document
Details of participation of teachers in various bodies	View Document
Any additional information	View Document

1.2 Academic Flexibility

1.2.1 Percentage of new Courses introduced out of the total number of courses across all Programs offered during last five years

Response: 51.75

1.2.1.1 How many new courses are introduced within the last five years

Response: 177

File Description	Document
Minutes of relevant Academic Council/BOS meetings.	View Document
Details of the new courses introduced	View Document
Any additional information	View Document

1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented

Response: 93.33

1.2.2.1 Number of programmes in which CBCS/ Elective course system implemented.

Response: 14

File Description	Document
Name of the programs in which CBCS is implemented	View Document
Minutes of relevant Academic Council/BOS meetings.	View Document
Any additional information	View Document

1.2.3 Average percentage of students enrolled in subject related Certificate/ Diploma programs/Add-on programs as against the total number of students during the last five years

Response: 1.63

1.2.3.1 Number of students enrolled in subject related Certificate or Diploma or Add-on programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
89	60	105	0	0

File Description	Document
Details of the students enrolled in Subjects related to certificate/Diploma/Add-on programs	View Document
Any additional information	View Document

1.3 Curriculum Enrichment

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

Response:

Being an affiliated Institute, we follow curriculum of University of Mumbai, which integrates cross cutting issues such as gender, environment and sustainability, human values and ethics through the following courses:

Courses on ‘Business Communication and Ethics’ offered to all nine Departments, Courses on ‘Environmental Engineering’ offered for Bio-Technology, Chemical Engineering and Civil Engineering Departments, Course on ‘Renewable Energy Sources’ for Mechanical Engineering, Non-Conventional Sources of Energy for Bio Technology, IPR, Bioethics and Bio-safety for Bio Technology, Solid Waste Management for Civil Engineering, etc.

‘Gender Equity’ has been one of the thrust areas of the Mahatma Gandhi Mission (MGM), which also reflects from the data that about 50% faculty members are ladies. ’Women Development Cell’ is constituted to ensure equity between men and women, organise gender awareness activities, invite successful women to interact with staff and students of college etc. Street plays are also organised towards Gender Equity. Both boys and girls participate in NSS activities (established under University of Mumbai) and visit rural areas. Students Council is one other example of Gender Equity. Girl students participate in large numbers in Cultural, Sports and Technical activities carried out by Students Council. Girl students were also General Secretaries of Students Council on several occasions. In technical competitions like Hackathon, Avishkar, ‘SUPRA SAEINDIA’, girl students actively participate in addition to the Clubs. ‘Internal Complaints Committee as per VISHAKA guidelines’ is established to address any gender problems.

Considering importance of ‘Environment’, University of Mumbai introduced a compulsory course on ‘Environmental Engineering’ at first year engineering level. Ms Anuradha Pawar, Lady Faculty Member, published a book as co-author on Environmental Studies (Published by Synergy Knowledge Ware Publication. ‘GREENATHON 2018’ (series of green activities by a social group) organized on 2nd June 2018 , in which 13 staff members of MGMCET actively participated in seed-ball preparation and tossed them over barren land to help germinate of seeds during rains. Institute celebrates world environment day on 5th June 2018 when faculty and students create awareness about present scenario of environment and they also actively participate in tree plantation. The topics like ‘Reduce – Reuse – Recycle’,’ Zero waste from every house’,’ industrial pollution’ are discussed. On this occasion, students and faculty are made aware about solid, liquid and e-waste management through seminars and lectures by eminent personalities like Dr. Kale (ex-Scientific Officer, BARC) recipient of Padmashri. Conference on Environment ‘NEWAGE 2018’ was organised on 2nd October 2018 when a lady entrepreneur Dr. Medha Tadpatrikar, MD, Rudra Environmental Solutions, Pune was invited as the Chief Guest.

Being an Institute under Mahatma Gandhi Mission, the Institute emphasizes Human Values in all walks of life. Human Values Club dedicates for this cause by conducting brain storming sessions, seminars, etc. A two days National Conference on Human Values has been also organised in June 2018. Students actively participate in all noble activities lime blood donation, health check-up camps etc. Conference on Integrating Human Values in Professional Education (NCIHVPE 2018). Charts are displayed to switch off supply when not in use.

File Description	Document
Any Additional Information	View Document
Link for Additional Information	View Document

1.3.2 Number of value added courses imparting transferable and life skills offered during the last

five years

Response: 5

1.3.2.1 Number of value-added courses imparting transferable and life skills offered during the last five years

Response: 5

File Description	Document
Details of the value-added courses imparting transferable and life skills	View Document
Brochure or any other document relating to value added courses.	View Document
Any additional information	View Document

1.3.3 Percentage of students undertaking field projects / internships

Response: 10.32

1.3.3.1 Number of students undertaking field projects or internships

Response: 294

File Description	Document
List of students enrolled	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document

1.4 Feedback System

1.4.1 Structured feedback received from 1) Students, 2)Teachers, 3)Employers, 4)Alumni and 5)Parents for design and review of syllabus-Semester wise/ year-wise
A.Any 4 of the above

B.Any 3 of the above

C. Any 2 of the above

D. Any 1 of the above

Response: A.Any 4 of the above

File Description	Document
Any additional information	View Document
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management	View Document
URL for stakeholder feedback report	View Document

1.4.2 Feedback processes of the institution may be classified as follows:
A. Feedback collected, analysed and action taken and feedback available on website

B. Feedback collected, analysed and action has been taken

C. Feedback collected and analysed

D. Feedback collected

Response: B. Feedback collected, analysed and action has been taken

File Description	Document
Any additional information	View Document
URL for feedback report	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average percentage of students from other States and Countries during the last five years

Response: 0.53

2.1.1.1 Number of students from other states and countries year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
15	08	22	15	20

File Description	Document
List of students (other states and countries)	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document

2.1.2 Average Enrollment percentage (Average of last five years)

Response: 93.99

2.1.2.1 Number of students admitted year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
805	827	940	925	930

2.1.2.2 Number of sanctioned seats year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
942	942	942	942	942

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

2.1.3 Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years

Response: 79.84

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

2017-18	2016-17	2015-16	2014-15	2013-14
252	289	292	304	368

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

2.2 Catering to Student Diversity

2.2.1 The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners

Response:

MGM’s CET, has a streamlined mechanism for continuous monitoring and evaluation of students and their academic performance. This system helps to identify advanced learners & slow learners. Before starting of every semester, college organises orientation program.

Students of first year are identifiedas advanced learners & slow learners based 0n (i) Performance in HSC score, CET score and JEE score and (ii) Performance in Internal Assessment taken in the first month after commencement of semester. For higher years, cumulative grade point index (CGPI) is the basis.

Advanced Learners:

Advanced learners across FE, SE, TE and BE are engaged in several activities based on their aptitude to get the best out of them. The institution encourages such students to participate in various competitions conducted both inside and outside the college based on their projects and other activities. By this the students develop self-confidence as well as technical presentation skills.

In addition, advanced learners take part in various technical and general clubs during institute slot (3 hours every week) to pursue various co-curricular activities. To expose advanced learners to Project Based Learning (PBL), students can work on innovative projects to develop skills towards solving complex engineering problems and to exhibit their creativity. This activity begins right in the first year by allowing them to join the project groups of second year.

Such advanced learners who exhibit their skills are motivated and encouraged by awards during college annual function, 'ManGalaM' (Cultural activity of Institute) and other occasions. They are encouraged to lead the Students' Departmental Association activities during Departmental slot (2 hours every week) under the banners of students' chapters such as IEEE, IIChE, ASME, BMESI and ASHRAE etc.

The advanced learners are given grants for attending National and International level activities, like Smart India Hackathon, Avishkar, etc. Value added programs in thrust areas such as CNC, Embedded Systems, Red Hat Linux, Hadoop, Matlab, Robotics, Microsoft Certification courses are also conducted to cater to the needs of the advanced learners.

They are also encouraged to learn through NPTEL and MOOCs as well as to appear for the certificate examinations. Students have successfully completed NPTEL/ MOOCs and secured certificates.

These efforts have yielded good results in terms of securing recognition at National Level Hackathon Competitions, State level AVISHKAR and several other events.

Slow Learners

Slow learners are encouraged to participate in aptitude and group discussion activities and also soft skill trainings. They are given special attention by the 'Departmental Performance Monitoring Committee (DPMC) by monitoring their performance as well as attendance. Mentors also keep a close watch on such students. Solutions of Assignments, CIE question papers, Practice Question Papers, University Question Papers are also provided to them to facilitate self-learning. Special sessions are also conducted to make-up laboratory sessions and tutorial sessions. Doubts clearing sessions are also conducted towards end of semester. Based on weekly monitoring, parents are invited for making them aware and also find ways for improvement.

File Description	Document
Any additional information	View Document

2.2.2 Student - Full time teacher ratio

Response: 14.54

File Description	Document
Any additional information	View Document

2.2.3 Percentage of differently abled students (Divyangjan) on rolls

Response: 0.14

2.2.3.1 Number of differently abled students on rolls

Response: 4

File Description	Document
List of students(differently abled)	View Document
Institutional data in prescribed format	View Document
Any other document submitted by the Institution to a Government agency giving this information	View Document
Any other document submitted by the Institution to a Government agency giving this information	View Document

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

Response:

The faculty adopt need based learning processes to make curriculum delivery effective by adopting learner centric approaches as well as CO-PO attainment.

- Brain storming activities, quiz programs, group discussions, model making competitions, Project Based Learning (PBL) for advanced learners, case studies etc. to develop effective use of NPTEL
- Video lectures, MOOCs and Workbooks specially prepared for first year students also facilitate both faculty and learners.
- Technical videos illustrations, Practical applications and state of the art technology prevailing in the Industry.

The Institute’s academic calendar is prepared for each semester based on dates for term commencement and end of the semester provided by University of Mumbai. The national importance days and annual gathering days are also included in the academic calendar so that concerned department can plan assigned activity.

1. Experiential Learning:-

Experiential Learning is a process through which learners develop knowledge skills, and values from direct experiences outside a traditional academic institution.

The design of the learning experience includes the possibility to learn from natural consequences, mistakes and successes. Our students are exposed to learning through outdoor physical activity, Group discussions, Indoor interactive sessions and Role plays contribute towards experiential learning. Activities include Field Survey, Industrial Visits, Internship, NSS activities, CSR activities, Participation in various Competitions etc.

2. Participatory learning:-

This practice is adopted by the faculty that develops an application based outlook for students. To adopt

learner–centric participative learning, faculty develop “MOOCs” videos and circulate to the students via Google class room or WhatsApp groups. Since learners are prepared, the lecture session turns out to be participative by way of interaction and involvement. Learners also get opportunity for participatory learning through group projects, project based learning, participating in competition such as Hackaton , SAE, AVISHKAR etc.

3.Problem solving methodologies:-

As per program outcomes (POs), learners should develop skills to solve complex engineering problems. This ability is developed through real-life problems discussed in the class room by faculty and attempted/solved by the learners through assignments. PBL for advanced learners also helps build this ability amongst students. BE projects also focus on developing skills towards solution of complex engineering problems.

Institute provides an environment for students to engage in intellectual discussions and work in a team for problem-solving under the guidance of a faculty to perform various activities such as development of drone for spray of fertilizer etc.

The laboratory sessions are another examples of participative learning. Since laboratory manual is given to the learners as well as the schedule of experiments at the commencement of semester, learners are equipped to perform experiments on their own in a group of 3 to 4 students leading to participating learning.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

2.3.2 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

Response: 91.33

2.3.2.1 Number of teachers using ICT

Response: 179

File Description	Document
List of teachers (using ICT for teaching)	View Document
Any additional information	View Document
Provide link for webpage describing the " LMS/ Academic management system"	View Document

2.3.3 Ratio of students to mentor for academic and stress related issues

Response: 14.77

2.3.3.1 Number of mentors

Response: 193

File Description	Document
Any additional information	View Document

2.3.4 Innovation and creativity in teaching-learning

Response:

Up-gradation of Faculty:

Effective delivery of knowledge (and not information) to enable learners to grasp is the need of the hour. Faculty of institute are continuously exposed to “effective teaching – learning methodologies” through special FDPs organized frequently. Special workshops are also organized on specific courses like ‘Engineering Mechanics’ in collaboration with NITTR Bhopal in July 2013.

Students Friendly Learning Tools:

Work books are prepared by our faculty for first year students and this approach of learning based on workbooks helped immensely both students and faculty. Two page summary of every module carefully prepared by faculty helps the learners to understand the basic, fundamentals, concepts as well as important formulae.

Course Planning:

Course plan carefully prepared and made available to the learners, help planning of the lectures not only for faculty but also for learners. Since the attention span of learners is around 15-20 minutes, faculty pose a trigging question after this interval to draw attention of learners. These trigging questions are prepared by faculty in advance. Recently use of ‘KAHOOT’ is also being practiced to make learning more interesting. Thus for every course, learners get approved to about 90 trigging questions. Use of MOOCs, specifically prepared by our own faculty, also make learning exciting and interesting. It is a flipped class room concept where interactive and participative learning takes place.

Higher Levels of Bloom’s Taxonomy:

Since, it is not possible to address questions at the levels of 5 and 6 of Bloom’s Taxonomy in a limited time examination, take-home assignments include at least one question each of levels 5 and 6 of Bloom’s Taxonomy to develop ability towards creativity amongst learners. ‘Course group project’ is yet another activity to address levels 5and 6 of Bloom’s Taxonomy. Some of the assignments call for library reference, internet surfing, NPTEL videos and out of box thinking. Towards end of semester, such assignments are discussed in class room and address doubts of the learners.

External Inputs:

Facilities of smart class room, lectures by Adjunct faculty and Resource Persons from industry keep students updated with technological advances in the industry.

Faculty members participate in National / International conferences / Workshops with financial support from the college. Faculty training in industry in India and abroad has also been introduced recently.

Students-Centric Activities:

Visit of students to Magnetic Maharashtra-2018 and Mumbai exhibition organized by ASHRAE International professional bodies, is yet another innovative approach of teaching and learning. Workshops on relevant topics organized every semester also help learners to get in-depth knowledge in thrust areas.

File Description	Document
Any additional information	View Document

2.4 Teacher Profile and Quality

2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

Response: 102.97

File Description	Document
Year wise full time teachers and sanctioned posts for 5 years	View Document
List of the faculty members authenticated by the Head of HEI	View Document
Any additional information	View Document

2.4.2 Average percentage of full time teachers with Ph.D. during the last five years

Response: 10.9

2.4.2.1 Number of full time teachers with Ph.D. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
27	30	28	22	14

File Description	Document
List of number of full time teachers with PhD and number of full time teachers for 5 years	View Document
Any additional information	View Document

2.4.3 Teaching experience per full time teacher in number of years

Response: 8

2.4.3.1 Total experience of full-time teachers

Response: 1568

File Description	Document
Any additional information	View Document

2.4.4 Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

Response: 1.75

2.4.4.1 Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
03	00	00	01	00

File Description	Document
Institutional data in prescribed format	View Document
e-copies of award letters (scanned or soft copy)	View Document
Any additional information	View Document

2.4.5 Average percentage of full time teachers from other States against sanctioned posts during the last five years

Response: 18.64

2.4.5.1 Number of full time teachers from other states year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
41	50	55	31	25

File Description	Document
List of full time teachers from other state and state from which qualifying degree was obtained	View Document
Any additional information	View Document

2.5 Evaluation Process and Reforms

2.5.1 Reforms in Continuous Internal Evaluation(CIE) system at the institutional level

Response:

Institute realizes that teaching and assessment/evaluation play a vital role in developing and enhancing learning abilities amongst the learners. We also believe that ‘continuous internal evaluation’ leads to continuous learning.

Use of Technology for Assessment during lectures:

As per UoM, CIE internal tests for theory courses are to be carried twice during semester first test scheduled after 40% syllabus and next after another 40% syllabus coverage.Our college has also introduced ‘surprise test’ to keep the learner alert and to be always ready. Surprise test is of MCQ type. We have recently introduced use of ‘Clicker Test’ as well as ‘KAHOOT’ open source platforms to conduct multiple choice quizzes on android devices. Some faculty members also make use of platforms like My Examo for on-line examination.

Reforms in CIE:

Institute has introduced the practice of ‘Blue Print’ and ‘Rubrics’ to bring transparency in the CIE. Discussion in the classroom on solution of CIE, pointing out silly mistakes made by students, detailed solution of question paper, showing answer books to the learners and clearing their doubts could be considered as an unique mechanism of transparency.

For CIE faculty members submit two sets of question papers along with solution of the same of which Principal select one of them for examination. Idea behind submitting solutions of CIE question papers is to ascertain accuracy as well as redundancy of the question papers. Recently CIE question papers are ‘No Choice’ Question Papers. College has given detailed guidelines for setting up CIE question paper. Assessment, Tutorial with quality questions focus on COs and Bloom’s Taxonomy. Recently PIs are also introduced as per AICTE Exam Reforms.

