

### YEARLY STATUS REPORT - 2020-2021

### Part A

### **Data of the Institution**

1. Name of the Institution MAHENDRA ENGINEERING COLLEGE

(AUTONOMOUS)

• Name of the Head of the institution Dr.R.V.Mahendra Gowda

• Designation Principal

• Does the institution function from its own Yes

campus?

• Phone No. of the Principal 04288288610

• Alternate phone No. 04288288500

• Mobile No. (Principal) 6382083091

• Registered e-mail ID (Principal) principal@mahendra.info

• Address Mahendra Engineering College

(Autonomous), Mahendrapuri,

Mallasamudram, Tiruchengode

• City/Town Namakkal

• State/UT Tamil Nadu

• Pin Code 637503

2.Institutional status

• Autonomous Status (Provide the date of 17/01/2013

conferment of Autonomy)

• Type of Institution Co-education

• Location Rural

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• Financial Status

Self-financing

• Name of the IQAC Co-ordinator/Director Dr.C.T.Sivakumar

• Phone No. 04288288599

• Mobile No: 9442130662

• IQAC e-mail ID sivakumar@mahendra.org

3. Website address (Web link of the AQAR

(Previous Academic Year)

http://mahendra.info/igac.php

**4.**Was the Academic Calendar prepared for that year?

• if yes, whether it is uploaded in the

http://mahendra.info/academic cal

Institutional website Web link: <a href="mailto:endar.php">endar.php</a>

### **5.**Accreditation Details

Cycle	Grade	CGPA	Year of Accreditation	Validity from	Validity to
Cycle 1	A	3.06	2014	10/07/2014	10/07/2020

Yes

### 6.Date of Establishment of IQAC

01/11/2012

# 7.Provide the list of Special Status conferred by Central and/or State Government on the Institution/Department/Faculty/School (UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC, etc.)?

Institution/ Depart ment/Faculty/Sch ool	Scheme	Funding Agency	Year of Award with Duration	Amount
Nil	Nil	Nil	Nil	Nil

### 8. Provide details regarding the composition of the IQAC:

• Upload the latest notification regarding the composition of the IQAC by the HEI

### 9.No. of IQAC meetings held during the year 3

- Were the minutes of IQAC meeting(s) and yes compliance to the decisions taken uploaded on the institutional website?
- If No, please upload the minutes of the meeting(s) and Action Taken Report

No File Uploaded

# 10.Did IQAC receive funding from any funding agency to support its activities during the year?

• If yes, mention the amount

### 11. Significant contributions made by IQAC during the current year (maximum five bullets)

NBA - Compliance report submitted for the 3 UG Programmes. Based upon the submission of the Compliance Report B.E. CSE, B.E. ECE, and B.E. EEE are accredited by NBA in Tier I (WA) for one more year valid up to 30.06.2022.

Our college have got approval from MSME approved Host Institution for "Support for Entrepreneurial and Managerial Development of MSMEs through Incubators" dated 6.4.2021. Total college from India: 147 From Tamil Nadu: 25

Participated in NIRF 2021 . Our Institution obtained 28.67 marks.

Participated in ATAL ranking of institutions on innovations achievements ARIIA 2020 . Ranking between 26 to 50 bandwidth

Received MHRD-IIC Innovation Cell 4 star for the Year 2020

12.Plan of action chalked out by IQAC at the beginning of the academic year towards quality enhancement and the outcome achieved by the end of the academic year:

Plan of Action	Achievements/Outcomes
Publications	One hundred and thirty one papers were published in reputed journals
Workshops	Organished Twenty Eight workshops
Result	Result : 93.91%
Admission	Achieved around 75 %
Paper Presentations	One hundred sixty four papers were presented
Research Enrolment	Sixty Nine Research Scholars enrolled
Programmes Organized Conference / Symposium	Thirty Two programmes organized

# 13. Was the AQAR placed before the statutory body?

• Name of the statutory body

Name of the statutory body	Date of meeting(s)		
Academic Council	29/04/2021		

# **14.**Was the institutional data submitted to AISHE?

Yes

• Year

Par	rt A				
Data of the	Data of the Institution				
1.Name of the Institution	MAHENDRA ENGINEERING COLLEGE (AUTONOMOUS)				
Name of the Head of the institution	Dr.R.V.Mahendra Gowda				
• Designation	Principal				
• Does the institution function from its own campus?	Yes				
• Phone No. of the Principal	04288288610				
Alternate phone No.	04288288500				
• Mobile No. (Principal)	6382083091				
Registered e-mail ID (Principal)	principal@mahendra.info				
• Address	Mahendra Engineering College (Autonomous), Mahendrapuri, Mallasamudram, Tiruchengode				
• City/Town	Namakkal				
• State/UT	Tamil Nadu				
• Pin Code	637503				
.Institutional status					
• Autonomous Status (Provide the date of conferment of Autonomy)	17/01/2013				
• Type of Institution	Co-education				
• Location	Rural				
• Financial Status	Self-financing				
Name of the IQAC Co-	Dr.C.T.Sivakumar				