Laboratory activity spreads over the semester.Use of well prepared laboratory manuals followed by meticulous care for each experiment conducted and answers to the 10 questions make this reform useful for

the students. Punctuality of submission is one of the parameter for evaluation.

5 assignments spread over the semester brings in “continuous learning” leading to “continuous assessment”. Academic calendar specifies entire schedule of assignment submission. Solution to assignment is an added feature of this college.

BE projects are also continuously monitored and assessed under overall supervision of Dean (R&D). Monthly reports are prepared to monitor the progress made by the students on BE projects.

Centralized CAP and Conduction Team for CIE brings seriousness and accuracy in this task.

These reforms in CIE systems at institute level have significantly improved quality as well as success of students not only in the internal examinations but also at university examinations.

Illustration:

Following Table illustrates reforms in CIE. Introduction of surprise test and Bloom’s Taxonomy are salient features introduced recently.

YEAR	INTERNAL MARKS				CIE-INTERNAL TESTS ANS SURPRISE TEST	CHOICE	BLOOM’S TAXONOMY
	Assignment	Practical /Journal	Tutorials/ Presence	Total Marks			
2017-18	10	10	05	25	YES	NO	YES
2016-17	10	10	05	25	YES	YES	YES
2015-16	10	10	05	25	NO	YES	NO
2014-15	10	10	05	25	NO	YES	NO
2013-14	10	10	05	25	NO	YES	NO

File Description	Document
Any additional information	View Document

2.5.2 Mechanism of internal assessment is transparent and robust in terms of frequency and variety

Response:

'Internal assessment' is one of the major activities for continuous evaluation and considered as independent passing head. This task is carried out strictly as per the guidelines of University of Mumbai. As per the university guidelines two internal tests are conducted for 20 marks each with overall 20% weightage. The students are given opportunities to prepare for their internal tests by way of assignments, pre-internal test discussions in the classroom, doubt clearing sessions etc.

Transparency initiatives at institute level

1. Academic Calendar defines entire schedule of internal examinations.
2. Rubrics for evaluation of internal examination as well as term work are well defined, transparent and strictly followed.
3. "Blue Print" gives detailed information on the type of question paper of internal tests.

Robustness in terms of Frequency:

1. Continuous assessment report for all the courses is displayed in respective laboratories every month. Test marks are displayed within a week after each internal test. Term work marks are displayed every week and also at the end of each semester for students information.
2. As soon as class test 1 is over, results are declared to enable them to put efforts for the class test 2 to improve performance.
3. Answer books are shown to the students so that they are satisfied with the evaluation and also know silly mistakes made by them to avoid such in mistakes in University examination.Rubrics for Term Work.
4. The answer scripts are evaluated by the faculty member handling the subject or by interchanging the scripts with other member who handles the same subject in other division.
5. Solutions of question papers are discussed in the class emphasizing silly mistake made by the students.
6. Departmental exam coordinator carries out the analysis of internal class test examination for each course.
7. Review of results of internal examination is done at departmental level to suggest corrective steps.
8. Internal examination marks are entered in the exam software.

Rubrics for Term Work

Sr. No	Very Good (21-25)	Good (18-20)	Satisfactory (13-17)	Unsatisfactor (10-12)	
			1. Student performed the Experiments, Journal	1.	Stude Exper

1	1. Student performed the Experiments, Journal submitted as per schedule, conclusions drawn properly. 2. Understanding of concepts correctly for all the experiments. 3. Answered all 10 questions correctly 4. Attended all practical sessions.	1. Student performed the Experiments, Journal submitted as per schedule, conclusions drawn properly. 2. Understanding of concepts correctly for most of the experiments. 3. Answered all 10 questions correctly 4. Attended all practical sessions.	submitted as per schedule, conclusions drawn properly. 2. Understanding of concepts correctly for some of the experiments. 3. Answered most of questions correctly 4. Missed out one of the practical sessions.		not su sched not pr 2. Unde conce 3. Answ questi 4. Misse one p

NAAC

Robustness in terms of Variety:

1. Due attention is given to monitor repetition of questions or question paper of previous years.

File Description	Document
Any additional information	View Document

2.5.3 Mechanism to deal with examination related grievances is transparent, time-bound and efficient

Response:

Internal Examination

CIE – Internal Tests

Process:-

1. Our College has the practice of showing answer books of CIE Internal Tests to the students. After going through the answer books, students discuss with the faculty member their doubts. In case of grievance about assessment, they fill up the grievance form and submit to the faculty along with the answer book.
2. The concerned faculty consolidates the grievance forms and submit s the same to the Departmental Examination Coordinator.
3. Examination coordinators should verify the totalling in marks, if any and also un-assessed part from the answer book.
4. Examination coordinators of respective departments submit the grievance forms along with the answer books to exam section within two working days after receiving the grievance forms.
5. The report of re-assessment is verified by grievance committee members and exam cell in-charge and they endorse correction and sign and the results are displayed..

END SEMESTER EXAM OF S.E. and T.E.

PHOTOCOPY

1. Examinee fills the application online for photocopy with requisite fees as per the notice displayed by the examination Cell and submits print out of the same to the examination cell.
2. Student will submit also the print out of the same to exam cell.
3. Exam coordinators issue the photocopy to examinee within 07 days.

GRIEVANCE

1. On receipt of the photocopy, if discrepancies like un-assessed parts in the answer books, mistake in totalling marks by the examiner are noticed by the students, they have to apply for revaluation.
2. College Grievance Committee completes the process and sends for re-assessment

REASSESSMENT

1. The examiner after carrying out re-assessment, submits the mark sheet. Photocopy of the re-assessment result is submitted to the University for the information.

For University Examination

PHOTOCOPY

1. Examinee has to fill application form duly filled in with question paper code and examination seat number and duly signed by him is submitted along with the requisite fees within ten days to the Class In-Charge.(as per circular VCD/1 of 2016 dated 01/7/2016)
2. Respective class in-charges forward the application to University of Mumbai through exam cell within next three days.
3. The university shall endeavour to supply photocopy (ies) of answer books within twenty five working days from date of receipt of application to the university (as per circular VCD/1 of 2016 dated 1/7/2016)

GRIEVANCE

1. On receipt of the photocopy, if the discrepancy is noted by the examinee, the examinee should apply to the university within in 07 working days with requisite fees (as per VCD /1 of 2016 dated 1/7/2016)
2. The exam section will process and send letter to university within 3 working days with supporting documents.
3. Examinee has to apply for grievance only if there is discrepancy with respect to mistake in totalling or non-assessment of question/sub question.

REASSESSMENT

1. The exam section processes the grievance and sends letter to the university for further process of re-assessment.
2. Result received from University is communicated to the examinee by examination cell.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

2.5.4 The institution adheres to the academic calendar for the conduct of CIE

Response:

A detailed and well planned 'Academic calendar', based on the University of Mumbai Academic Calendar is prepared by Dean (Academic) and presented in the Academic Committee Consisting of all Deans and HODs. After deliberations and discussions, the academic committee finalizes the Academic Calendar. With due approval of Principal, Academic calendar comes in effect for the particular semester.

Academic Calendar clearly Specifies the following:

1. Commencement of semester
2. Dates for CIE internal test (Class Test 1 and Class Test 2)
3. Date of submission of term work.
4. End of semester.
5. University schedule for practical/oral/theory exams.
6. Commencement of theory exams.

Schedule of CIE internal tests (Class Test 1) and (Class Test 2) are meticulously followed. The first internal test is after 40% completion of syllabus and the second after another 40% syllabus.

Submission of Term Work is categorized as under:

1. Those students who carried out laboratory courses without missing any experiment.
2. Those students who missed same of the experiments due on genuine grounds.

As mentioned in the Academic Calendar students under category 1 submit their journals during specified period. Students under category 2 are given a schedule to complete missed laboratory experiments and submit journal. Assessment of journal is carried out as per well defined rubrics.

EXTRACT
08.02.2018

No: MGM/CET/2017 - 18

Academic Calendar for even semester – 2018 FE/SE/TE/BE/ME

Sr. No	Date/Duration	Week	Activity
3	8/1/18	1	Semester begins
14	12/2/18	6	Question papers of CLASS TEST 1 (Standard format Outcomes and level of Bloom's Taxonomy) and class test submitted to Principal for approval.
16.	15/2/2018		Duty charts of CLASS TEST 1 to be given to all faculty mer
17	21.2.18 to 23.2.2018	7	CLASS TEST I

18	29/2/2018	8	Last date for CLASS TEST 1 CAP including marks entry in
20.	1/3/2018		Display of CLASS TEST 1 results by Exam Cell
22	6/3/2018		Results Analysis of CLASS TEST – 1 in the prescribed form to the Principal and Dean Academics
32	19.3.2018	11	Question papers CLASS TEST 2 to be submitted to Principa
36	23.3.2018		Duty Charts of CLASS TEST 2 test to be given to all faculty
37	26.3.18 to 28.3.18	12	CLASS TEST 2
38	4.4.18	13	Completion of assessments of CLASS TEST – 2 and CAP c submit the pending assessments to Principal
40	5.4.18		Display of CLASS TEST 2 results by Exam Cell
43	9.4.18 to 12.4.18	14	ATKT Test
48	17.4.18	15	Completion of assessments of ATKT Test and CAP Co submit the pending assessments to Principal. Last date entries in the system (entries to be done in CAP room books)
49	18.4.18		Declaration of ATKT results by Exam Cell
51	21.4.18		End of the term

Academic committee strictly monitors various activities. In addition, strict monitoring of examination and evaluation takes place through conduction team and CAP respectively.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

2.6 Student Performance and Learning Outcomes

2.6.1 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

Response:

Learning outcomes (LO) are statements that specify what learners will know or be able to do as a result of a learning activity. Outcomes are usually expressed as knowledge, skills, or attitudes. Through a series of lectures and practical classes, he/she tends to absorb the knowledge that is ‘delivered ’ in the class.

- The LOs can be achieved through the classroom teaching, supplemented by assignments, tutorials and practical.
- The verification of the course material by the HOD and the deliberations at the class in charges ensure these aspects.
- The CIA and ESA are assessments to check if outcomes are achieved.
- Every subject has lesson plans and every lesson plan has the specific learning outcome. Lesson plans are displayed on the college intranet.
- All lesson plans are reviewed by the HODs concerned.
- Also in every class the faculty clearly explains the learning outcomes to the students and in the

class, evaluation is designed to test the same.

The NBA which insist on 'Outcome Based Education' (OBE), has published guidelines UG Engineering programmes by introducing course outcomes (COs), programme outcomes (POs) and programme specific outcome (PSOs). Whereas POs are defined by NBA, PSOs and COs are defined or formulated by respective colleges/Universities. PSOs are in tune with the expectations of the professional bodies and society.

Our college is affiliated to University of Mumbai. While designing curriculum, university has also defined COs for all courses. Our college faculty deliberated on the COs defined by University and modified and followed the same for attainment of COs. Similarly each of the Specific Program Outcome (PSO) has also been worked out.

Programme outcome (PO), programme specific outcome (PSO) and course outcome (CO) are displayed on website and communicated to all stake holders including faculty and students. These are also displayed at the following locations (Fig. 1)

1. Principal's cabin
2. HODs' Cabins
3. Boards and Banners at prominent locations
4. Institute website
5. Corridors

Faculty and Students:

POs, PSOs, and COs are mandatory part of the Course Files prepared by faculty. COs are clearly mentioned in the Course Plans. Faculty stress on CO while covering a particular module. Pos, PSOs and COs are included in the Journals of students.

Principal, Dean (Academics) and HODs address all newly admitted first year and direct second year students and parents in the orientation programme. During this, Institute vision, mission and PO, PSO and CO are mentioned. Current system of Outcome Based Education (OBE) is also explained.

Every course faculty discusses Course Outcomes with the students at the beginning of each semester.

Teaching-learning and CIE:

Assignments, CIE question papers also include Cos for the questions included in these.

The teaching- learning process and assessment methods are designed to achieve attainment of COs and POs.

File Description	Document
COs for all courses (exemplars from Glossary)	View Document
Link for Additional Information	View Document

2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

Response:

Attainment of CO, PO & PSO

The process of attainment of COs, POs and PSOs starts from finalizing COs for each course of the program from first year to fourth year. The course outcomes given by University of Mumbai which are finalized after brainstorming by the concerned faculty members using action verbs of learning levels as per Bloom's Taxonomy.

Then, a correlation is established between COs and POs in the scale of 1 to 3, 1 being the slight (low), 2 being moderate (medium) and 3 being substantial (high). A mapping matrix is prepared in this regard for every course in the program including the elective courses. The course outcomes and their mapping with POs are reviewed frequently by a committee of senior faculty members. Correlation between the course outcomes and program outcomes (POs) and Program Specific Outcomes (PSOs) is established for all courses of the program. The PSOs are in tune with the expectation of the professional bodies and the society.

For each course, attainment level of all course outcomes is arrived at rigorously based on the student performance in the internal and external examinations. Similarly, the direct and indirect feedback at the end of course helps to assess the course outcome indirectly. Thus, the CO attainment is a combined result of direct and indirect assessment.

This in turn helps in arriving at the PO assessment as each CO is mapped with certain POs and PSOs. Besides this, the exit survey is taken from students for indirect assessment of the PO's. The alumni, employer and parent's surveys are also taken for indirect assessment of the Pos and PSOs. The entire process of attainment of learning outcomes is shown in **Fig-1**. Now PO can be calculated with the help of COs as shown in the view document.

CO attainment:

Direct Attainment of CO = 30% of CO attainment in internal examination + 60 % of CO attainment in the external examination +10% Course exit feedback and indirect feedback. Thus overall attainment of CO = 90% CO attainment from Direct method + 10 % of CO attainment through Indirect method.. COs are mapped with PO and PSO as shown in **Table 1.** PO and PSO attainment: The direct attainment of PO and PSO is obtained by taking into consideration contribution of each course as shown in Program attainment matrix described in **Table 2.**

PO attainment:

Direct Attainment of PO = Average of attainments of all CO contributing to the specific PO.

Indirect attainment:

Questionnaires are developed for stake holder (eg students, parents and industry persons..etc). They

are circulated among them for survey via direct communication, emails or post etc. The data received from them has been analyzed and used for attainment of POs.

Overall attainment of PO = 90% attainment through the direct method + 10 % of PO attainment through indirect method.

Overall attainment of PO = 90% POdir + 10 % POindir

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

2.6.3 Average pass percentage of Students

Response: 89.44

2.6.3.1 Total number of final year students who passed the examination conducted by Institution.

Response: 771

2.6.3.2 Total number of final year students who appeared for the examination conducted by the institution

Response: 862

File Description	Document
Institutional data in prescribed format	View Document

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response: 2.31

Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

3.1.1 Grants for research projects sponsored by government/non government sources such as industry ,corporate houses, international bodies, endowment, chairs in the institution during the last five years (INR in Lakhs)

Response: 131.52

3.1.1.1 Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
74.89	1.31	22.33	23.44	9.55

File Description	Document
List of project and grant details	View Document
e-copies of the grant award letters for research projects sponsored by non-government	View Document

3.1.2 Percentage of teachers recognised as research guides at present

Response: 2.55

3.1.2.1 Number of teachers recognised as research guides

Response: 5

File Description	Document
Any additional information	View Document

3.1.3 Number of research projects per teacher funded, by government and non-government agencies, during the last five year

Response: 0.04

3.1.3.1 Number of research projects funded by government and non-government agencies during the last five years

Response: 9

3.1.3.2 Number of full time teachers worked in the institution during the last 5 years

Response: 1144

File Description	Document
Supporting document from Funding Agency	View Document
Any additional information	View Document
Funding agency website URL	View Document

3.2 Innovation Ecosystem

3.2.1 Institution has created an ecosystem for innovations including incubation centre and other initiatives for creation and transfer of knowledge

Response:

MGMCET provides support in terms of financial, academic and human resource required to enable faculty tosubmit project proposals.Institute has taken following initiatives towards innovations and transfer of knowledge.

Innovation & creativity (I&C) cell: The innovation and creativity cell of MGMCET is active since 2014 to enhance knowledge, skills, personality & productivity of students. Primary purpose of this cell is to nurture the innovative and creative minds of students. It organises'Innovative Project Idea Competition' for the students. The students are asked to submit write-up based on their ideas. Committee scrutinizes, selects some of the ideas & best amongst them is awarded. Some of the ideas are taken to next level by the students with the help of I&C cell.