ordinator	/Director							
Phone No.				04288288599				
Mobile No:			9442130	0662				
• IQAC e-mail ID			sivaku	mar@	mahend:	ra.or	g	
3.Website address (Web link of the AQAR (Previous Academic Year)			http:/	/mah	endra.	info/	igac.php	
4. Was the Academic Calendar prepared for that year?			Yes					
	hether it is uploa nal website Web		the	http:/			info/	academic_ca
5.Accreditation	Details						J	
Cycle	Grade	CGPA		Year of Accredita	ntion	Validity	from	Validity to
Cycle 1	A	3.06		2014		10/07	/201	10/07/202
6.Date of Estab	lishment of IQA	AC	T	01/11/2	2012			
7.Provide the li Institution/Dep Bank/CPE of U	artment/Faculty GC, etc.)?		ol (UGC/	CSIR/DST	r/DB7	Γ/ICMR/	TEQIE	P/World
Institution/ Depar tment/Faculty/Sc hool Funding			Agency		of Award Duration	d A	mount	
Nil	Nil		Ni	.1		Nil		Nil
8.Provide detai	ls regarding the	comp	osition of	the IQAC	C:			
Upload the latest notification regarding the composition of the IQAC by the HEI			View File	<u>.</u>				
9.No. of IQAC meetings held during the year			3					
Were the minutes of IQAC meeting(s) and compliance to the decisions taken uploaded on the institutional website?			Yes					

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If No, please upload the minutes of the meeting(s) and Action Taken Report	No File Uploaded
10.Did IQAC receive funding from any funding agency to support its activities during the year?	No
If yes, mention the amount	
11 (1) (1) (1) (1) (1) (1)	

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### 13. Was the AQAR placed before the statutory body?

• Name of the statutory body

Name of the statutory body	Date of meeting(s)
Academic Council	29/04/2021
14.Was the institutional data submitted to	Yes

### **14.**Was the institutional data submitted to AISHE?

• Year

Year	Date of Submission		
26/02/2022	26/02/2022		

### 15. Multidisciplinary / interdisciplinary

The curriculum is implemented effectively by standard teachinglearning process facilitated by well qualified, dedicated faculty members using a host of innovative teaching practices. Study of fundamental concepts of basic sciences enables the students to understand and apply them to solve engineering problems. Students learn important concepts in professional core courses and advanced concepts in professional elective courses, which enhance their analytical and problem-solving skills. The study of open electives offered by other branches facilitates an interdisciplinary approach to learning. Conduct of practical's enables the students to practice what they learnt in theory and have hands-on experience. Mini-projects and Projects enable the students to think creatively, innovate and develop novel products/process, work in teams, prepare reports and make presentations. Internships/industrial training facilitate the students to learn the latest in industry, bridge the gap between academia and industry and get industry-ready to seek employment.

#### 16.Academic bank of credits (ABC):

Every B.E. / B. Tech. Programme will have a curriculum with syllabi consisting of theory and practical courses that shall be categorized as follows:

Humanities and Social Sciences including Management Courses (HSMC) include Technical English, Employability Skills, Engineering

Ethics and Human Values, Communication skills and Management courses, etc.

- ii. Basic Sciences Courses (BSC) include Physics, Chemistry, Mathematics and Environmental Sciences, etc.
- iii. Engineering Sciences Courses (ESC) include Engineering
  Practices, Engineering Graphics, Basics of Electrical /
  Electronics / Mechanical / Civil Engineering, etc.
- iv. Professional Core Courses (PCC) include the core courses relevant to the chosen specialization/branch.
- v. Professional Elective Courses (PEC) include the elective courses relevant to the chosen specialization/ branch.
- vi. Open Elective Courses (OEC) include the courses from other branches; a student can choose from a list specified in the curriculum
- of the B.E. / B. Tech. Programmes.
- vii. Employability Enhancement Courses (EEC) include Project Work and/or Internship, Seminar, Professional Practices, Case Study, a n d Industrial/Practical Training, etc.

viii. Audit Courses (AC) expose the students to Constitution of India, Essence of Indian Traditional Knowledge, Yoga, English for Research Paper Writing, Value Education, Pedagogy Studies, Stress Management and Personality Development through Life Enlightenment Skills, etc. No credits shall be allotted to the audit courses. There shall be a certain minimum of Core courses and sufficient number of Elective courses that can be opted by the students. The blend of different courses shall be designed that the student, at the end of the programme, would have been trained not only for his/her relevant professional field but also would have developed as a socially conscious human professional

#### 17.Skill development:

The Mission of the College emphasizes on Industry-Institute interaction for effective training of students for successful placement, adoption of innovative and current practices in the industry.

To achieve this, the College has strategically established various Centres of Excellence in collaboration with prominent industries, through which students achieve their academic excellence to meet industrial standards. Our College has established TVS Harita Techserve Research Center for New Product Development and Manufacturing Technologies, which was inaugurated at MEC campus on 11th March 2014. The main objective is to create a Pool of Students with Strong Industry Ready Talent, undergoing Engineering. This has helped to bridge the gap between industry requirements and skills taught in academic course and greatly enabled to groom Engineers who are highly conversant with Design processes involving need finding, ethnographic field work, rapid prototyping and testing. So far more than 40 students were placed in reputed companies like VOLVO, Atlas Copco, SCL, Honey well, TVS motors, based on this Tie-up. Similarly the Centre of Excellence in Formwork Engineering in collaboration with L&T Ltd., was established on 9th November 2017 at Mahendra Engineering College. From this Centre of Excellence students gain valuable information on various formwork systems, tools and components used in formwork, different bonds of brick masonry and reinforcement details of various elements. Through the Centre of Excellence we provide training to masons, mazdoor and engineers about various formwork systems and new technologies used as recent trends. We also conduct several certified courses in formwork engineering inviting participants from various institutions. MEC-NI LabVIEW Academy is established in 2014 jointly with National Instruments under their Planet NI

(Nurturing Innovation) framework which strives to increase the employability of Indian engineering graduates by creating Centre of Excellence in Engineering Colleges and Universities which will provide cost effective access to world-class latest technology through classroom teaching-learning. Escorts Training and Development Center (ETDC) is established in February 2017 at our College to organise technical programs such as Internship, Training, Project works and Research for the Agriculture Engineering students. A Centre of Excellence in Artificial Intelligence and Machine Learning is established at our College in collaboration with Intel, Next Wealth and Happiest Minds in June 2019. This CoE in AI-ML offers courses on Artificial Intelligence, Python Programming and Image processing for Computer vision. Around 40 Students and 5 faculty members are trained by Next Wealth Private Limited, Happiest Minds, and Mind Tree. Intel donated 45 Parallel Studio XE Cluster edition licence software, each worth of USD 3200, for learning. Some of the students are placed in Happiest Minds, Mind tree and other companies that use AI and app development.

### 18.Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course)

Personality and Character Development All students shall enroll, on admission, in any one of the personality and character development programmes (NCC/NSS/NSO/YRC) and undergo training for about 80 hours and attend a camp of about seven days. The training shall include classes on hygiene and health awareness and also training in first-aid, etc. National Cadet Corps (NCC) will have about 20 parades. National Service Scheme (NSS) will have social service activities in and around the College. National Sports Organization (NSO) will have sports, games, drills and physical exercises. Youth Red Cross (YRC) will have activities related to social services in and around the College. While the training activities will normally be during weekends, the camp activities will normally be during vacation period.

### 19. Focus on Outcome based education (OBE): Focus on Outcome based education (OBE):

Our College is an autonomous institution, which has duly constituted Board of Studies for each discipline of study. Each programme has well defined Programme Educational Objectives (PEOs) and Programme Specific Outcomes (PSOs). The PEOs are based upon the Institute Mission for holistic needs. The PSOs define the programme-specific and deeper specializations to develop man

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power to meet the local/regional needs of industry. The POs reflect the national and global developmental needs. All the POs and PSOs are attained by offering a set of courses over a period of 8 semesters in UG programmes and 4 semesters in PG programmes.

The curriculum and syllabi for both undergraduate and postgraduate programs is designed and developed by the Boards of Studies based upon the AICTE model curriculum and by taking the opinion/suggestions/feedback from the University nominee, Academic expert, Industry experts, Faculty members and Alumni. The curriculum has a good balance of courses covering Basic Sciences, Humanities and Sciences, Basic Engineering, Programme Core, Programme Electives, Open Electives, Employability Enhancement Courses, Personality Development, Competency Development courses, etc. Each course has a set of 5-6 COs, which are mapped to one or many relevant POs and PSOs. The curriculum is modified and updated from time to time on yearly basis based upon the changes in industry and societal needs.

The curriculum is implemented effectively by standard teachinglearning process facilitated by well qualified, dedicated faculty members using a host of innovative teaching practices. Study of fundamental concepts of basic sciences enables the students to understand and apply them to solve engineering problems. Students learn important concepts in professional core courses and advanced concepts in professional elective courses, which enhance their analytical and problem-solving skills. The study of open electives offered by other branches facilitates an interdisciplinary approach to learning. Conduct of practicals enables the students to practice what they learnt in theory and have hands-on experience. Mini-projects and Projects enable the students to think creatively, innovate and develop novel products/process, work in teams, prepare reports and make presentations. Internships/industrial training facilitate the students to learn the latest in industry, bridge the gap between academia and industry and get industry-ready to seek employment.

Students are also encouraged to participate in technical competitions and ideation contests as part of co-curricular activities to improve their individual and team work. They also participate in sports activities on a regular basis. Training in technical and soft skills has been imparted to the students by Mahendra Academy for Training and Placement (MATP). It involves training in communication skills, quantitative aptitude, logical

reasoning, and coding. This training ensures better employability for the students. Training in the latest software and technologies is offered to the students as desired by companies. With a view to promote self-learning, students are encouraged to pursue online NPTEL/ MOOCS certification courses.

So a host of courses such as Universal Human Values, Environmental Science, Managerial Economics clubbed with language training, aptitude and problem solving, co-curricular and extracurricular activities aim to inculcate wide-ranging skills in the youth to make them to work in teams, be socially-responsible, environmentally-conscious, holistic, adaptive and innovative Engineers.