These activities train the students to participate in various competitions like *Avishkar, Hackathon, Supra,* etc. In 2018, one team from Electronics and Telecommunication department secured **gold medal** in inter-university research project competition, '**Avishkar**'. In **Smart India Hackathon- 2017**, our team, TechNOBI got selected among the top 15 innovative ideas and received prize amount of 10,000/-INR. In **Smart India Hackathon- 2018**, our ream BugSquashers stood **1st runner-up** by coding continuous 36 hours and bagged cash prize of INR 75,000/-. In addition to this, in finals our team Techvist received **Deloitte Innovation Award** and cash prize of INR 10,000/-.

Every year team of MGMCET participates in '**Supra**' car design competition and their rank in the competition adds feather in the cap of MGMCET every year.

Intellectual Property Rights (IPR) Cell: In order to protect the intellectual rights of the faculty, students and staff, MGMCET has established Intellectual Property Rights (IPR) Cell in 2014. The main objective of the IPR Cell is to create an awareness about IPR, conduct workshops, seminars and impart training course on IPR, disseminate knowledge on patents, and its registration aspects, etc.IPR cell also motivate & trainsfaculty to submit research proposals for obtaining funds from various government and non-government organization such as BRNS, ICMR, etc. As a result, BRNS and ICMR funded projects have

been sanctioned to our college.

Institute-institute collaboration: In order to promote research activity, MGMCET has Institute-institute collaboration with Thakur College of Engineering &Technology and jointly organize a conference '**MULTICON-W**' every year. Collaboration of MGMCET with the MGMIHS has facilitated joint research project ,'Impact of radiation from cell phone tower and cell phone use on health of pregnant women, neonates and infants'.

Memorandum of Understanding:

MGMCET has signed the **MoU**with various institutes such as ATS InfoTech Pvt Ltd, Infosys Ltd, Cloud Point Technologies and ICT academy,which aims at bridging the gap between industry-academia by providing training to the students and faculty in software, soft skills, technical expertise etc. through FDP and workshops.

Societies, student chapters & Clubs: With the help of professional bodies such as IEEE student's branch, SAE, IIChE, ASME student section MGMCET arrange training programs to make faculty and students aware about industrial practices. Technical and General clubs at MGMCET provide platform for inquisitive and creative minds of students.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

3.2.2 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the last five years

Response: 18

3.2.2.1 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
14	1	1	2	0

File Description	Document
Report of the event	View Document
List of workshops/seminars during the last 5 years	View Document
Any additional information	View Document

3.3 Research Publications and Awards

3.3.1 The institution has a stated Code of Ethics to check malpractices and plagiarism in Research

Response: Yes

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

3.3.2 The institution provides incentives to teachers who receive state, national and international recognition/awards

Response: Yes

File Description	Document
e- copies of the letters of awards	View Document
Any additional information	View Document

3.3.3 Number of Ph.D.s awarded per teacher during the last five years

Response: 0.8

3.3.3.1 How many Ph.Ds awarded within last five years

Response: 4

3.3.3.2 Number of teachers recognized as guides during the last five years

Response: 5

File Description	Document
URL to the research page on HEI web site	View Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	View Document
Any additional information	View Document

3.3.4 Number of research papers per teacher in the Journals notified on UGC website during the last five years

Response: 0.16

3.3.4.1 Number of research papers in the Journals notified on UGC website during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
7	11	11	4	4

File Description	Document
List of research papers by title, author, department, name and year of publication	View Document
Any additional information	View Document

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

Response: 0.49

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

2017-18	2016-17	2015-16	2014-15	2013-14
55	21	5	15	15

File Description	Document
List books and chapters in edited volumes / books published	View Document
Any additional information	View Document

3.4 Extension Activities

3.4.1 Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years

Response:

Every right has its responsibility.

The security, progress and welfare of one group is measured finally in the security, progress and welfare of all mankind. Institute believes in giving back what it has enjoyed from society. MGMCET arranges a number of community oriented service activities to endorse institute – neighbourhood community linkage to make aware the students towards needs of the society and bring about social transformation in the adjacent city and country communities.

Extension is indeed an offshoot of education, which highlights the community services.The interfacing approach between education and extension has a prominent role.

Every year in month of January MGMCET participates in '**MGM Walkathon**: a walk, for health 'in Navi Mumbai. Health freak students and faculty participate enthusiastically and create health awareness in society. Few themes taken for these campaigns are, 'Walk for Heart', 'Walk for Navi Mumbai', 'Chalo everyone' etc. **Blood Donation** Camps are also held in MGMCET in order to encourage youth in donating blood and save lives in critical cases.

MGMCET actively collaborates **MGMIHS** which has adopted several villages in Maharashtra state (Ambelohal, Nanded, Tara, Ellora, Vardukazi) for overall development where preventive, promotive and curative services are provided through health education and health screening camps to financially constrained and under-privileged section of the society.

'**College Social Responsibility Club**' regularly provide services to the people from neighbouring villages of Raigad district. They organise health check-up camps, distribute eatables, toys, clothes etc. Students regularly organise road shows or street plays to spread awareness message about cancer, AIDs, blood donation, road safety etc.

Swachha Bharat Abhiyan proclaimed the importance of cleanliness and health. Every year college involve faculty and students and organize cleanliness drive in campus or off campus under Swachha Bharat Abhiyan. It also ensures to conduct awareness activities in the 'Road Safety Week' to imbibe importance of safe driving in youth.

Every year on '**World Environment Day**' plantation program is held in order to inculcate the importance of nature –human interface. On this day faculty and students make and sow seed balls, plantsaplings in the campus and also in the surrounding empty places.

As a responsible institute towards environment, MGMCET has taken few concrete steps to protect mother earth. It includes, Installation of solar lights in campus, solid and liquid waste management, rain water harvesting etc. For taking these activities one step ahead, in 2018 institute organised '**Environmental Conference**'and **Greenathon drive**'

From 9thAugust to 20th Aug 2018 students conducteda patriotic event '**Yaad Karo Kurbani**' department wise to motivate the spirit of nationalism. Students remembered sacrifices of freedom fighters through dance, songs, dramas etc. College appreciated the efforts by giving a trophy to the best performing team.

Maximum aspiring engineers and responsible faculty of our college are involved in all these activities who will definitely create a difference in the Indian and global scenario.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

3.4.2 Number of awards and recognition received for extension activities from Government /recognised bodies during the last five years

Response: 0

3.4.2.1 Total number of awards and recognition received for extension activities from Government /recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

File Description	Document
Number of awards for extension activities in last 5 years	View Document
e-copy of the award letters	View Document
Any additional information	View Document

3.4.3 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., during the last five years

Response: 59

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

2017-18	2016-17	2015-16	2014-15	2013-14
21	8	10	10	10

File Description	Document
Reports of the event organized	View Document
Number of extension and outreach programs conducted with industry,community etc for the last five years	View Document
Any additional information	View Document

3.4.4 Average percentage of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the last five years

Response: 0.43

3.4.4.1 Total number of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
20	9	11	10	15

File Description	Document
Report of the event	View Document
Average percentage of students participating in extension activities with Govt or NGO etc	View Document
Any additional information	View Document

3.5 Collaboration

3.5.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc during the last five years

Response: 251

3.5.1.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
32	48	50	49	72

File Description	Document
Number of Collaborative activities for research, faculty etc	View Document
Copies of collaboration	View Document
Any additional information	View Document

3.5.2 Number of functional MoUs with institutions of National/ International importance, Other Institutions, Industries, Corporate houses etc., during the last five years (only functional MoUs with ongoing activities to be considered)

Response: 21

3.5.2.1 Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years (only functional MoUs with ongoing activities to be considered)

2017-18	2016-17	2015-16	2014-15	2013-14
8	7	2	3	1

File Description	Document
e-copies of the MoUs with institution/ industry/ corporate house	View Document
Details of functional MoUs with institutions of national, international importance,other universities etc during the last five years	View Document
Any additional information	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 The institution has adequate facilities for teaching- learning. viz., classrooms, laboratories, computing equipment, etc.

Response:

Response : Yes

The institution has adequate facilities for teaching-learning as per the minimum specified requirements by statutory bodies. The management shows keen interest in the creation and augmentation of infrastructure in the institution for smooth running of all the academic, co-curricular and extra-curricular activities. Necessary budget is allocated every year by the management for creation and upgradation of infrastructure in the institution. The academic infrastructure in the institution is as per the norms prescribed by All India Council of Technical Education (AICTE), Directorate of Technical Education (DTE) Maharashtra State and University of Mumbai.

At the end of each semester of every academic year the Heads of Departments prepare a detailed assessment of the requirements for the forthcoming semester regarding equipment for the laboratories, computer systems, software packages and books for the library as mentioned in the syllabus prescribed by the University of Mumbai. All these requirements are met before the commencement of the semester.

The institution has 33 classrooms (66 sq. m.) for UG, 10 classrooms (33 sq. m.) for PG and 9 tutorial rooms for UG. All the classrooms and tutorial rooms have adequate seating capacity and are provided with blackboards. Every department is provided with a smart room to facilitate use of digital media. The institution also has a drawing hall and a workshop which are as per the prescribed norms. There are eight seminar halls and an auditorium in the institution having LCD projectors for teaching-learning purposes and for conferences and other co-curricular and extra-curricular activities. An auditorium is also available on the campus which is a shared facility. Every department uses the available infrastructure to conduct seminars, workshops and technical programmes related to their respective disciplines to equip the students with state-of-the-art developments in the industry.

The institution has well-equipped laboratories in every department for both undergraduate and postgraduate programs offered. The number and area of the laboratories required are as per the prescribed norms. There are minimum 8 laboratories of 66 sq. m. area in each department running undergraduate program and minimum 9 laboratories of 66 sq. m. area in each department running undergraduate and postgraduate programs. The institution also has few laboratories of 200 sq. m. area as per norms. The laboratories have adequate seating capacity in the form of chairs and stools and the equipment or

experimental setups in the laboratory are sufficient to satisfy the requirements of the syllabus of the University of Mumbai for the practical courses offered by various branches.

The institution has 863 computers to take care of the computational requirements of the students for various practical courses as prescribed in the syllabus of the University of Mumbai. Every department has a computer laboratory to take care of the computational requirements of the students. It also caters to the computational requirements of the faculty members for academic and administrative work. The institution has a computer centre which is as per the prescribed norms.

Each department has cabins for Heads of Departments and individual faculty members as per norms.

File Description	Document
Any additional information	View Document

4.1.2 The institution has adequate facilities for sports, games (indoor, outdoor),gymnasium, yoga centre etc., and cultural activities

Response:

Response : Yes

The students of the institution are encouraged to actively participate in extra-curricular activities such as indoor and outdoor sports and cultural activities. The campus where the institution is located has a large playground or multipurpose playfield of 11309 sq. m. area established in the year 1993 which is used for sports activities such as cricket and football. During the Annual Day celebrations of the institution a stage is constructed at the playground which enables many cultural activities to be organized. Inner courtyard and outer courtyard of the college are also used for sports such as badminton. There is also a well-equipped gymnasium which is used by the students for their fitness and physical training. The college has initiated club activities which include Yoga Club, Dance Club, Music Club, Karate Club, Photography and Film Making Club, Dramatics Club, Literature Club and Sports Club.

Eight seminar halls and one auditorium are available in the institution which are used for conducting cultural activities. The seminar hall at the ground floor of the institution is also used as a facility for yoga. An auditorium is available on the campus which is used for various co-curricular and extra-curricular activities. A room is available in the institution which is used to store the sports equipment. Boys and Girls Common rooms are available in the college building. The multipurpose playfield, gymnasium and auditorium are available on the campus as additional shared facilities.

The facilities available are used for various cultural activities and for celebration of days of national

importance such as Fresher's Welcome (Annual Event), ManGalaM Fest (Annual Event), Alumni Meet (Annual Event), Degree Distribution Ceremony (Annual Event), Independence Day (15th August), Republic Day (26th January), Gandhi Jayanthi (2nd October), Ekta Divas (31st October), Teachers Day (5th September), Engineers Day (15th September), Science Day (28th February), Technology Day (11th May) and Yaad Karo Qurbani Celebrations (Annual Event). Sports are organized throughout the academic year and also during annual functions by the college during which all the facilities and infrastructure for sports and games are fully utilized for the benefit of the students.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

4.1.3 Percentage of classrooms and seminar halls with ICT - enabled facilities such as smart class, LMS, etc

Response: 100

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 53

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	View Document
any additional information	View Document
Link for additional information which is optional	View Document

4.1.4 Average percentage of budget allocation, excluding salary for infrastructure augmentation during the last five years.

Response: 7.52

4.1.4.1 Budget allocation for infrastructure augmentation, excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
55	55	60	60	45

File Description	Document
Details of budget allocation, excluding salary during the last five years	View Document
Audited utilization statements	View Document
Any additional information	View Document

4.2 Library as a Learning Resource

4.2.1 Library is automated using Integrated Library Management System (ILMS)

Response:

Response : Yes

Details of Integrated Library Management System

Name of the ILMS software	KOHA Library Management System
Nature of automation (fully or partially)	Fully
Version	3.12.07
Year of Automation	2016-2017

Total number of books (Including M.E Dissertations)	53395
Total number of titles	15328
Total number of print journals	85
Total number of e-journals	11580
Total number of e-books	6072
Book bank collection	1422
NPTEL videos	267

The Central Library of the institution is well equipped with a large number of books (textbooks as well as reference books), national and international journals, encyclopedias and e-resources. A large number of e-resources are available with the library such as IEEE e-Journals, J-Gate, i-Scholar Engineering and Technology Collection, IET Journals, McGraw Hill Access Engineering, ASTM Digital Library, DELNET Package, Springer e-Books, NPTEL videos and SPSS Packages. M.E. dissertations of the research work carried out by the students of the institution are also available in the library. Newly received books are kept on display at the entrance of the library. The institution has a Library Committee which recommends new books, journals and e-journals for purchase at the start of each semester of every academic year.

The library has a separate reference section where handbooks, encyclopedias and other rare books are stored. KOHA Library Management Software which is fully automated is available for all in-house library activities and the library also has Online Public Access Catalogue (OPAC). The library has an open access system where users can browse the required library resource in OPAC and then directly go to the shelf and collect it.

For library transaction purpose (issue and return) the user has to produce bar-coded identity card to the library staff at the counter. While issuing and returning a book, the library staff scans the bar-code of the book with the automated system. Registers are maintained at the entrance of the library for both students as well as faculty members who utilize the library facilities. The library has membership of IIT Bombay Library, National Digital Library India and DELNET Delhi.

The library has a collection of 11580 e-journals and 6072 e-books and digital means are used for accessing these e-resources. In addition remote access facility is available for referring to the databases and e-resources of the library. Book bank scheme is available in the library for Scheduled Caste students.

The library has modular furniture such as 14 computer tables which accommodate 28 computers, 4 current periodicals display racks, circulation counter, and 13 office as well as reader’s tables. The library has a reading room facility with a seating capacity of more than 150. The library conducts regular orientation and training programs on how to utilize the library resources and e-resources available.

The library has a collection of regional language books and general reading books. Daily newspapers are also available in the library.

File Description	Document
Any additional information	View Document

4.2.2 Collection of rare books, manuscripts, special reports or any other knowledge resources for library enrichment

Response:

Response : Yes

MGMCET Library has a rich collection of Hand Books, Encyclopedias, rare books and other reading material which enhance the quality of teaching, learning and act as a support for research. The handbooks available in the library are on various topics such as analytical instruments, nuclear medical instruments, mobile computing, screen printing, chemical process design, nanotechnology, electronics, optical properties, microcomputers, wind energy, mechanical components and piping design.

In addition handbooks are available on cost control, materials management, disaster recovery and contract negotiation. The library has a number of encyclopedias on various subjects such as chemical technology, polymer science and technology, industrial chemistry and tribology. Encyclopedic dictionary of English language is also available in the library.

21 books for helping the students prepare for competitive examinations such as GATE for various branches of engineering are also available in the library. The library has a collection of codes and standards such as IS codes which are very useful for engineering students.

The IS codes available are very useful for Civil Engineering, Mechanical Engineering and Chemical Engineering students and cover topics such as prestressed concrete, measurement of building and civil works, test for soils, installation of septic tanks, specification for test sieves, design and construction of pile foundations, design and construction of foundations for transmission line towers and poles.

NPTEL videos on various topics related to engineering and technology are also available in the library, which are valuable learning resources for the benefit of the students. Students can enhance their knowledge and technical skills by watching these videos which is a supplement to the topics covered in the regular lectures.

A collection of rare books which have been downloaded from the website of the Rare Books Society of India is available in the college library and is an e-resource which adds to library enrichment.

File Description	Document
Any additional information	View Document

4.2.3 Does the institution have the following:

1. **e-journals**
2. **e-ShodhSindhu**
3. **Shodhganga Membership**
4. **e-books**
5. **Databases**

A. Any 4 of the above

B. Any 3 of the above

C. Any 2 of the above

D. Any 1 of the above

Response: A. Any 4 of the above

File Description	Document
Details of subscriptions like e-journals,e-ShodhSindhu,Shodhganga Membership etc	View Document
Any additional information	View Document

4.2.4 Average annual expenditure for purchase of books and journals during the last five years (INR in Lakhs)

Response: 16.28

4.2.4.1 Annual expenditure for purchase of books and journals year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
9.48	7.76	53.87	10.27	0.0

File Description	Document
Details of annual expenditure for purchase of books and journals during the last five years	View Document
Audited statements of accounts	View Document

4.2.5 Availability of remote access to e-resources of the library

Response: Yes

File Description	Document
Any additional information	View Document

4.2.6 Percentage per day usage of library by teachers and students

Response: 14.94

4.2.6.1 Average number of teachers and students using library per day over last one year

Response: 455

File Description	Document
Any additional information	View Document

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities including Wi-Fi

Response:

Response :

Does the institution have a comprehensive IT policy with regard to :

- Information Security: **Yes**
- Network Security: **Yes**
- Software Asset Management: **Yes**
- Open Source Resources: **Yes**

Some of the policies followed with respect to IT facilities are as follows :

- Sharing of folders in Desktops and Laptops is discouraged to protect IT infrastructure from virus attack.
- Installation and use of proprietary anti-virus software is encouraged.
- Desktop should have administrator user with password security which is available only with Administrator/Laboratory In-Charge.
- Access codes are not provided to unauthorized users.
- No pirated software is to be used and use of only licensed software is allowed.
- Regular back-ups of information and files are made and stored in different locations including Google Drive.
- A detailed IT asset register in maintained in the concerned departments.
- Use of IT resources for personal gain, illegal activities or obscene activities is not permitted and IT resources are used only for academic, administrative and research and development activities.
- Connection of devices such as switches, routers, hubs, computer systems and wireless access points to the network that are not approved by the central institutional IT administrator is strictly forbidden.

Additional Features of the IT infrastructure in the institution :

- National Knowledge Network connectivity is available at the institution.
- Wi-Fi facilities are available in the college through NKN and Reliance Jio.
- Wi-Fi facility is available in Smart classrooms, seminar halls and in the auditorium.
- Cloud Computing facilities are available at the institution.
- ERP, MOODLES and MOOCS are being used in the institution.
- Online Feedback System is being used by the institution.
- High Performance Servers are available with the institution.
- Proprietary Software such as MATLAB, STADDPro and RSoft as well as Open Source Software such as SciLab, COCO simulator and ReactorLab are available in the institution.
- Centralized UPS facility is available.
- All the computer laboratories are provided with air-conditioners.
- Computers or laptops are made available to all the faculty members of the college. The faculty members are encouraged to promote e-learning and make use of digital means in their courses by use of audio-visual aids, LCD projectors, NPTEL videos and Virtual Laboratories.
- The institution upgrades its computational facilities with the latest configuration, internet lease line with high bandwidth and highly configured network equipment.
- Anti-virus software is installed on all computers in the college and is regularly updated by the computer maintenance department.

File Description	Document
Any additional information	View Document

4.3.2 Student - Computer ratio

Response: 3.3

File Description	Document
Any additional information	View Document

4.3.3 Available bandwidth of internet connection in the Institution (Lease line)
>=50 MBPS

35-50 MBPS

20-35 MBPS

5-20 MBPS

Response: >=50 MBPS

File Description	Document
Any additional information	View Document

4.3.4 Facilities for e-content development such as Media Centre, Recording facility, Lecture Capturing System (LCS)

Response: Yes

File Description	Document
Facilities for e-content development such as Media Centre, Recording facility,LCS	View Document
Link to photographs	View Document

4.4 Maintenance of Campus Infrastructure

4.4.1 Average Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, as a percentage during the last five years

Response: 65.88

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

2017-18	2016-17	2015-16	2014-15	2013-14
272.6	399.8	507.8	803.7	771.0

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	View Document
Audited statements of accounts.	View Document
Any additional information	View Document

4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

Response:

Response : Yes

Maintenance of existing facilities is ensured through site office having a skilled pool of people to cater to civil and electrical needs. Masonry work, plumbing and carpentry work are met through the site office. Maintenance and repair of the buildings of the institution is also carried out periodically. Painting of all laboratories, class rooms and other academic infrastructure facilities is carried out on a regular basis. A generator is also available on the campus to ensure uninterrupted power supply to the institution. In addition, an electrician available on the college premises for electrical repair and maintenance during the college working hours. Repair and maintenance of tube-lights and fans in the institution is carried out on a regular basis. Maintenance of the playground and lawns on the campus is carried out by gardeners.

Cleanliness of all the classrooms, tutorial rooms, seminar halls, laboratories, library and other facilities in the institution is maintained by a housekeeping agency. Cleaning of toilets is carried out regularly on daily basis by the housekeeping staff to ensure a hygienic atmosphere in the institution. Cleaning of overhead water tank of the college building is also carried out periodically. Fumigation of the institution and the surrounding campus is carried out frequently.

There are laboratory assistants and laboratory attendants in all departments who take care of the maintenance and upkeep of the laboratories of each department. Faculty member, appointed as laboratory in-charge for each laboratory in all the departments, is responsible for the maintenance and repair of the equipment present in his/her respective laboratory. Before the start of every semester the laboratory in-charges prepare an A to G report which includes the status of each equipment present in the laboratory and also the maintenance requirement if any to ensure that the equipment is in working condition before the commencement of the semester. During this period even replacement of equipment / experimental setup is also planned. Requests for maintenance and repair of equipment as well as procurement of new equipment and consumables are sent to the Stores section by the concerned laboratory in-charge through the Head of the Department. Annual Maintenance Contract (AMC) with suppliers of equipments such as spectrophotometer and weighing balances is undertaken by the institution. The institution takes up

calibration activities and other accuracy procedures for certain instruments and equipment. External agencies are invited for calibration of instruments and equipment in laboratories depending on the need by the respective laboratory in-charges through the Head of the Department. Laboratory inspection committee of the institution is responsible to check that all the laboratory facilities are well maintained and the committee also carries out stock verification of all laboratories. Scrap committee is responsible for disposal of non-working and non-repairable equipment, furniture, fixtures and other scrap items.

There is a computer maintenance section in the institution which looks after the maintenance and repair of all the computers, printers and internet facilities available in the college. UPS, voltage stabilizers and spike guards are also available in most of the laboratories.

Water filters (Aqua-guard) and coolers in the institution are maintained through annual maintenance contract. Pest control of all laboratories, library and other academic infrastructure facilities is carried out on a regular basis Maintenance of lifts is carried out under annual maintenance contract. Regular maintenance of Xerox facilities, computers and printers, air conditioners and fire extinguishers is also carried out. Security of the institution is assigned to an external agency.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years

Response: 54.02

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

2017-18	2016-17	2015-16	2014-15	2013-14
1580	1589	1839	1734	1513

File Description	Document
Upload self attested letter with the list of students sanctioned scholarships	View Document
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	View Document
Any additional information	View Document

5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution besides government schemes during the last five years

Response: 1.91

5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
57	40	63	66	65

File Description	Document
Any additional information	View Document

5.1.3 Number of capability enhancement and development schemes –

1. **For competitive examinations**
2. **Career counselling**
3. **Soft skill development**
4. **Remedial coaching**
5. **Language lab**
6. **Bridge courses**
7. **Yoga and meditation**
8. **Personal Counselling**

A. 7 or more of the above

B. Any 6 of the above

C. Any 5 of the above

D. Any 4 of the above

Response: A. 7 or more of the above

File Description	Document
Details of capability enhancement and development schemes	View Document
Any additional information	View Document
Link to Institutional website	View Document

5.1.4 Average percentage of student benefited by guidance for competitive examinations and career counselling offered by the institution during the last five years

Response: 29.22

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

2017-18	2016-17	2015-16	2014-15	2013-14
1460	1014	928	586	453

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	View Document
Any additional information	View Document

5.1.5 Average percentage of students benefited by Vocational Education and Training (VET) during the last five years

Response: 7.06

5.1.5.1 Number of students attending VET year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
675	196	102	61	11

File Description	Document
Details of the students benifitted by VET	View Document
Any additional information	View Document

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

Response: Yes

File Description	Document
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	View Document
Details of student grievances including sexual harassment and ragging cases	View Document

5.2 Student Progression

5.2.1 Average percentage of placement of outgoing students during the last five years

Response: 14.25

5.2.1.1 Number of outgoing students placed year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
217	169	72	53	32

File Description	Document
Self attested list of students placed	View Document
Details of student placement during the last five years	View Document
Any additional information	View Document

5.2.2 Percentage of student progression to higher education (previous graduating batch)

Response: 6.49

5.2.2.1 Number of outgoing students progressing to higher education

Response: 50

File Description	Document
Upload supporting data for student/alumni	View Document
Details of student progression to higher education	View Document
Any additional information	View Document

5.2.3 Average percentage of students qualifying in State/ National/ International level examinations during the last five years (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 36.74

5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil services/ State government examinations) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
13	33	11	1	3

5.2.3.2 Number of students who have appeared for the exams year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
40	60	30	6	7

File Description	Document
Upload supporting data for the same	View Document
Number of students qualifying in state/ national/ international level examinations during the last five years	View Document
Any additional information	View Document

5.3 Student Participation and Activities

5.3.1 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) during the last five years.

Response: 13

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

2017-18	2016-17	2015-16	2014-15	2013-14
6	2	2	3	0

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at national/international level during the last five years	View Document
e-copies of award letters and certificates	View Document
Any additional information	View Document

5.3.2 Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

Response:

MGMCET has an active and vibrant Student's Council (SC), formed by established process. The process starts with inviting applications from students for the various posts of student's council. It consists of, **President, Cultural secretary, Technical secretary, Sports secretary, NSS representative, Ladies representative, University representative and Class representatives.**

Class Representatives (CR) of every class of all the Departments is selected on the basis of their academic merit in the preceding academic year. A selection committee comprising of Principal, HoDs and students

council In-charge is formed for the selection of the Technical, Cultural & Sports Secretary among the CRs. Student Council has been formed for academic year 2017-18. Some activities executed by student representative of council are given as follows:

- **Student Grievance:** This committee addresses student grievances and maintains harmony and discipline among the students throughout the academic year .
- **Cultural & Sports:** Students council, co-ordinates various cultural and sports activities and events throughout the year. "ManGalaM" is annual social gathering which showcases cultural talent of students. Near about eighteen hundred students have participated in different events. Latest our students won zonal level "**Kurangale**" trophy in cricket tournament, organized by the University of Mumbai.
- **Technical Activities:** Students representative of council and professional chapters conduct various programs such as expert lectures, to arrange industrial visit, HR interview practice, Paper presentation, Technical Quizzes, Robot war, Model making etc during Techfest. Our students participated in Technex-2019, IIT Varanasi and JNEC, Aurangabad (Shyambhu) and bag prizes. Our students also participated in **Hackathon-2017**, organized by AICTE, got second prize in all over India. Students participated in **Avishkar**, organized by University of Mumbai, got first prize (gold medal at UG level).

At MGMCET, there are several professional students branch, like IEEE, ASHRAE, IIchE, IE and BMESI,. These student's chapters have office bearers like, Chairman, Secretary, Treasures, and Technical head. Student representative have been organizing several events throughout the academic year, like workshops, quizzes, essay writing, to arrange expert lectures from industry and academia. Several lectures are delivered by industry and academic experts. Lecture delivered by Prof. Nihal Kulratna on Super Capacitor, Waio Kato University, New Zealand, through IEEE student branch, is one of the example.

The Students' Council organizes many activities through its representative's viz. Sports Secretary, Cultural Secretary, Technical Secretary. Apart from this some, students are members of placement committee, grievance committee, IQAC and departmental advisory committee. On the occasion of **'Teachers day'** advanced learners actively engaged the lectures to the students of lower years. Through these committees, student's members learn various skills such as planning, organization, estimation and execution along with trouble shooting of the real life problems, which help in their comprehensive development.

Extra Curricular Activities:

Any education is incomplete without social awareness. In this direction, "Environmental Clubs and Human Values clubs of MGMCET are active in carrying out different activities in such as Blood donation camp, Swachcha Bharat Abhiyan, Yoga day, tree plantation etc, cancer awareness. Apart from this students are encouraged to join the events organized by other colleges/professional bodies.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

5.3.3 Average number of sports and cultural activities/ competitions organised at the institution level per year

Response: 56.6

5.3.3.1 Number of sports and cultural activities / competitions organised at the institution level year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
65	59	59	50	50

File Description	Document
Report of the event	View Document
Number of sports and cultural activities / competitions organised per year	View Document

5.4 Alumni Engagement

5.4.1 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

Response:

The Alumni Association contributes significantly to development of institution. In MGMCET alumni meeting was held on 5th April 2012. Since then the alumni meet is organised every. The Alumni Association of the institution functions through its administrative body, which holds periodic meetings, elects office bearers and regularly updates the database of alumni and carries out activities to meet its objectives. To facilitate alumni activities, fully furnished office space having internet and telephonic facility, is also provided in the institute premises.

Alumni Association Responsibilities: Some of the distinguished alumni are invited as a chief guest for cultural and technical activities. Our students and institute are benefited in various fields such as students placement, training, expert lecture, career guidance session, industrial visits and mentoring from the interaction of alumni. Now institute has an “Alumni Association” having registration no **F-13676**. Our alumni association is working under the guidance of alumni association of **VJTI**, Matunga.

. Apart from these others, responsibilities are given/ executed as follows.

1. To promote interaction between the MGMCET institute and its Global Alumni, and promote the interest of the current, and future students of the institute.
2. To encourage the establishment of similar national-level MGMCET Alumni Chapters within, and outside of India.
3. To help and guide students and alumni of the Institute for anti-drug, anti-ragging and any other anti-

social activities.

4. To publish books, periodicals for public interest, arrange blood donation, eye donation and health awareness camps and also to provide help to victims and victim areas of natural calamity and disasters.
5. Some alumni also guided the students who participated in Hcakathon (organized by AICTE), Avishkar (Organized by University of Mumbai) and others technical events.
6. Alumni are also the members of various committees (Departmental Placement committee and Departmental Advisory Committee—etc)
7. Some distinguished alumni have reviewed and guided advanced learners and BE projects.
8. Alumni Col. Param Veer Singh, (Indian Army) visited our campus and delivered lecture on “Career opportunity in Army”.
9. Alumni Akshay Naik, (Seimens India) delivered the lectures on “Latest Trends in Imaging Techniques”.
10. During the visit of Respected Principal at Dubai, he interacted with five alumni members.
11. Some alumni are contributing to extracurricular activities by judging various competitions during annual festivals and also providing some assistantship in mentoring the different clubs.

We are proud of our distinguished alumni who have received National and International recognition for their contribution

To name a few –

1. Col. Param Veer Singh – Indian Army
2. Mr. Pardeep Pol, section engineer, Indian Railway.
3. Mr. Deepak Kunawat, project manager, CIDCO.
4. Mr. Jiten Bhardwaj, Marketing India Head, TCS
5. Mr. Akshay Tandel , Data analytics, Facebook, USA
6. Mr. Rajesh Chandramani , Senior Vice President , Tech Mahindra
7. Dr. Devendra Shah , Vice Principal , TCET , Mumbai
8. Mr. B. K. Kushbah , Deputy Project Manager, MRCL
9. Mr. Parveen Devikar , Director Sales, Rak Free Zone , UAE.
10. Dr. Anant Madabhusi, Professor, Case Western Reserve University , USA (https://case.edu/medicine/ccir/faculty/anant-madabhushi)

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

5.4.2 Alumni contribution during the last five years(INR in Lakhs)
? 5 Lakhs

4 Lakhs - 5 Lakhs

3 Lakhs - 4 Lakhs

1 Lakh - 3 Lakhs

Response: ? 5 Lakhs

File Description	Document
Any additional information	View Document
Alumni association audited statements	View Document

5.4.3 Number of Alumni Association / Chapters meetings held during the last five years

Response: 12

5.4.3.1 Number of Alumni Association /Chapters meetings held year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
4	2	2	2	2

File Description	Document
Number of Alumni Association / Chapters meetings conducted during the last five years	View Document
Any additional information	View Document
Report of the event	View Document

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the institution

Response:

Institute has vision and mission which are innovative in nature. They satisfy the needs of society by providing the quality education through achieving excellence in technology.

Vision of the Institute

To become one of the outstanding Engineering Institute in India by providing conducive and vibrant environment to achieve excellence in the field of Technology

Mission of the Institute

To empower the aspiring professional students to be prudent enough to explore the world of technology and mould them to be proficient to reach the pinnacle of success in the competitive global economy

The Chairman of the Trust being alumnus of IIT Bombay, leads the Board of Governors formed as per AICTE norms with Management Trustees, Experts from Industry and Education, Nominations from regulatory authorities and senior faculty of the Institution. The Principal of the Institute works ex-officio Member Secretary with Board of Governors and is responsible for execution of the decisions, conduction of the meetings, regular functioning and monitoring the activities on campus maintaining harmony. Governing board looks after the critical functions of institute like planning for budget, approving the expenditures, recruitment of required faculties and staff. The board takes periodical reviews of the functioning of the Institute and prepares strategic plans. For the convenience and effectiveness of functioning various committees are assigned.