#### 20.Distance education/online education:

Students may be permitted to credit online courses (which are provided with certificate) from second semester onwards with the approval of Principal subject to a maximum of two / three credits per course. An online course can be considered equivalent to one elective course. Online course credits can be transferred to program / open elective course with the approval of Course Credit Transfer Committee constituted by the Head of the Institution.

The students satisfying the following conditions shall be permitted to carry out their final semester Project Work for six months in industry/research organizations.

- The students should not have current arrears and shall have CGPA of 7.50 and above.
- The student shall undergo the eighth semester courses in the sixth and seventh semesters. The Head of Department, in consultation with the faculty members handling the said courses, shall forward the proposal approved by the Head of Institution to the Controller of Examinations at least 2 weeks before the commencement of the sixth semester of the programme.

### **Extended Profile**

### 1.Programme

1.1

Number of programmes offered during the year:

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File Description	Documents
Institutional Data in Prescribed Format	<u>View File</u>

### 2.Student

2.1 4473

Total number of students during the year:

File Description	Documents
Institutional data in Prescribed format	<u>View File</u>

2.2

Number of outgoing / final year students during the year:

File Description	Documents
Institutional Data in Prescribed Format	<u>View File</u>

2.3

Number of students who appeared for the examinations conducted by the institution during the year:

File Description	Documents
Institutional Data in Prescribed Format	<u>View File</u>

### 3.Academic

3.1

Number of courses in all programmes during the year:

File Description	Documents
Institutional Data in Prescribed Format	<u>View File</u>

3.2

Number of full-time teachers during the year:

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Extended Profile		
1.Programme		
1.1		26
Number of programmes offered during the year	::	
File Description	Documents	
Institutional Data in Prescribed Format		View File
2.Student		
2.1		4473
Total number of students during the year:		
File Description	Documents	
Institutional data in Prescribed format		<u>View File</u>
2.2		995
Number of outgoing / final year students during	g the year:	
File Description	Documents	
Institutional Data in Prescribed Format	<u>View File</u>	
2.3		4070
Number of students who appeared for the examinations conducted by the institution during the year:		
File Description	Documents	
Institutional Data in Prescribed Format		View File
3.Academic		
3.1		26
Number of courses in all programmes during the year:		
File Description	File Description Documents	
Institutional Data in Prescribed Format	scribed Format <u>View File</u>	

3.2	374
Number of full-time teachers during the year:	
File Description	Documents
Institutional Data in Prescribed Format	<u>View File</u>
3.3	12
Number of sanctioned posts for the year:	
4.Institution	
4.1	1148
Number of seats earmarked for reserved categor GOI/State Government during the year:	ries as per
4.2	109
Total number of Classrooms and Seminar halls	
4.3	1050
Total number of computers on campus for acade	emic purposes
4.4	1718
Total expenditure, excluding salary, during the Lakhs):	year (INR in

### Part B

#### **CURRICULAR ASPECTS**

### 1.1 - Curriculum Design and Development

1.1.1 - Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which are reflected in Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the various Programmes offered by the Institution.

Our College is an autonomous institution, which has duly constituted Board of Studies for each discipline of study. Each programme has well defined Programme Educational Objectives (PEOs) and Programme Specific Outcomes (PSOs). The PEOs are based upon the Institute Mission for holistic needs. The PSOs define the programme-specific and deeper specializations to develop man power to meet the local/regional needs of industry.

The POs reflect the national and global developmental needs. All the POs and PSOs are attained by offering a set of courses over a period of 8 semesters in UG programmes and 4 semesters in PG programmes.

The curriculum and syllabi for both undergraduate and postgraduate programs is designed and developed by the Boards of Studies based upon the AICTE model curriculum and by taking the opinion/suggestions/feedback from the University nominee, Academic expert, Industry experts, Faculty members and Alumni. The curriculum has a good balance of courses covering Basic-Sciences, Humanities and Sciences, Basic-Engineering, Programme-Core, Programme-Electives, Open Electives, Employability-Enhancement Courses, Personality-Development, Competency-Development courses, etc. Each course has a set of 5-6 COs, which are mapped to one or many relevant POs and PSOs. The curriculum is modified and updated from time to time on yearly basis based upon the changes in industry and societal needs..

File Description	Documents
Upload additional information, if any	<u>View File</u>
Link for additional information	Nil

### 1.1.2 - Number of Programmes where syllabus revision was carried out during the year

20

File Description	Documents
Minutes of relevant Academic Council/BOS meeting	<u>View File</u>
Details of syllabus revision during the year	<u>View File</u>
Any additional information	<u>View File</u>

### 1.1.3 - Number of courses focusing on employability/entrepreneurship/ skill development offered by the Institution during the year

109

File Description	Documents
Curriculum / Syllabus of such courses	<u>View File</u>
Minutes of the Boards of Studies/ Academic Council meetings with approval for these courses	<u>View File</u>
MoUs with relevant organizations for these courses, if any	<u>View File</u>
Any additional information	<u>View File</u>

### 1.2 - Academic Flexibility

### 1.2.1 - Number of new courses introduced across all programmes offered during the year

100

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<u>View File</u>
Any additional information	<u>View File</u>
Institutional data in prescribed format (Data Template)	<u>View File</u>

# 1.2.2 - Number of Programmes offered through Choice Based Credit System (CBCS)/Elective Course System

26

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<u>View File</u>
Any additional information	<u>View File</u>
List of Add on /Certificate programs (Data Template)	<u>View File</u>

### 1.3 - Curriculum Enrichment

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

As the Mission of the Institute is to inculcate ethical values,

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the College focuses on integrating cross-cutting and interdisciplinary issues to enable students develop wholesome personality.