The distinctive characteristics are stated by addressing the needs of society and institute’s value orientation with its core competencies, core values and strategic objectives as mentioned below:

Core competencies:

a) Structured and guided teaching learning

b) System-driven student-centric services

c) Proactive student professional & personality development schemes

Core Values:

a) Integrity & accountability

b) Respect for each individual

c) Sensitivity towards social responsibilities

Strategic objectives:

a) To become an institute of repute

b) To become the preferred recruitment destination by the industry

c) To become an institute fostering active R&D culture at undergraduate/post graduate level

d) To become an institute nurturing budding engineers to become entrepreneurs

The governance comprising of Governing Body (GB), Local Management Committee (LMC) and Internal Quality Assurance Cell (IQAC). IQAC discusses and defines to evolve quality benchmarks of academic and administrative activities. IQAC also suggests initiatives like Vision, Mission, short term and long term goals, quality policies which are taken up in academic Committee .All academic and administrative matters are discussed, deliberated and decided in Academic Committee meeting under chairmanship of Principal.

HoD conducts meetings at departmental level to disseminate the decision and work out action plans. The HoDs are also encouraged to bring back suggestions of faculty members to combined meeting of Hods and Deans.The departmental committee decides timetable, subject allocation, proposal for purchase and maintenance of equipment and consumables. The department also organizes workshops, industrial visits, internships, conferences and guest lectures. With continuous monitoring of college activities several new initiatives have emerged such as orientation program every semester, project for advance learners, industry readiness and conferences.

File Description	Document
Any additional information	View Document

6.1.2 The institution practices decentralization and participative management

Response:

Institute has a mechanism for delegating the authority and providing operational autonomy to all the functionaries leading towards decentralized governance system. Effective decentralization provides a better practice for successful and reinforce productivity of the college. Through participative management, the committees handle and ensure their activities in a complete and constructive way.

Committees are formed for the various curricular, co-curricular and extracurricular activities are carried out during the academic year. These committee deliberate an new initiates and come up with schemes for all round development of students. The departments are encouraged to prepare action plans and execute the activities in HoDs and Deans meeting.

College promotes the participative management by encouraging faculty, staff and students to involve at various levels of learning procedures. Governing body has been formed to decide policies & take major decisions. Principal is the head of joint venture of academic and administrative affairs. He conducts periodic meetings with Deans and HoDs evolves policies through deliberations to accomplish the mission and vision. All policy changes and academic activities are planned through a process of dialogue with stakeholders at various levels.

Director General , Principal and Dean Academic takes care of the planning, conduction, assessment and corrective measures for smooth and effective implemenattion of academic matters.. Each department has got one academic coordinator to execute departmental activity in coordination with HoDs and Deans. Each class is having a faculty in-charge to monitor the academic activities and other issues of the students. Faculty mentors help students academic and other issues. Institute level academic calendar for various participative activities is developed and discussed with HoDs and Deans before its implementation. Head of the Departments along with faculty members, execute the plan for its successful implementation as well as documentation. Departments are actively engaged in organizing various student centric programmes so that the creative capacities of students are positively utilized to their full potential for bringing out the best among them. As a part of the professional and personal commitment, the Head of the departments actively engage themselves in the parent-teacher meets to find out the strength and weakness areas of students which can be worked out for the betterment of departments. Various teams and team leaders are formed based on aptitude of different students for activities such as technical, placement, sports and cultural.

The meetings are conducted on regular basis with Director General, Principal and Dean Academic along with the HoD’s of departments for the implementation of academic activates at institute level. HoDs conduct Faculty meeting regarding implementation of academic calendar. The faculty and class in charges carry out the implementation of guidelines meticulously.

HoDs responsibility includes governance at the Departmental level towards smooth and strict adherence to academics, extension and maintenance of the classroom and Laboratory facilities. A well organized Placement Cell provides the employment opportunities & training to students to lead the organizations. Placement cell provides the information, advice and counselling to the students for their career objectives and prepare for job search.

File Description	Document
Any additional information	View Document

6.2 Strategy Development and Deployment

6.2.1 Perspective/Strategic plan and Deployment documents are available in the institution

Response:

The Institute has clear strategic direction for itself and is determined to obtain international benchmarks. It is developed in the Joint meeting of HoDs and Deans under chairmanship of Principal to ensure progress of college. Institute provides excellent training in Engineering and Technology Disciplines for better employment opportunities. To attract the best talent we shall provide the best of the facilities intellectually

simulating environment for Research and Innovation. Institute will be undertaking joint research with other organizations and Industries establishing research facilities and open innovation centre. Institute with Industrial organizations and professional bodies will coordinate responsibility towards society for development, public awareness and training modules. These recommendations are discussed in HoDs meeting before finalization. College Admission system has online plan implemented by ERP software WORDPRO which takes care of all aspects of Institutional functioning

Strategic plans:

1. Approval of UGC under 2f
2. Approval as a research centre by University of Mumbai
3. Digital Institute-Implementation of ERP
4. Co-Curricular and Extra Curricular Activities under Technical and General Club
5. Increasing Intake of PG from 18 students to 24 students in Electronics & Telecommunications and Computer Engineering
6. Institute Industry Linkage through Resource Persons from Industry for Interaction with the Students
7. Accreditation by NAAC and NBA
8. Permanent Affiliation by University of Mumbai
9. Centre of Excellence in Thrust areas
10. Inviting Experts from within an Abroad:

- Dr Kornel F. Ehmann Visiting and Conducting Seminars in two successive years;
- Russians with Dr. Inamdar of Vishwa Niketan for Internship Abroad.
- Dr Chandrkant Desai, University of Arizona

Successfully Implemented Example: **Towards Digital Institute**

Digitization has not just made an impact on reducing paperwork and overall documentation but also the system has become a lot more transparent and plain-sailing. With an aims to minimize the usage of physical documents, the new digital system enables the students sharing of the e-documents, which will be done with the help of registered repositories.

Major functions currently carried towards Digitization are:

1. Google class room for students of each class along with faculty coordinator. Assignments are assessed and report is also generated.
2. MOOCS are the video lectures prepared by some of the faculty and posted on student's group before actual commencement of lecture.
3. Exam Software: All mark sheets and records are maintained through VIVA software.
4. On-line feedback: To improve the teaching quality, Institute has fair mechanism to get the reviews of students via online feedback through Google sheet.
5. Whats App Groups: Students and faculty members communicate through WhatsApp group. Faculty shares teaching material , resolve students' query , important notices and general discussion are also carried out.
6. SMS to the parents and students: - Class in charges /faculty members send the message through digital system to the parents through GUPSHUP and ERP software.
7. SBI collect: All monetary transactions are made online through SBI collect.

8. NEFT: Institute is making all payments through NEFT like supplies, resource person and external Examiners receive digital payment.
9. Biometric: Attendance for all faculty and staff is recorded through Biometric system.
10. Digital payment for transcript of students.

File Description	Document
Any additional information	View Document

6.2.2 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

Response:

MGM’s College of Engineering has well established organizational structure to execute out smooth functioning of administrative and academic processes. Various bodies are formulated which constitutes the organization chart. The governing body is the highest decision making body as per the guidelines of AICTE constituting members of the management, various statutory bodies, Principal and nominated faculty members. Local Management Committee includes member of management, principal, experts and nominated faculties.

The constituents of the organization structure are as follows:

Every department has Departmental Committee to monitor the implementation the policies in academics and work environments. It comprises HoD, one senior faculty, alumni, student, parents and industry person. Departmental Committee has adequate participation in making decisions in academic and administrative processes under their preview. The overall academic and administrative activities are planned and discussed before implementation as mentioned below.

1. Governing body

2. Local management committee (College Development committee)

3 Principal

4. IQAC

5. DAC (Departmental Advisory Committee)

All day –to- day activities are

- Principal
- Dean(Academics)

- Dean(R and D)
- Dean (FE)
- Head, Biomedical
- Head, Biotechnology
- Head, Chemical Engineering
- Head, Civil Engineering
- Head, Computer Science Engineering
- Head, Electrical Engineering
- Head, Electronics and Telecommunication Engineering
- Head, Mechanical Engineering
- Head, Information Technology

Recruitment of the faculty takes place as per AICTE norms. Advertisement is published in all India level News Paper and Local News paper. Selection is made through panel of experts from Institute and Industry. Service rules are prepared and revised from time to time. Promotion happens through career advancement scheme as well as other related process. All types of grievance are resolved through grievance redressal committee.

File Description	Document
Any additional information	View Document

6.2.3 Implementation of e-governance in areas of operation

1. **Planning and Development**
2. **Administration**
3. **Finance and Accounts**
4. **Student Admission and Support**
5. **Examination**

A. All 5 of the above

B. Any 4 of the above

C. Any 3 of the above

D. Any 2 of the above

Response: A. All 5 of the above

File Description	Document
Screen shots of user interfaces	View Document
ERP Document	View Document
Details of implementation of e-governance in areas of operation Planning and Development,Administration etc	View Document
Any additional information	View Document

6.2.4 Effectiveness of various bodies/cells/committees is evident through minutes of meetings and implementation of their resolutions

Response:

MGM's College of Engineering started student’s chapters such as IEEE, AIChE, SAE, IIChE and CSI for overall development of students. (Technical, leadership, organizational, finance management skills, etc.) of various engineering branches in their respective technical domains. Developmental activities carried out under SAE (Society of Automotive Engineers) activities.

College sponsors students to participate in Hackathon, Supra Car and other Competitions held at various locations with full financial assistance. Various bodies have well defined functions and follows the systematic procedure to bring out the best result.

Project Based Learning

Project Based Learning is monitored by Academic Committee comprises of Dean Academics and Senior faculty members. Project Based Learning is for upgrading the skills of students , also to meet the requirements of Program Outcomes.

Committee deliberated in detail and decided to implement project based learning for advanced learners since Academic year 2015 – 2016. Academic committee is constituted to workout the detailed guidelines for implementation of project based learning for the advanced learner through project assigned.

Highlights of project based learning

1. Engages students in complex, real-world issues and problems

2. Requires students to use inquiry, research, planning skills, critical thinking, and problem-solving skills

3. Requires students to learn and apply content-specific skills/standards

4. Provides opportunities for students to learn and practice interpersonal skills in cooperative teams

5. Gives students practice in using the array of skills needed for their careers in terms of time/resources,

individual responsibility, interpersonal skills, learning through experience, etc.

6. Includes expectations regarding accomplishments/learning outcomes

7. Incorporates reflection activities that lead students to think critically about their experiences and to link those experiences to specific learning standards.

8. Ends with a presentation or product that demonstrates learning and is assessed; the criteria could be decided upon by the students.

At the beginning of the semester, department will identify the list of advanced learner based on track record of academic performance. The department also ready with projects given by subcommittee of Academic Committee.

Students can choose the project either from subcommittee or by their own. Exceptions are also made even though students are not advanced learner but chosen by project convener. Projects will be allocated to students as the advanced level of laboratory experiments . Monitoring of the project is being carried out by project guides and Academic Committee members. Inter department and Intra department competitions are arranged to judge the project. The Judges are mostly from Industry to evaluate and ascertain the future work to be done on these projects.

At the outcome of this students get a feel for solving complex engineering problems as envisaged in program outcome. The students encouraged by this participated in National and International Competitions and won prizes. Smart India Hackathon teams participated and won a Prize In 2016-17. In 2017 -18 also three teamsof Hackathon participated and won two prizes. The details of the prizes won are enclosed in link. Students participated in State level also won prizes in poster presentations and Avishkar competition and won **gold medal**

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

6.3 Faculty Empowerment Strategies

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

Response:

The Institute has variety of welfare schemes for teaching as well as non-teaching staff as follows

1. **Skill up-gradation of faculty:** Faculty members are motivated to pursue higher education. Some faculty members are granted study leave with payment.
2. **In-Service increment**: Employees (Faculty and Staff) completing 25 years of service at MGMCET are given one additional increment in salary as the token of appreciation.

3. **Emergency Loan Facility**: This type of loan is available without interest for the emergency to the staff as per the need
4. **Group Insurance:** Group Insurance has been taken for 167 employees with sum assured for 1 Lakh Rs per employee per year from oriental Insurance company Ltd and policy no 131400/47/2020/23
5. **Gratuity:** This scheme was initiated in year 1992 for retirement benefits or on leaving the job. Gratuity is received by an employee in gratitude for their services offered to the Institute.
6. **Doctor on call:** This facility is available for all staff and students. In house hospital is available where treatments are given. All the employees and students are entitled for 50% subsidization of medical treatment expenses.
7. **Employees' Provident Fund** is deposited along with same contribution from Institutes' side
8. **Freeship**: Subsidized fees to the wards of employees of the Institution.
9. **Medical Expenses:** MGM Trust Provides concession of 50 % to all employees. In emergency (critical situation) medical expenses to the extent of 100% are also provided.
10. **Advance against salary:** In case of medical or other emergency needs, advance against salary and Festival advance without interest is also given.
11. **Deputation of faculty for research:** Faculty members are given leave for pursuing research work. In case of local research center, faculty members are given duty leave as per requirement.

File Description	Document
Any additional information	View Document

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

Response: 11.13

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

2017-18	2016-17	2015-16	2014-15	2013-14
47	32	14	13	11

File Description	Document
Details of teachers provided with financial support to attend conferences,workshops etc during the last five years	View Document
Any additional information	View Document

6.3.3 Average number of professional development /administrative training programs organized by

the institution for teaching and non teaching staff during the last five years

Response: 6

6.3.3.1 Total number of professional development / administrative training programs organized by the Institution for teaching and non teaching staff year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
15	06	05	02	02

File Description	Document
Details of professional development / administrative training programs organized by the Institution for teaching and non teaching staff	View Document
Any additional information	View Document

6.3.4 Average percentage of teachers attending professional development programs viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Program during the last five years

Response: 32.03

6.3.4.1 Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
178	41	78	24	23

File Description	Document
Details of teachers attending professional development programs during the last five years	View Document
Any additional information	View Document

6.3.5 Institution has Performance Appraisal System for teaching and non-teaching staff

Response:

Performance appraisal

MGMCET has the well define and elaborate mechanism to evaluate the performance of the faculty through Faculty appraisal form. Appraisal process boosts the professional knowledge and growth. Therefore it is mandatory for every faculty to submit performance appraisal every semester.

Faculty appraisal system evaluates the following parameters:

Teaching and Learning like attendance of the faculty, lectures conducted against the scheduled number of lectures, syllabus completion, paper assessment, result analysis, conferences attended, publications, strength and weakness etc. Appraisal form also mentions about the examination Paper setting, evaluation of answer sheets at college and Institute Assessment Process(CAP),member of university constituted committee, syllabus revision committee. Participation of faculty in Performing as the Teacher related to Class room planning & Control, Students guidance & counselling, curriculum /learning-resource are well defined.

Co-curricular, extension and professional development: In addition to teaching, capacity to get the work done by subordinates and relation with colleagues, leadership development and managerial skill, administrative skill/ functions and interaction with external environment has also being assessed through this process. Faculty has the responsibility of mentoring and counselling the students for academics and professional development. Initiatives like Swatchh Bharat,Yoga, Activities under Digital India, Activities under Unnat Bharat Abhiyan, Skill Development Activity are also appreciated in appraisal activity

Research, publication and academic contribution: No teaching can be complete without research and development activity. To nurture the research towards the innovation, introduction and improvement of products and processes.MGMCET has Innovation and creativity cell undertaken by research associates in developing new services or improving existing services or products. The faculty members get the appreciation for papers publication and innovative creation. Research is strengthen by academic and industry interaction.

Faculty members are motivated and their quality and length of service is reviewed under a transparent system and appraisal with comments of head of departments is analyzed by Principal.

After the evaluation, every concern staff is either appreciated or directed for further improvement

File Description	Document
Any additional information	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

1. The college has an effective and independent mechanism for auditing the accounts. The accounts of the college are audited by chartered accountant regularly as per the Government rules.

2. There are no audit objections since the institution follows a good system of internal controls like calling quotations, comparison of rates, preparation of purchase order etc. Approvals of every purchase has to be made through properly constituted purchase committee. The purchased material/ machinery is verified by the concern authority. MGMCET has the policy of digital payment for every transactions. There is absolute transparency in maintaining accounts.

3. MGMCET has conducted internal and external financial audits in last five years with the mechanism for settling audit objections.