In this context, important courses such as Professional Ethics and Human Values, Universal Human Values, Environmental Science and Engineering, Constitution of India, Managerial Economics have been introduced as mandatory courses for all programmes of engineering to enable students acquire the essence of Human Values, Gender Equity, Fraternity, Harmony, Right Understanding, Complementariness, etc. These courses in addition to other courses such as Disaster Management, Non-Conventional Energy Resources help the students understand the environmental concerns, energy requirements, disaster prevention and mitigation, and the need for sustainability of ecosystem, etc.

Professional Ethics and Human Values, Universal Human Values:

To instill ethical, moral, social and universal values, the College has introduced a mandatory course, namely Professional Ethics and Human Values, which is renamed by AICTE as Universal Human Values as 3-credit course during III/IV or V/VI semesters for all B.E./B.Tech programmes. These courses help students gain a holistic view of the values, ethics, self, society and profession, right understanding, harmony, ethical human conduct, trustworthiness and mutual cooperation.

File Description	Documents
Upload the list and description of the courses which address issues related to Gender, Environment and Sustainability, Human Values and Professional Ethics in the curriculum	<u>View File</u>
Any additional information	<u>View File</u>

### 1.3.2 - Number of value-added courses for imparting transferable and life skills offered during the year

15

File Description	Documents
List of value-added courses	<u>View File</u>
Brochure or any other document relating to value-added courses	<u>View File</u>
Any additional information	<u>View File</u>

### 1.3.3 - Number of students enrolled in the courses under 1.3.2 above

#### 1869

File Description	Documents
List of students enrolled	<u>View File</u>
Any additional information	<u>View File</u>

### 1.3.4 - Number of students undertaking field work/projects/ internships / student projects

#### 1640

File Description	Documents
List of programmes and number of students undertaking field projects / internships / student projects	<u>View File</u>
Any additional information	<u>View File</u>

### 1.4 - Feedback System

### 1.4.1 - Structured feedback and review of the syllabus (semester-wise / year-wise) is obtained from 1) Students 2) Teachers 3) Employers and 4) Alumni

### A. All 4 of the above

File Description	Documents
Provide the URL for stakeholders' feedback report	http://www.mahendra.info/downloads/AQAR_2 020-21/1_4_1_1_4_2_Feedback.pdf
Upload the Action Taken Report of the feedback as recorded by the Governing Council / Syndicate / Board of Management	<u>View File</u>
Any additional information	<u>View File</u>

### **1.4.2 - The feedback system of the Institution comprises the following**

A. Feedback collected, analysed and action taken made available on the website

File Description	Documents
Provide URL for stakeholders' feedback report	http://www.mahendra.info/downloads/AQAR 2 020-21/1 4 1 1 4 2 Feedback.pdf
Any additional information	<u>View File</u>

### TEACHING-LEARNING AND EVALUATION

### 2.1 - Student Enrollment and Profile

### 2.1.1 - Enrolment of Students

### 2.1.1.1 - Number of students admitted (year-wise) during the year

#### 1236

File Description	Documents
Any additional information	<u>View File</u>
Institutional data in prescribed format	<u>View File</u>

### 2.1.2 - Number of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc.) as per the reservation policy during the year (exclusive of supernumerary seats)

1191

File Description	Documents
Any additional information	<u>View File</u>
Number of seats filled against seats reserved (Data Template)	<u>View File</u>

### 2.2 - Catering to Student Diversity

2.2.1 - The institution assesses students' learning levels and organises special programmes for both slow and advanced learners.

The Faculty members assess the students learning and identify Bright Students and Slow Learners by continuously monitoring their academic performance and participation in curricular and co-curricular activities. Students who consistently score above 60% in Internal Assessments and previous End Semester Examinations are considered as Fast Learners and those who score below 50% in Internal Assessments and have arrears in previous End Semester Examinations are considered as Slow learners.

### Measures to Encourage Fast learners

- Students are encouraged to present papers on technological advancements at national and international events. Partial financial support is extended for soft skill development, other training and placement activities. Additional library cards are issued to enable them to access more reference books on recommendation of HODs.

#### Measures to Support Slow Learners:

- The slow learners are identified and Special Coaching is provided during evening.
- Extra coaching classes, tutorial classes, assignments, discussing previous end semester question papers and providing question banks with answer keys, etc. are followed to improve academic performance of the slow learners. Retest is also conducted for slow learners to improve their performance.
- Students are encouraged periodically by inviting the alumni for seminars through Mahendra Alumni Lecture Series (MAILS) program.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	Nil

### 2.2.2 - Student - Teacher (full-time) ratio

Year	Number of Students	Number of Teachers
20/03/2020	4473	374

File Description	Documents
Upload any additional information	<u>View File</u>

### 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:

The faculty members adopt various innovative Teaching-Learning methodologies to create the best learning environment for students. These methodologies include classroom teaching, ppt presentations, video lectures, and collaborative learning with illustrations.

- The following innovative teaching techniques have been introduced and implemented by collaborative work amongst faculty members and students:
- Flipped Classroom (Participative Learning)
- Blended Learning (Experiential Learning)
- Activity/Project
- Students are motivated to pursue online courses from NPTEL/Swayam to learn advanced concepts and improve problem solving skills.

File Description	Documents
Upload any additional information	<u>View File</u>
Link for additional Information	http://www.mahendra.info/downloads/AQAR_2 020-21/2_3_1.pdf

### 2.3.2 - Teachers use ICT-enabled tools including online resources for effective teaching and learning

ICT facilities and LCD projectors are installed in lecture halls. Online resources and e-Learning facilities like NPTEL video lectures are used by both faculty members and students for effective teaching and learning. In addition e-Books, e-Journals, DELNET and Digital library services are used by faculty members for extended reference of material for teaching. Also Guest Lectures by industrial experts and online Webinars/Seminars, IIT/NIT Lecture series are organized by faculty members on specific topics for enhanced learning. Industrial co-teaching courses are introduced, which are partially delivered by Industry experts to enhance practical knowledge.

During pandemic and post-pandemic faculty members conducted online classes extensively using through Google meet/Google classroom. Online assessments, quiz, Flipped teaching and Blended learning are also practiced and implemented by the faculty members and students. In-house Competency and Personality development trainings are provided every semester to make the students industry ready.

File Description	Documents
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	http://www.mahendra.info/downloads/AQAR_2 020-21/2_3_2.pdf
Upload any additional information	<u>View File</u>

### 2.3.3 - Ratio of students to mentor for academic and other related issues

#### 2.3.3.1 - Number of mentors

225

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File Description	Documents
Upload year-wise number of students enrolled and full-time teachers on roll	<u>View File</u>
Circulars with regard to assigning mentors to mentees	No File Uploaded

### 2.3.4 - Preparation and adherence to Academic Calendar and Teaching Plans by the institution

The Principal office prepares Academic Calendar for each semester in consultation with the HODs and Management. The Academic Calendar consists of Opening/Reopening date, Total no.of Working-days, Holidays, Internal Test slots, End Semester Exam fees payment dates, Last working day, End Semester Practical and Theory Examination dates, Reopening date for the next semester, etc. It is circulated amongst all faculty members and students for their information and record. Based upon the Academic Calendar the Heads of the Departments plan and decide the academic activities and assign the responsibilities to the faculty members. Every Department plans to prepare the timetable, subject allocation, etc. Every faculty member accordingly prepares the Preamble for each subject with the name of the course, course Objectives, Prerequisites, Outcomes, Textbooks, references, etc. The faculty member also prepare lecture plan/teaching plan/session plan and implement accordingly.

The Controller of Examinations-plans, conducts and monitors the Internal tests, End-Semester-Examinations for each semester in line with the schedule received from the affiliating-university. The Departments and CoE office largely adhere to the dates given in the Academic Calendar except minor deviation in the event of unforeseen holidays, disasters, pandemic, etc. In addition a Target plan is prepared for organizing conferences, symposia, guest lectures, webinars, workshops, FDPs, Alumni-lectures, Innovative &best-practices, etc.

File Description	Documents
Upload the Academic Calendar and Teaching Plans during the year	<u>View File</u>

### 2.4 - Teacher Profile and Quality

### 2.4.1 - Number of full-time teachers against sanctioned posts during the year

#### 374

File Description	Documents
Year-wise full-time teachers and sanctioned posts for the year	<u>View File</u>
List of the faculty members authenticated by the Head of HEI	<u>View File</u>
Any additional information	No File Uploaded

### 2.4.2 - Number of full-time teachers with PhD/ D.M. / M.Ch. / D.N.B Super-Specialty / DSc / DLitt during the year

60

File Description	Documents
List of number of full-time teachers with PhD./ D.M. / M.Ch. / D.N.B Super-Specialty / D.Sc. / D.Litt. and number of full-time teachers for 5 years	<u>View File</u>
Any additional information	No File Uploaded

# 2.4.3 - Total teaching experience of full-time teachers in the same institution: (Full-time teachers' total teaching experience in the current institution)

### 374

File Description	Documents
List of teachers including their PAN, designation, Department and details of their experience	<u>View File</u>
Any additional information	<u>View File</u>

#### 2.5 - Evaluation Process and Reforms

### 2.5.1 - Number of days from the date of last semester-end/ year- end examination till the declaration of results during the year

15 days

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File Description	Documents
List of Programmes and the date of last semester-end / year- end examinations and the date of declaration of result	<u>View File</u>
Any additional information	<u>View File</u>

### 2.5.2 - Number of students' complaints/grievances against evaluation against the total number who appeared in the examinations during the year

0

File Description	Documents
Upload the number of complaints and total number of students who appeared for exams during the year	<u>View File</u>
Upload any additional information	<u>View File</u>