4. The auditor ensures that all payments are duly authorized. The auditor conducts a statutory audit at the end of the financial year. After the audit, the report is sent to the Management for review

File Description	Document
Any additional information	View Document

6.4.2 Funds / Grants received from non-government bodies, individuals, Philanthropists during the last five years (not covered in Criterion III) (INR in Lakhs)

Response: 0.84

6.4.2.1 Total Grants received from non-government bodies, individuals, philanthropists year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
00.05	0.20	0.25	0.34	0

File Description	Document
Details of Funds / Grants received from non-government bodies during the last five years	View Document
Any additional information	View Document

6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

Response:

The college is self financing Institute hence major source of funding is fees paid by students. The student's fees are decided by the Fee regulating authority (Earlier Shikshan Shulka Samiti), Govt of Maharashtra. The college fund is utilized for providing salaries to staff and faculty members, recurring and non recurring maintenance of equipments and student activities. The financial resources of the college are managed in a very effective manner. There is fully computerized accounts department in the college. Accounts

department takes care of the collection of tuition fees through SBI Collect, salary distribution, tax payment, loan distribution. Stores will prepare purchase orders for the laboratory equipment's, teaching aids, furniture, payment of bills, maintaining the department budget allocation and expenditure etc. The Institute is organizational member of many professional bodies at individual and college level such as Institute of Electrical and Electronics Engineers, Indian Institute of Chemical Engineers (IICHE), American Institute of Chemical Engineers (AICHE), Computer Society Of India (CSI), ICT Academy etc.

These professional membership along with Alumni Association of the college organizes seminars/symposiums/workshops etc by different departments. MGMCET has got the research grant from national important bodies through ICMR, BRNS, AIChE, IEEE to develop collaborative research development program/projects and the incubation centre. These activities bring sponsorship from industries for research. College alumni participate at college technical, cultural, sports events organized every year and arranged research machinery for laboratory. All type of contribution in digital or kind are always acceptable for the development of college. There are few recent events like ManGalaM2018, ManGalaM2017, Wave 2015, and Wave 2016. MGMCET has the privilege of having medical college around the campus. Collaborative medical engineering research programs have taken place in recent past which led to industrial and social research. This has developed both in terms of fiscal benefits and social responsibilities through board of apprenticeship training program of Government of India. Alumni also are coming forward for helping in modernization of the existing laboratories, donation of equipments/systems as goodwill gesture in addition to taking part in adjunct/technical lectures organizing industrial visits.

Rain water harvesting is done for water conservation to optimal use of water. Awareness is spread amongst students to be conscious of this resource. Implementing digitalization, paperless administration is achieved to protect environment. Energy utilization is done carefully maintaining the database of daily consumption, promoting use of LEDs and Solar panels.

Sponsored project by BRNS, ICMR provide funds for research and development activities.

File Description	Document
Any 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

Response:

The college has set up IQAC in July 2016 in accordance with the guidelines of NAAC. Members are chosen to achieve goal of this cell. It aims at providing quality education fulfilment of Institute's vision. The IQAC ensures proper academic planning, execution, monitoring and evaluation.

The following are the teaching and learning reforms done after institutional reviews.

Example I –Academic audit

Head of the Department conducts regular meetings to ensure proper delivery of course and its timely completion. Monthly academic feed-backs are collected to ascertain the completion of syllabus. Reports of lecture planned and actual covered by faculty are available in ERP.All course files are checked by HoD as per requirement in Academic Calendar. Feedback from students is being collected for mid –term and end term. Course outcome analysis for each class is taken at the end of the semester. All department activities such as regular assessment and improvement of Monthly student‘s attendance Record, Class Test, Regular assessment of lab journal, Project Monitoring and Organizing various extra & co-curricular activities are monitored.The purpose of an academic audit is also to encourage departments to strengthen the techniques and processes to improve the quality of their work. Academic audits invite departments to describe the strengths and weaknesses of their efforts to improve the academic quality of their programs and identify plans for improvement.

Example 2-Review of Teaching Learning Process

i) Workbook:

Subjects like Engineering Mechanics, Engineering Mathematics and Basic Electrical Engineering are known for their contribution in the failure rate in first year engineering. It has been a perpetual challenge to get a good result in these subjects.

ii) Assignment

Assignments are given to the students as per academic calendar with Blooms Taxonomy .Assignments are given periodically throughout the semester for practice. All the assignments and class test question papers are mapped to blooms taxonomy defined as per Revised 2001 model

iii) Course file of Faculty

The course files contains course plan, assignments, Practice Question paper and attendance details of students.The course files are checked by HoDs for compliance.

iv)Internal Assessment

Institute conducts Internal Assessment for all exams centrally. The marks are entered in the system for Class Test 1 and Class Test 2. The answer books are shown to students and grievances are addressed.

v) Workshops

During every semester departments at least conduct one workshop for faculty and students for enhancing technical capabilities in latest technologies.

vi) Practice Question Paper with Solution

All the faculties prepare practice question paper and solution and given to students as a learning tool to prepare them for examinations .

vii) Project based learning by Advanced learners

Project-based learning is designed for advanced learners to provide them on opportunity to develop thinking skills and conceiving problem statements to address Bloom's Taxonomy level 5 and 6 and the program outcomes to conduct investigation of complex problems for advanced learners.

viii) Internship for the Students:

It was decided to explore the opportunities for sending the students for internship in the industries following a well organized process

File Description	Document
Any additional information	View Document

6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms

Response:

The college plans to organise the teaching, learning and evaluation schedules in following way.

1. Teaching –learning process: Teaching and learning is the process that includes many variables. These variables interact as learners work towards their goals and incorporate new knowledge, behaviour and skill that add to their range of learning experiences.

There are six steps in teaching learning process

1.Analyzing the need for implementing an active learning strategy.

2.Identify topics and questions

3.Identify learning objectives and outcomes

4.Plan and design the activity

5.Identify sequence of learning events

6.Evaluate and assess

Effective teaching strategies

Effective teaching involves not only the use of tools, techniques and strategy to optimize students' learning but also an understanding of context, in particular how your students learn, how they process information , what motivates them to learn more and what impedes the learning process.

The Institution follows the academic calendar which is released before commencement of the semesters. Allocation of subjects is done as per the expertise of the faculty. Faculty members are send for up

gradation of skill and faculty development programmes Faculty prepares lecture plans as per university syllabus. Conduction of the lectures is done by regular monitoring by Dean Academics, Dean FE, HoDs. The current system of teaching learning process is reviewed through MOOC's, Moodle, Google Classroom and Work books for First year students.The progress of the student is monitored by course coordinator and Head of Department through continuous assessment. The intended Course outcomes are achieved by facilitating teaching, learning and assessment appropriately based on the course need. Institute strive to motivate and engage all their students in learning rather hen simply accepting that some students are destined to do poorly.

ii) **Structures & Methodologies of Operations:** Methodology is the systematic theoretical analysis of the methods applied to a field of study. To discuss the content in the subject in the background of the topic, Massive open online course(MOOCs) is free web based distance learning program that is designed for the participation of large number of graphically dispersed students.A concise, targeted video lecture is uploaded for students before actual conduction of lecture. MOOCs include discussion forum and allow people to bounce ideas around and discuss learning together.

iii**) Learning utcomes:** Learning outcomes are that statements that describe significant and essential learning that learners have achieved and can reliably demonstrate at the end of course or program. Students are well conversed with the lecture to be taken and understand the contents. Unit tests results are declared on time and students grievances can be addressed. Successful completion of term work by students allows them to promote to higher classes.

Example of an Activity 1: Modular Object Oriented Dynamic Learning Environment / Google Classroom

Modular Object Oriented Dynamic Learning Environment is a free and open-source learning management system written in PHP language and distributed under the GNU operating system. General Public License. Modular object-orientated dynamic learning environment allows for extending and tailoring learning environment using community sourced plugins. Moodle is used for blended learning, distance education ,flipped class room and other e- learning projects

Google Classroom is a free web service developed by Google aims to simplify creating, distributing and grading assignments in a paperless way. The primary purpose of Google Classroom is to streamline the process of sharing files between teachers and students. Google Classroom combines Google Drive for assignment creation and distribution, Google Docs, Sheets and Slides for writing, Gmail for communication, and Google Calendar for scheduling. Students can be invited to join a class through a private code, or automatically imported from a college domain. Mobile apps, available for Android devices, students attach assignments. Each class creates a separate folder in the respective user's Drive, where the student can submit work after that teacher can review and give grades.

Example of an Activity 2: Workbooks Developed for First Year Courses:

MGM's college of Engineering and Technology developed workbook for first year courses (concerned faculties of other then MGM's Engineering colleges was involved for two workbooks)

Workbooks are learning tools. Workbooks have been prepared for AM-I, AP-I, AC-I, EM, BEE, AP-II, AC-II, AM-II, SPA. In the workbooks thought provoking questions have been framed to cover all the topics in the syllabus. The workbook includes multiple choice questions, short answer type questions, reasoning

questions and numerical examples. Workbooks are reviewed by class teachers of concerned course during the semester regarding students action of workbook qualities.

File Description	Document
Any additional information	View Document

6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year

Response: 2.8

6.5.3.1 Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
9	04	01	00	00

File Description	Document
Number of quality initiatives by IQAC per year for promoting quality culture	View Document

6.5.4 Quality assurance initiatives of the institution include:

1. **Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements**
2. **Academic Administrative Audit (AAA) and initiation of follow up action**
3. **Participation in NIRF**
4. **ISO Certification**
5. **NBA or any other quality audit**

A. Any 4 of the above

B. Any 3 of the above

C. Any 2 of the above

D. Any 1 of the above

Response: A. Any 4 of the above

File Description	Document
e-copies of the accreditations and certifications	View Document
Details of Quality assurance initiatives of the institution	View Document
Any additional information	View Document

6.5.5 Incremental improvements made during the preceding five years *(in case of first cycle)* Post accreditation quality initiatives *(second and subsequent cycles)*

Response:

IQAC sets the benchmark for various activities and processes. It prepares the policies, formats and documentations in order to cater the requirements of various certificating/accrediting bodies. The Institute plans the teaching, learning and evaluation schedules by preparing academic calendar. The academic calendar is monitored by Principal, Deans, HoDs, Academic coordinator as per the directives given by IQAC through Department.

Through interactive learning, collaborative learning and independent learning, efforts are being taken to build the student centric system. Utilization of resources enhances effectiveness of teaching learning process. The needs of advanced domain knowledge for students and faculty is fulfilled by organizing various events, training, workshops etc. Faculty members are also deputed for attending various courses, conferences symposium etc as per their need/interest.

Description of quality enhancement initiatives in the academic and administrative domains successfully implemented during the last three year.

Quality Enhancement in Academics

1. **Introduction assignments for the students**: Assignment are given to the students from concerned subject for continuous learning covering the entire subject. Assignment carries grading which covers short questions and objective type questions to prepare students for competitive exams.

2. **Practice question paper** : Practice question paper is prepared by teachers on seeing the importance of topic and Old question papers to help students for understanding exam pattern. Solution of practice question paper is also discussed so that students can learn the sample solution.

3. **Examination reforms** leading to Question paper addressing CO, PO, PI, and Blooms Taxonomy.

4. **Project Based Learning** for advanced learners . Projects are assigned to students at the start of semester for each subject and reviewed by faculties .

Innovative and Creative Activities : Students participate in University level competitions (Avishkar).

Students also developed consumable products at lower price phenol .

Research and Developments: The college stressed upon R & D. It got two research projects sponsored by Board of Research in Nuclear Science (BRNS), Department of Atomic Energy government of India (DAE) on dental implant and optical fibres respectively. These project were executed with active collaboration from MGM dental college and in house EXTC and computer department.. Two more Biomedical projects got sanctioned from BRNS in 2015 and 2017 respectively. Presently two scholars are pursuing PhD in the subject. In 2017 another project was sanctioned by BRNS. ICMR project Impact of Radiation from cell phone towers and cell phone use on health of pregnant woman, neomates and infants.

5. **Academic Audit**: A department provides a review of the processes or procedures to provide a quality education through regular checks. Academic audits focus on planning and execution activities by faculty members

6. **Use of MOOCs**: A massive open online course (MOOC) is a free Web-based distance learning program that is designed for the participation of large numbers of geographically dispersed students. Faculty prepare small video of the topics well in advance and circulates to students through Google class rooms. Students are conversed with the topic taught and this improves the understanding of the subject.

7. **Earn and Learn scheme**: The MGMCET encourages students to Earn and Learn Scheme for Economically weaker section and needy ones are selected on criteria. . To make the library digital and make it user friendly .Students can work in library in vacation and work on online Library management system. Also encourage the students to make it green and clean.

8. **E-Yantra Lab Setup**: MGMCET Setup Robotic Lab Sponsored by MHRD under the National Mission on Education through ICT program in collaboration with IIT, Bombay.

Quality Enhancement in Administrative

Successfully Implemented Example: **Towards Digital Institute**

Digitization has not just made an impact on reducing paperwork and overall documentation but also the system has become a lot more transparent and plain-sailing. With an aims to minimize the usage of physical documents, the new digital system enables the students sharing of the e-documents, which will be done with the help of registered repositories. Hence this assures on the authenticity of the documents available online.

Major functions currently carried towards Digitization are:

1. Google class room for students of each class along with faculty coordinator. Students can submit assignments and communicate their query. Assignments are assessed and report is also generated.

2. MOOCs are the video lectures prepared by some of the faculty and posted on student’s group before the actual commencement of lecture. Students can view these videos and get the basic idea of topic.

3. Exam Softwares: All mark sheets and records are maintained through VIVA software.

4. On-line feedback: To improve the teaching quality, Institute has fair mechanism to get the reviews of students via online feedback through Google sheet.

5. Online Aptitude Test: Institute conducts Online Aptitude test in some of the courses to make students ready for better placement.

6. WhatsApp Groups: Students and faculty members communicate through WhatsApp group. Faculty shares teaching material , resolve students' query , important notices and general discussion also on this group.

7. SMS to the parents and students: - Class in charges /faculties send the message through digital system to the parents through GUPSHUP and ERP software.

8. SBI collect: All monetary transactions are made online through SBI collect. Students make payment of all type of fees through this facility .

9. NEFT: Institute is making all payments through NEFT like supplies, resource person and external Examiners receive digital payment.

10. Biometric: Attendance for all faculty and staff is recorded through Biometric system.

11. Digital payment for transcript for students.

File Description	Document
Any additional information	View Document

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

Response: 8

7.1.1.1 Number of gender equity promotion programs organized by the institution year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1	3	1	2	1

File Description	Document
Report of the event	View Document
List of gender equity promotion programs organized by the institution	View Document
Any additional information	View Document

7.1.2

1. **Institution shows gender sensitivity in providing facilities such as:**
    1. **Safety and Security**
    2. **Counselling**
    3. **Common Room**

Response:

1.Safety and Security:

The institute has a strict Security checks at entrance for every individuals. It is compulsory for the Students and staff to wear Identity card whenever they are inside the premises.

Considering the gender sensitivity, Institute has deputed separate lady security guards in addition to gents security guards, who remains available at all times in college hours.

In each class under the gender equality policy one student is selected as girls representative student on merit basis. The objective is that the problems related to girl students should reach higher authorities such as Class Advisor or HOD. Also any girl students can inform the problem to the higher authorities through suggestion boxes kept near Principal Cabin (one box for suggestions to Principal and another to Chairman) or by email.

Institute has installed 32 CCTV Cameras at different locations such as Institute Entrance, all corridors, Computer Centre, Examination cell and Principal's office.

All corridors and laboratories are equipped with fire extinguishers. There is a strict code of conduct circulated to all concerned and disciplinary action is taken in case of complaint. Girls' hostel facility is provided at Sanpada and bus arrangement for the same is also available for Pick up and drop.

Institute has Women's Grievances Cell handled by Women's Harassment Redressal Committee.

2.Counseling:

The major objective of the counseling is to facilitate Academic, Emotional, Social and cognitive development of the students hence to empower them in their learning and personal development.

General counseling is given to all the students during the mentor hour and to specific students whenever the need arises. Mentor (faculty) will take care of about 20 students. Students are allocated to specific mentor for entire semester. Specific issues related to mentee, identified by respective mentors during departmental counseling are taken care by mentors. Students are counseled by Mentor, HOD or Principal depending upon the gravity of issue. The critical cases are referred to professional counselors from MGM Institute of Health Sciences.

To make girl students understand that women can succeed as engineers, opportunities are given to them to interact with other successful women entrepreneurs and leaders. Although there is a provision for psychological counseling given to the students through medical practitioners from MGM Hospital, no such case has been reported. So far the college didn't come across any serious issue related to girl students.

3.Common Room:

A separate common room is available for the girl students. This has been designed to give female students a place to relax, study and have discussions in free time.

File Description	Document
Any additional information	View Document

7.1.3 Alternate Energy initiatives such as:

1. **Percentage of annual power requirement of the Institution met by the renewable energy sources**

Response: 86.66

7.1.3.1 Annual power requirement met by the renewable energy sources (in KWH)

Response: 135569

7.1.3.2 Total annual power requirement (in KWH)

Response: 156432

File Description	Document
Details of power requirement of the Institution met by renewable energy sources	View Document
Any additional information	View Document

7.1.4 Percentage of annual lighting power requirements met through LED bulbs

Response: 53.25

7.1.4.1 Annual lighting power requirement met through LED bulbs (in KWH)

Response: 12944

7.1.4.2 Annual lighting power requirement (in KWH)

Response: 24308

File Description	Document
Details of lighting power requirements met through LED bulbs	View Document
Any additional information	View Document

7.1.5 Waste Management steps including:

- **Solid waste management**
- **Liquid waste management**
- **E-waste management**

Response:

Response: YES

Solid waste management

In collaboration with CIDCO, institute had arrangement for solid waste management. Dustbins are provided in each and every lab and floor. A separate housekeeping team is appointed which takes care of solid waste. Also separate dustbins are provided for Dry and Wet garbage. The dry and wet waste is finally handed over to CIDCO. An external agency had given the contract for cleaning and recycling of paper waste such as old journals, files, workshop waste. The activity happens on regular basis in a semester.

Liquid waste management

Sewage treatment plant is installed in the campus for liquid waste treatment, recycling of liquid waste is done through it.

E-waste management

A committee examines gazettes and other items suggested for writing off as E-waste comprising of electronic gazettes, PC's, Laptops etc. E-waste is collected and sent for recycling through a private Agency.

File Description	Document
Any additional information	View Document

7.1.6 Rain water harvesting structures and utilization in the campus

Response:

Response: YES

The rain water harvesting system for the entire campus is implemented. Rain water collected through storm water drains is directed to a pond which is constructed within the campus. In the similar way the roof water is collected from the drain pipes placed along the external walls and channeled through interconnected surface drains, and directed to the pond. Approximately 2, 41,387 m3 of water is stored and collected during rainy days. Out of which approximately 1,00,000 liter of water is utilized for the fulfillment of water requirements for cleaning, flushing and washing etc.

The Sewage Treatment Plant (STP) of capacity 6000 cu.m. per day is available in the campus. The treated water is used for gardening and flushing of toilets every day and rest of the water is filtered for further utilization. The existing capacity of the pond is sufficient to harvest the rain water throughout the year for the entire campus leading to conservation of water and reduction in the cost of water bills payable to CIDCO. If we calculate in terms of percentage, out of the total rain water collected on the roof tops 75% goes into the harvesting points.

File Description	Document
Any additional information	View Document

7.1.7 Green Practices

- **Students, staff using**

a) Bicycles

b) Public Transport

c) Pedestrian friendly roads

- **Plastic-free campus**
- **Paperless office**
- **Green landscaping with trees and plants**

Response:

Response : YES

Institute has initiated the Green Campus activity which supports environmental sustainable development. The activity promotes various programs for the environment protection and sustainability such as, use of bicycles,carpooling, public transport. The roads within yhe campus are designed to be pedestrian friendly and makes the campus pleasant.

Minimum Use of Paper

To reduce the use of paper which ultimately helps in saving the trees, the Institute promotes digital practices for record keeping such as attendance of students, marks of internal assessment, and many other records. Most of the communication with staff members and students happens through emails and SMS, which reduces the paper work. Students make use of google classroom to submit their assignments, which reduces the use of papers.Institute is located prime location at the junction of NH-4 and Mumbai-Pune Expressway, it maintains picturesque and lush green gardens around the campus to provide a soothing atmosphere conducive to learning.

Bus Facility from nearest station:

Institute encourages all faculties and students to use public transport which will save energy resources and reduce environmental pollution. Institute is having many advantages for conveyance. Bus stops are in front of the institute campus which is beneficial for the students as well as staff to use public transport. The nearest local Railway station is Khandeshwar, because of which Navi Mumbai, Thane, Panvel are well connected with the campus. Institute had provided bus facility from college to khandeshwar railway station. Most of nearby residing staff and students use bicycles. Most of the faculty members residing at same location, are pooled their vehicle to reach institute which saves fuel. Institute provides separate Bus facility for girl hostelite students.

Plastic Free Campus: Notices and Posters are displayed for not using the plastic inside the campus, and the plastic free campus practice is strictly followed. Institute has taken many initiates such as paper cups, no plastic bags, separate dustbins for plastic waste to make the campus plastic free.

Tree Plantation Program:

Green landscaping with trees and plants: In collaboration with CIDCO, a green patch is maintained in and around the campus. Tree plantation is spread on around 8 acres of land. Every year 200-250 saplings are

planted by the college. So far, 1000 trees have been added in last 5 years.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

7.1.8 Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years

Response: 1.34

7.1.8.1 Total expenditure on green initiatives and waste management excluding salary component year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
7.20	5.31	6.82	20.70	16.68

File Description	Document
Green audit report	View Document
Details of expenditure on green initiatives and waste management during the last five years	View Document

7.1.9 Differently abled (Divyangjan) Friendliness Resources available in the institution:

1. **Physical facilities**
2. **Provision for lift**
3. **Ramp / Rails**
4. **Braille Software/facilities**
5. **Rest Rooms**
6. **Scribes for examination**
7. **Special skill development for differently abled students**
8. **Any other similar facility (Specify)**

A. 7 and more of the above

B. At least 6 of the above

C. At least 4 of the above

D. At least 2 of the above

Response: B. At least 6 of the above

File Description	Document
Resources available in the institution for Divyangjan	View Document
Any additional information	View Document
link to photos and videos of facilities for Divyangjan	View Document

7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years

Response: 9

7.1.10.1 Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2	5	1	1	0

File Description	Document
Number of Specific initiatives to address locational advantages and disadvantages	View Document
Any additional information	View Document

7.1.11 Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere)

Response: 14

7.1.11.1 Number of initiatives taken to engage with and contribute to local community year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
10	2	2	0	0

File Description	Document
Report of the event	View Document

7.1.12
Code of conduct handbook exists for students, teachers, governing body, administration including Vice Chancellor / Director / Principal /Officials and support staff

Response: Yes

File Description	Document
URL to Handbook on code of conduct for students and teachers , manuals and brochures on human values and professional ethics	View Document

7.1.13 Display of core values in the institution and on its website

Response: Yes

File Description	Document
Provide URL of website that displays core values	View Document

7.1.14 The institution plans and organizes appropriate activities to increase consciousness about national identities and symbols; Fundamental Duties and Rights of Indian citizens and other constitutional obligations

Response: Yes

File Description	Document
Details of activities organized to increase consciousness about national identities and symbols	View Document
Any additional information	View Document

7.1.15 The institution offers a course on Human Values and professional ethics

Response: Yes

File Description	Document
Any additional information	View Document
Provide link to Courses on Human Values and professional ethics on Institutional website	View Document

7.1.16 The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions

Response: Yes

File Description	Document
Provide URL of supporting documents to prove institution functions as per professional code	View Document

7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years

Response: 18

7.1.17.1 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
9	2	3	2	2

File Description	Document
List of activities conducted for promotion of universal values	View Document
Any additional information	View Document

7.1.18 Institution organizes national festivals and birth / death anniversaries of the great Indian personalities

Response:

Response : YES

Republic Day and Independence Day –

Every year Institute celebrates National festivals with maximum attendance of students and faculties with full enthusiasm. Flag hoisting is done at the hands of the Trustee followed by patriotic songs, speeches by Chief Guest and voluntary student members. Cultural programs are conducted by students. Different activities such as speeches, debates, poster presentations, competitions, skits and performances of students showing national culture and communal harmony are organized during these festivals

Mahatma Gandhi birth anniversary -

Mahatma Gandhi birth anniversary is generally celebrated by organizing programs such as Swaachh Bharat Abhiyan, Cleanliness drive to practice his teachings of cleanliness.

The contribution of our national heroes such as Mahatma Gandhi, Pt. Jawaharlal Nehru, Dr. A.P.J. Kalam, Dr. B.R. Ambedkar, Mahtma Phule, is memorized and tribute is given to them on their Birth / Death Anniversaries.

Teachers Day -

Teachers day is celebrated on 5th September every year in the memory of birth anniversary of Dr. Sarvepalli Radhakhrishnan, a great teacher and a strong believer of education. Students organize this event and interact with their faculty members in an informal way by conducting a few competitions, singing songs with teachers. Teaching and Non-teaching staff members also participate in this event enthusiastically.

Engineers Day -

Engineers day is celebrated on 15’th September in the memory of great Indian civil engineer Dr. M. Visvesaraya. A great civil engineer. The institute organises Engineering every year and talks are given by eminent speakers regarding great Engineering inventions.

Yoga Day -

International yoga day is celebrated every year on 21’st June. Teacher’s day is celebrated in the memory of Dr. Sarvapalli Radhakrishnan on 5’th September.

File Description	Document
Any additional information	View Document

7.1.19 The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions

Response:

Response : YES

Financial Transparency

Institute follows the practice of uploading the financial information on the website. There is provision for the budget for many different college events and funding related to student activities. Budget allocation to the departments is done at the start of every semester.

Institute promotes the development of faculties and provides necessary financial support for attending

faculty development programs, research paper publication etc.

Examination and other Fees is accepted online by SBI Collect facility and by demand drafts, all salaries are deposited into nationalized bank account.

Purchases for the laboratory equipment's are initiated at the department level, tendering process carried out by the purchase committee.

Every year financial audit is conducted.

Administrative Transparency

As the part of Administrative transparency institute has a well-defined organizational chart and standard operating procedure in all the departments and administrative office.

Staff Committees are appointed by the Principal ensuring everybody's participation to carry out various administrative and auxiliary functions

Leaves and Outdoor duties are applied online and leave record of the faculty is also available in ERP which they can access and check at any time. Suggestion boxes are placed in the campus to invite suggestions and complaints.

Academic Transparency

Institute follow academic Transparency by following the practices such as,A well-defined academic calendar is maintained and which is made available to all students and faculty member. Course plans of respective subjects are prepared and uploaded on ERP before commencement of the semester, the timetable is prepared and made available online before the semester begins. Attendance of the students is maintained in ERP system and communicated to parents through SMS.

Student's feedback mechanism is in place. Online students feedback is collected at the end every semester from all students. Rubrics are followed for evaluation process thereby bringing in transparency in the academic evaluation.

Marks obtained by students in class tests on are displayed on notice boards and answer books are shown to the students after the result is displayed. Also grievances of the students related to evaluation are immediately addressed.

Self-appraisal are maintained by teaching faculty which is part of their performance report.

File Description	Document
Any additional information	View Document

7.2 Best Practices

7.2.1 Describe at least two institutional best practices (as per NAAC Format)

Response:

Response : YES

1. **Academic Audit and Inspection**

Title of the Practice : Academic Audit and Inspection

Objectives of the Practice :

The Academic Audit is a peer review process involving self-study and then an audit visit by an expert from outside the Institution. The process emphasizes on self-improvement rather than mere compliance with predetermined standards.

The purpose of an academic audit is to encourage Institutes to evaluate the quality of 'Teaching-Learning processes".

To standardize the teaching learning process thus to ensure quality of technical education throughout the system

To ensure academic accountability of every stakeholder, i.e. students, teachers, colleges and University.

To verify the academic activities are happening as per the academic calendar and proper records are maintained by the faculties.

The Context

The Institute must have appropriate strategic and operational planning documents which include objectives related to student achievements and teaching quality. The Course files, various reports and PowerPoint presentation made by the faculties for their course are the best way to understand and evaluate their contribution to the academic activity they had carried out throughout the semester. The Institute should ensure teaching and learning spaces and facilities are appropriately available as per the needs.

The Practice

Academic inspection is conducted in every semester. It is mainly about the quality of teaching and learning methods followed by the teachers for the course which they teach. After the successful completion of theory and laboratory session, faculty members prepare rigorous record of their course. Faculty member also prepares a course file for every subject that he/she is teaching. Course file includes record of various documents including objectives and outcomes of the course, Course Teaching plan, Assignments, Practice Papers with solutions, Class Test solution and Result Analysis, Attendance Records of students, subject notes prepared by faculty.

The College/Department shall identify and academic experts for the Academic Audit of the college/Department. Academic experts from National Institutes, such as IIT, NIT, or other institutes who have made mark in the field of education and research are called as an expert. The Audit team consists of min 3 and max 5 members from institutions which are known for educational quality and for best practices in teaching-learning processes. An industry expert may be also included in the team for his perspective on quality of students.

Auditors meet with departmental faculty, technical staff and students, separately. Auditors ask questions related to the course to which the staff or student is concerned.

Using the input from the stake holders the Auditors shall prepare a report with help of the Principal of the Institute by

1. Noting areas for improvement,

2. Evaluating a department's approach to educational quality practices.

3. Highlighting examples of exemplary practice(s),

Evidence of Success

The academic audit helped the faculties for smooth conduction of teaching learning process. Faculties improved their teaching skills by adhering to the guidelines given by institute as well as suggestions given by the academic experts. Laboratory reports are also modified based on the audit report.

Knowledge delivery to students become well planned and students activities get stream lined.

Faculties seek out good practices in other comparable departments and institutions and adopt the best to their own conditions.

Problems Encountered and Resources Required

Identification and availability of right type of Academic Expert.

Define quality in terms of outcomes.

Finding the best approach in the learning assessment.

2. Project Based Learning for Advanced Learners.

Title of the Practice: **Project Based Learning for Advanced Learners.**

Objectives of the Practice:

Project Based Learning (PBL) is an innovative learning method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and

complex question, problem, or challenge. Thus the objective of this practice is to develop in the students deep content knowledge as well as critical thinking, creativity, and communication skills in the context of doing an authentic, meaningful project. This practice will help make the students Industry-Ready. This will also motivate them to participate in different competitions like Smart India Hackathon, Avishkar etc. In addition, it also provides platform to the students to implement their innovative ideas.

The Context

Project Based Learning (PBL) prepares students for academic, personal, and career success, and readies students to rise to the challenges in real life. Thus PBL is becoming widely used in learning. However, it is not just from "doing a project" but engaging in rigorous Project Based Learning.

While adhering to the curriculum of the University of Mumbai, implementing Project Based Learning across all the students is a challenge as students get busy with the curriculum aspects. Hence this activity has been restricted to Advance Learners (AL) and also some of the exceptional students having aptitude for PBL who do not qualify under AL.

As one of the pre-semester activities, faculty members prepare a list of projects with references and announce the same through whatsApp groups and Google Class Room. This helps students select the topic amongst the topics listed or the topic of their own choice after approval of the Committee.

The Practice

The advanced learners are identified based on their track record of academics, grasping ability, programming / design skills and their aptitude for working projects. Students make groups of 3-4 students either from the same discipline or across disciplines depending on the nature of the project. Based on the list of projects offered by faculty, they can choose the topic or they can also work on their own innovative idea, if approved by the Committee. Topics of these projects are such that students get an opportunity to work on complex engineering problems guided by domain experts, alumni, industry experts and faculty. Some of the project titles are:

Biodiesel production from waste frying oil, Simple electronic piano kit, Use of Basalt fibre in reinforced concrete using M30 grade, Chat module using socket programming, etc.

Having chosen the topic, students are trained for literature survey utilizing Library, Internet, NPTEL, SWAYAM video lectures etc. Based on this, the students prepare a report and present to the faculty within a fortnight defining the scope of work for their chosen project. Wherever possible students also take guidance from Alumni, Industry Experts, Institutes like IIT, BARC etc.

Under this activity, the students had developed many real time projects in the area of IoT, Network Security, Embedded systems etc. Students also make PPT presentation as per the schedule when Industry experts are present. The best projects are ranked and Certificate of Merit is given to them.

The Innovation and Creativity Cell also contributes to this activity by way of inviting proposals from the First Year students on their innovative ideas and the shortlisted students work on the topics.

Evidence of Success

This exposure to Project Based Learning was useful for the students to participate in different competitions like 'SUPRA SAEINDIA Student Formula', 'Smart India Hackathon', 'Avishkar Research Convention', etc. The students made our Institute proud by their success and prizes won by them. They also take part in inter-college level Technical Festivals and win prizes.

SUPRA SAEINDIA Student Formula -- MGM Accellors students' teams from MGMCET designed and developed cars as per specifications of Formula-1 student's competition. Our Team-2015 secured 34th All India Rank amongst 60 teams and 2nd rank in Mumbai region. Our Team-2016 secured 60th All INDIA Rank amongst 120 teams by clearing Static Events and obtained 2 Technical Inspection stickers and 3rd rank in Mumbai region. Our Team-2017 secured 30th All India Rank amongst 125 students and 3rd Rank in Mumbai region. Some of our students who participated in of Supra event, has been selected as judge for Supra events.