2.5.3 - IT integration and reforms in the examination procedures and processes including Continuous Internal Assessment (CIA) have brought in considerable improvement in the Examination Management System (EMS) of the Institution

Our Institution has an exclusive web based Examination Management System (EMS) named as COXCO, which has been created and integrated with all necessary modules to conduct the Examination and process the results smoothly. The Examination Cell collects the Student data and updates the same in the EMS software module. The important activities include:

- Planning and conducting the Continuous Internal Assessment tests for each semester of all UG & PG students as per the College Academic Calendar. The final score is computed, considering various components of the continuous assessment processes. It is verified by the Examination Coordinators, Class Advisors and finally approved by the HOD, which is entered in the EMS by individual faculty members.
- Central valuation of end semester examination theory scripts is conducted by the BoS Chairman of the individual Departments where 50% internal and 50% external Evaluators are appointed and the marks are entered in the EMS module.
- Conducting malpractice committee meeting if needed, by
   Malpractice Cases Consideration Committee (MCCC). Minutes

- of the MCCC will be approved by the authorities concerned and punishments will be awarded to the students.
- Processing of results, announcement of results and printing of grade sheets; timeline is to be followed for each activity.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR 2 020-21/2 5 3.pdf

### 2.6 - Student Performance and Learning Outcomes

2.6.1 - Programme Outcomes and Course Outcomes for all Programmes offered by the institution are stated and displayed on the website and communicated to teachers and students

Every Department has prepared the Programme Educational Objectives (PEOs), Programme Outcomes (POs) and Programme Specific Outcomes (PSOs). The Vision and Mission statements, PEOs, POs and PSOs are properly disseminated among all the students as follows:

- Hardcopy of Vision, Mission, PEOs and PSOs are distributed to the students and their parents/guardians during orientation meet in first year
- Displayed in all classrooms, laboratories and notice boards
- Also, the Vision, Mission, PSOs and PEOs are made available in

Institute website http://www.mahendra.info/

 Awareness sessions were conducted in physical classroom and online sessions were conducted through Google meet to create awareness among all students.

While taking classes, each faculty member used to create awareness about Course Outcomes (COs) among the students. They also discuss about CO-PO mapping, assessment criteria, attainment, etc.

File Description	Documents
Upload COs for all courses (exemplars from the Glossary)	<u>View File</u>
Upload any additional information	<u>View File</u>
Link for additional Information	http://www.mahendra.info/be programmes of fered.php

### 2.6.2 - Attainment of Programme Outcomes and Course Outcomes as evaluated by the institution

- Using the Bloom's Taxonomy action verbs COs are defined for all courses in the curriculum and syllabi.
- With a better understanding of the Course Outcomes, CO-PO mapping is made properly for all courses by the course coordinators and the same is duly verified by program coordinator.
- Curriculum gap if any is identified and minimized by introducing new subjects / augmented topics in the syllabus in addition to providing the contents beyond the syllabus towards the attainment of POs and PSOs.
- The faculty members used to calculate the CO attainment for their respective courses and the Department/Programme Coordinator(s) calculate the PO and PSO attainments. Much attention is given to the slow learners to improve their academic performance so as to improve the attainment level.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/be programmes of fered.php

### 2.6.3 - Pass Percentage of students

### 2.6.3.1 - Total number of final year students who passed in the examinations conducted by Institution

988

File Description	Documents
Upload list of Programmes and number of students appear for and passed in the final year examinations	<u>View File</u>
Upload any additional information	<u>View File</u>
Paste link for the annual report	http://www.mahendra.info/downloads/AQAR 2 020-21/2 6 3.pdf

### 2.7 - Student Satisfaction Survey

2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design its own questionnaire). Results and details need to be provided as a weblink

http://www.mahendra.info/igac.php

#### RESEARCH, INNOVATIONS AND EXTENSION

#### 3.1 - Promotion of Research and Facilities

3.1.1 - The institution's research facilities are frequently updated and there is a well-defined policy for promotion of research which is uploaded on the institutional website and implemented

The College has modern laboratory facilities with Centres of Excellence in major disciplines of study to encourage faculty members and students to pursue research. The facilities are regularly updated using the funds from the Management and grants received from AICTE under MODROBS and RPS schemes. The Institute has a well-defined policy for promoting research and related activities. It can be accessed from the College website at http://www.mahendra.info/research.php

The College has a Director for R&D who coordinates the research activities such as motivating and guiding the faculty members in preparing research proposals seeking funding from government and non government agencies, encouraging faculty members to publish their research work in reputed national and international journals, etc. He is the Editor-in-Chief of the refereed journal, namely International Journal of Advance Science and Engineering (IJASE), published by our Group Institutions. https://mahendrapublications.com

File Description	Documents
Upload the Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	<u>View File</u>
Provide URL of policy document on promotion of research uploaded on the website	http://www.mahendra.info/research.php
Any additional information	<u>View File</u>

### 3.1.2 - The institution provides seed money to its teachers for research

# 3.1.2.1 - Seed money provided by the institution to its teachers for research during the year (INR in lakhs)

320000

File Description	Documents
Minutes of the relevant bodies of the institution regarding seed money	<u>View File</u>
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	<u>View File</u>
List of teachers receiving grant and details of grant received	<u>View File</u>
Any additional information	<u>View File</u>