SMART INDIA HACKATHON – Two teams participated in 2017 event. Three teams participated in 2018 event. Every year students have secured prizes. Team 'BugSquashers' won the first runner up prize of Rs.75000/- at BHU, Varanasi out of 48 teams shortlisted for that theme from all over India.

AVISHKAR RESEARCH CONVENTION 2017-18 -- Four groups of students from MGMCET participated in this district level competition. One of the MGMCET students' group secured First Rank under UG level for a project entitled " Design and Development of Drone for Crop Health and Soil Quality Monitoring" at the 13th Avishkar Research Convention organized by University of Mumbai on 29th December 2018. A large number of students from all Departments participate in the event.

India International Science Festival (IISF) SENSITIZING YOUTH TO FLAGSHIP PROGRAMS OF GOVT 2017 and 2018 -- Two teams of students from MGM's College of Engineering and Technology participated in "The Third IISF SENSITIZING YOUTH TO FLAGSHIP PROGRAMS OF GOVERNMENT (SYPOG) " Chennai, in September 2017 and presented the posters based on their projects 'Design and Development of Aurdino based PCR' and 'Design and Development of Electric Sanitary Disposal Machine'.

Three teams of students participated and presented Papers at the fourth India International Science Festival 2018 (IISF 2018) held in lucknow, Uttar Pradesh in October 2018.

JNEC TECHHUNT Aurangabad -- Jawaharlal Nehru Engineering College, Aurangabad organized two days technical event during March 30-31, 2018 and our students won several prizes in this event.

Problems Encountered and Resources Required

Although advanced learners are identified based on their academic track record, their grasping power, programming skills etc., some of them do not have aptitude for taking up on projects.

To overcome this, our college is training the students to work on projects from first year of engineering itself by joining the students in the second year for carrying out Projects. It is expected that this may develop aptitude for projects. Industry involvement for these projects is yet a challenge. For hardware related projects, Management does support to some extent. In addition, all the facilities available in the college are extended to them. College is trying to tie-up with some industries which can provide resources if required.

Notes (Optional)

Although the idea of providing opportunities to work on projects right from first year is being pursued at our College, all the students cannot participate because of time constraints as for some of the students find it difficult to complete the studies as they are slow learners. We at MGMCET believe that all the students must get opportunity to work on projects right from first year level which will not only address several POs but make the students Industry-Ready.

File Description	Document
Any additional information	View Document

7.3 Institutional Distinctiveness

7.3.1 Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust

Response:

Industry Ready Activities.

MGM's College of Engineering and Technology is an Institute of opportunities and has tryst with excellence in academics. Institute's focus has been on making the students 'Industry-Ready'. Students coming from varied background lack skills as required by the Industry. Curriculum of the University does not meet these requirements. The students from rural background also lack in the communication skills. The students also need training in soft skills and Aptitude Tests. Technology gaps also exist as the Curriculum of the University is not in-line with the Industry. To bridge the gap between Industry and Academia, particularly when Curriculum of the University does not completely address the requirements of the Industry and Internship in the Industry is not mandatory; our College has devised the activities which make the students Industry-ready.

Departmental and Institute Slots

To meet requirements of additional activities, Institute has provided slots for Institute level and Departmental level activities. Each Department including First Year plan various activities during Institute as well as Departmental slots. These are well defined in the Departmental Activity Calendar announced before commencement of the semester and also explained during Orientation Programme. Innovation and Creativity Cell activities include involving the First Year students in developing innovative ideas by inviting proposals from them.

Students whose proposals are approved by the committee, are allowed to pursue their idea.

1. First Year - Exposure

The students are groomed right from the first year level where the first exposure given to them is a daylong orientation program to inform them regarding various activities planned during the semester. They also get

an opportunity to interact with Industry Resource Persons who also address regarding Industry requirements. Students with bent of mind for Project Based Learning are encouraged to join the project groups of the second year students. Workshops on Industry relevant topics are organized every semester.

2.Orientation Program

Orientation programms are organized every semester not only for the First Year students , but also for the students of higher years (SE, TE and BE students) by all the Departments. College Alumni or Industry experts are called for the program as a chief guest. Resource persons invited from Industry as 'Chief guests' guide students regarding thrust areas pursued in industry and skills they look for. HoD and Faculty also present on the importance of different subjects, syllabus, experiments to be performed and various other aspects.

3.Resource Persons from Industry

To meet requirements of additional activities, Institute has provided slots for Institute level and Departmental level activities. During these slots Industry-Ready activities are carried out. To reach out to Industry in a big way, MGMCET takes lead in inviting industry professionals as resource persons for interaction with the students. Special training programs for the students utilizing services of such resource persons have been organized such as Internet of Things (IoT), Big Data Analytics, Mobile App Development, Cyber and Mobile Security, Smart Technology in Structural Engineering, Ethics in Industry and Evolution of Design, etc. The College organizes special training programmes with the help of industry professionals for the students on the topics such as digital marketing, spoken tutorials on python, Industry-ready programmes, courses by Microsoft IT Academy.

4.General and Technical Clubs

College caters to the interests of the students through 26 club activities which deal with Innovation and Creativity, Entrepreneurship, Environment, Renewable Energy, Foreign Language, Yoga, Karate, Human Values, College Social Responsibility etc. "Industry-Ready" activities include Aptitude Tests and Soft Skills Training through organized efforts by inviting experts. Students are encouraged to participate in Projects every semester to build confidence for solving real life problems. These activities help students to get the placement of their interest.

5.Internship

College also provides internal internship facility to the students under supervision of senior faculty in addition to Internship in the Industry . This is one of the unique initiatives taken by the College where students are allowed to work as intern in the laboratories on specific tasks under the supervision of Faculty. This facility essentially trains the students on Project Based Learning.

6. Project Based Learning

Through the initiative of Project Based Learning (PBL), our students worked on several projects relevant to the industry. This learning methodology inculcated the skills to work on Projects. This skill development helped the students to participate in National/State Level activities like Smart India Hackathon, SUPRA INDIA Student Formula, AVISHKAR Research Convention etc. and come up with innovative solutions for real life problems.

7. Experts from National Institutes

MGMCET emphasizes on preparing the students “Industry-Ready” through organized efforts of inviting eminent academician from IIT’s and other well known Institutions as well as Research organisations. The interaction of these experts with students not only boosts their confidence but also get the exposure to the sate-of-the-art R and D activities. Some of such eminent personalities who visited our Institute and from whom the students get inspiration are Dr. Anil Kakodkar (Former Chairman, Atomic Energy Commission) , Dr. V.G. Gaikar(VC, BATU), Prof Nihal Kulratna(Univ. of Waikato, New Zealand), Dr. Vijay Kumar Mishra (IISc Bangalore), Dr. Alok Srivastava, (Programme Director, ISAC, ISRO), Mr. Ashank Desai (Founder MASTEK), Dr. Kornel F. Ehmann, (Professor, Northwestern University Evanston, Illinois, USA etc.)

8 National Conferences

MGMCET has been consciously organizing National Conferences on relevant and important themes. Several National Conferences have been organized during (2013-14) to (2017-18). Recently in February 2018 MULTICON-W 2018 was organized at Thakur College of Engineering and Technology, Kandivali, Mumbai under Institute-Institute partnership. Also in June 2018, two National Conferences were organized, namely National Conference on “Challenges in Engineering Teaching and Research” and “Human Values in Professional Education”. College has also planned to organize a National Conference on ”Industry 4.0” in collaboration with IEEE and CSI during June 11 -12, 2019.

9 Outcome

All these efforts are reflected in increase in placements over the period 2013-14 to 2017-18 from 32 to 217 and also reflected in National recognition through “Times of India Ranking” - 60th Rank in top 150 Engineering Institutes (2018) and 59th Rank in top 150 Engineering Institutes (2019). Gold Rank in AICTE-CII survey of Industry linked Technical Institutes 2018.

File Description	Document
Any additional information	View Document

5. CONCLUSION

Additional Information :

- Leadership from members with IIT background (BoG Members, Chairman, Director General and Principal are from IIT background and some faculty members are from ICT Mumbai background).
- Institute's focus has been on making the students 'Industry-Ready' right from first year level.
- Research Centre in Bio-Medical Engineering.
- Team 'BugSquashers' won the first runner up prize of Rs.75000/- at BHU, Varanasi out of 48 teams shortlisted for that theme from all over India in 2018.
- General and Technical clubs to carryout co-curricular and extra-curricular. interdisciplinary projects including College Social responsibility (CSR) Club, Human Values Club and Entrepreneurship development club.
- Academic Auditing.
- National Conferences.
- Recognition under 2(f) category under UGC Act.
- Gold Rank in AICTE-CII survey of Industry linked Technical Institutes 2018.
- National recognition through "Times of India Ranking" - 60th Rank in top 150 Engineering Institutes (2018) and 59th Rank in top 150 Engineering Institutes (2019).

Concluding Remarks :

MGM's College of Engineering and Technology is an Institute of opportunities and has tryst with excellence in academics. Keeping in line with this, Institute's focus has been on making the students 'Industry-Ready'. The Institute believes in promoting a culture of research with the help of our faculty having IIT and ICT Mumbai background with long term objective of making our Institute a Research Institute.

6.ANNEXURE

1.Metrics Level Deviations

<table>
<tr><td>Metric ID</td><td>Sub Questions and Answers before and after DVV Verification</td></tr>
<tr><td>1.1.2</td><td>Number of certificate/diploma program introduced during the last five years

1.1.2.1. Number of certificate/diploma programs introduced year-wise during the last five years
Answer before DVV Verification:
<table>
<tr><td>2017-18</td><td>2016-17</td><td>2015-16</td><td>2014-15</td><td>2013-14</td></tr>
<tr><td>9</td><td>2</td><td>1</td><td>2</td><td>0</td></tr>
</table>
Answer After DVV Verification :
<table>
<tr><td>2017-18</td><td>2016-17</td><td>2015-16</td><td>2014-15</td><td>2013-14</td></tr>
<tr><td>2</td><td>1</td><td>1</td><td>0</td><td>0</td></tr>
</table></td></tr>
<tr><td>1.1.3</td><td>Percentage of participation of full time teachers in various bodies of the Universities/ Autonomous Colleges/ Other Colleges, such as BoS and Academic Council during the last five years

1.1.3.1. Number of teachers participating in various bodies of the Institution, such as BoS and Academic Council year-wise during the last five years
Answer before DVV Verification:
<table>
<tr><td>2017-18</td><td>2016-17</td><td>2015-16</td><td>2014-15</td><td>2013-14</td></tr>
<tr><td>8</td><td>12</td><td>14</td><td>12</td><td>12</td></tr>
</table>
Answer After DVV Verification :
<table>
<tr><td>2017-18</td><td>2016-17</td><td>2015-16</td><td>2014-15</td><td>2013-14</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr>
</table></td></tr>
<tr><td>1.2.3</td><td>Average percentage of students enrolled in subject related Certificate/ Diploma programs/Add-on programs as against the total number of students during the last five years

1.2.3.1. Number of students enrolled in subject related Certificate or Diploma or Add-on programs year-wise during the last five years
Answer before DVV Verification:
<table>
<tr><td>2017-18</td><td>2016-17</td><td>2015-16</td><td>2014-15</td><td>2013-14</td></tr>
<tr><td>373</td><td>128</td><td>105</td><td>95</td><td>0</td></tr>
</table>
Answer After DVV Verification :
<table>
<tr><td>2017-18</td><td>2016-17</td><td>2015-16</td><td>2014-15</td><td>2013-14</td></tr>
</table></td></tr>
</table>

89	60	105	0	0

1.3.2 Number of value added courses imparting transferable and life skills offered during the last five years

1.3.2.1. Number of value-added courses imparting transferable and life skills offered during the last five years

Answer before DVV Verification : 12

Answer after DVV Verification: 5

1.3.3 Percentage of students undertaking field projects / internships

1.3.3.1. Number of students undertaking field projects or internships

Answer before DVV Verification : 1366

Answer after DVV Verification: 294

1.4.2 Feedback processes of the institution may be classified as follows:

Answer before DVV Verification : A. Feedback collected, analysed and action taken and feedback available on website

Answer After DVV Verification: B. Feedback collected, analysed and action has been taken

Remark : Revised as per supporting document of the HEI and chose B. as the URL was not provided

2.1.1 Average percentage of students from other States and Countries during the last five years

2.1.1.1. Number of students from other states and countries year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
16	08	22	15	20

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
15	08	22	15	20

2.1.3 Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
252	289	292	304	358

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
252	289	292	304	368

2.3.2 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

2.3.2.1. Number of teachers using ICT

Answer before DVV Verification : 196

Answer after DVV Verification: 179

2.4.4 Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

2.4.4.1. Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
03	14	14	13	10

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
03	00	00	01	00

Remark : Revised considering only awards as follows: 2014-15-Vinod Suri 2017-18-chavan sachin, Dr. G D Jindal, Akaaanksha Rajput

3.1.1 Grants for research projects sponsored by government/non government sources such as industry ,corporate houses, international bodies, endowment, chairs in the institution during the last five years (INR in Lakhs)

3.1.1.1. Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years(INR in Lakhs)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
0	74.89	25	25.84	72.76

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
74.89	1.31	22.33	23.44	9.55

3.1.3	Number of research projects per teacher funded, by government and non-government agencies, during the last five year 3.1.3.1. Number of research projects funded by government and non-government agencies during the last five years Answer before DVV Verification : 9 Answer after DVV Verification: 9 3.1.3.2. Number of full time teachers worked in the institution during the last 5 years Answer before DVV Verification : 1144
3.2.2	Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the last five years 3.2.2.1. Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year-wise during the last five years Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
73	71	05	10	12

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
14	1	1	2	0

3.3.5	Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years 3.3.5.1. Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings year-wise during the last five years Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
57	21	5	15	21

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
55	21	5	15	15

3.4.2	Number of awards and recognition received for extension activities from Government /recognised bodies during the last five years 3.4.2.1. Total number of awards and recognition received for extension activities from Government /recognised bodies year-wise during the last five years Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
33	5	3	4	0

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

3.4.3 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., 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:

2017-18	2016-17	2015-16	2014-15	2013-14
27	13	14	121	17

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
21	8	10	10	10

3.5.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc during the last five years

3.5.1.1. Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
39	113	121	154	135

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
32	48	50	49	72

3.5.2 Number of functional MoUs with institutions of National/ International importance, Other Institutions, Industries, Corporate houses etc., during the last five years (only functional MoUs with ongoing activities to be considered)

3.5.2.1. Number of functional MoUs with institutions of national, international importance, other

universities, industries, corporate houses etc. year-wise during the last five years (only functional MoUs with ongoing activities to be considered)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
8	8	3	4	2

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
8	7	2	3	1

5.1.4 Average percentage of student benefited by guidance for competitive examinations and career counselling offered by the institution during the last five years

5.1.4.1. Number of students benefited by guidance for competitive examinations and career counselling offered by the institution year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
1350	1110	977	560	450

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
1460	1014	928	586	453

5.3.1 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) 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:

2017-18	2016-17	2015-16	2014-15	2013-14
33	3	4	4	1

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
6	2	2	3	0

6.4.2 Funds / Grants received from non-government bodies, individuals, Philanthropists during the last five years (not covered in Criterion III) (INR in Lakhs)

6.4.2.1. Total Grants received from non-government bodies, individuals, philanthropists year-wise during the last five years (INR in Lakhs)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
10.05	1.1	8.37	0.34	0

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
00.05	0.20	0.25	0.34	0

6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year

6.5.3.1. Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
18	04	02	00	00

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
9	04	01	00	00

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

7.1.1.1. Number of gender equity promotion programs organized by the institution year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
1	3	1	2	1

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
1	3	1	2	1

7.1.8 Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years

7.1.8.1. Total expenditure on green initiatives and waste management excluding salary component year-wise during the last five years(INR in Lakhs)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
7.20	5.30	6.85	20.70	16.68

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
7.20	5.31	6.82	20.70	16.68

7.1.9 Differently abled (Divyangjan) Friendliness Resources available in the institution:

1. Physical facilities
2. Provision for lift
3. Ramp / Rails
4. Braille Software/facilities
5. Rest Rooms
6. Scribes for examination
7. Special skill development for differently abled students
8. Any other similar facility (Specify)

Answer before DVV Verification : A. 7 and more of the above

Answer After DVV Verification: B. At least 6 of the above

Remark : Revised as per the supporting documents and considered, lift, rail, rest room, scribe, and other similar facility

7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years 7.1.10.1. Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
1	1	5	4	2

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
2	5	1	1	0

2.Extended Profile Deviations

ID	Extended Questions
1.2	Number of programs offered year-wise for last five years Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14

14	14	14	14	14

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
15	15	14	14	14

2.3 Number of outgoing / final year students year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
771	788	798	767	599

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
771	788	798	767	559

NAAC