# ${\bf 3.1.3 - Number\ of\ teachers\ who\ were\ awarded\ national\ /\ international\ fellowship(s)\ for\ advanced\ studies/research\ during\ the\ year}$

6

File Description	Documents
e-copies of the award letters of the teachers	<u>View File</u>
List of teachers and details of their international fellowship(s)	<u>View File</u>
Any additional information	<u>View File</u>

### 3.2 - Resource Mobilization for Research

# 3.2.1 - Grants received from Government and Non-Governmental agencies for research projects, endowments, Chairs during the year (INR in Lakhs)

### 8320440

File Description	Documents
e-copies of the grant award letters for research projects sponsored by non- governmental agencies/organizations	<u>View File</u>
List of projects and grant details	<u>View File</u>
Any additional information	No File Uploaded

### 3.2.2 - Number of teachers having research projects during the year

### 32

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR 2 020-21/3 2 2.pdf
List of research projects during the year	<u>View File</u>

### 3.2.3 - Number of teachers recognised as research guides

22

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File Description	Documents
Upload copies of the letter of the university recognizing teachers as research guides	<u>View File</u>
Institutional data in Prescribed format	<u>View File</u>

### 3.2.4 - Number of departments having research projects funded by Government and Non-Government agencies during the year

7

File Description	Documents
Supporting document from Funding Agencies	<u>View File</u>
Paste link to funding agencies' website	http://www.mahendra.info/research.php
Any additional information	<u>View File</u>

### 3.3 - Innovation Ecosystem

3.3.1 - Institution has created an ecosystem for innovations and creation and transfer of knowledge supported by dedicated centres for research, entrepreneurship, community orientation, incubation, etc.

Our College has around 10 Centres of Excellence and an EDC, and has created a good ecosystem for creativity, innovation, new product development, and to promote entrepreneurship activities.

Our Institute's Innovation Cell (IIC) is ranked by MHRD-AICTE by 4-star rating for innovation and entrepreneurship activities and ranked in ARIIA Band 'B' (Ranks 26-50) by MHRD-AICTE during 2020 and ranked in ARIIA Band 'EXCELLENT', during 2021 in the category of Self-Financing Institutions.

The Departments have organized I & E activities, pre-incubation events for the benefit of students and faculty innovators. The details of dedicated Centers of Excellence, events/programmes organized, students/faculty participated, etc., are given in the ARIIA report 2020-21.

http://www.mahendra.info/pdf/ARIIA-2020-21.pdf

A. All of the above

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/pdf/ARIIA-2020-2 1.pdf

### 3.3.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year

56

File Description	Documents
Report of the events	<u>View File</u>
List of workshops/seminars conducted during the year	<u>View File</u>
Any additional information	No File Uploaded

### 3.4 - Research Publications and Awards

### **3.4.1 - The Institution ensures**

implementation of its Code of Ethics for Research uploaded in the website through

the following: Research Advisory

**Committee Ethics Committee Inclusion of** 

Research Ethics in the research

methodology course work Plagiarism check

through authenticated software

File Description	Documents
Code of Ethics for Research, Research Advisory Committee and Ethics Committee constitution and list of members of these committees, software used for plagiarism check	<u>View File</u>
Any additional information	<u>View File</u>

# 3.4.2 - Number of PhD candidates registered per teacher (as per the data given with regard to recognized PhD guides/ supervisors provided in Metric No. 3.2.3) during the year

### 3.4.2.1 - Number of PhD students registered during the year

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88

File Description	Documents
URL to the research page on HEI website	http://www.mahendra.info/research.php
List of PhD scholars and details like name of the guide, title of thesis, and year of registration	<u>View File</u>
Any additional information	<u>View File</u>

# 3.4.3 - Number of research papers per teacher in CARE Journals notified on UGC website during the year

159

File Description	Documents
List of research papers by title, author, department, and year of publication	<u>View File</u>
Any additional information	No File Uploaded

# 3.4.4 - Number of books and chapters in edited volumes / books published per teacher during the year

34

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR 2 020-21/3 4 4.xls

# 3.4.5 - Bibliometrics of the publications during the year based on average Citation Index in Scopus/ Web of Science/PubMed

### 3.4.5.1 - Total number of Citations in Scopus during the year

61

File Description	Documents
Any additional information	<u>View File</u>
Bibliometrics of the publications during the year	<u>View File</u>

## 3.4.6 - Bibliometrics of the publications during the year based on Scopus/ Web of Science – h-Index of the University

### 3.4.6.1 - h-index of Scopus during the year

14

File Description	Documents
Bibiliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	<u>View File</u>
Any additional information	No File Uploaded

### 3.5 - Consultancy

### 3.5.1 - Revenue generated from consultancy and corporate training during the year (INR in lakhs)

1845000

File Description	Documents
Audited statements of accounts indicating the revenue generated through consultancy and corporate training	No File Uploaded
List of consultants and revenue generated by them	<u>View File</u>
Any additional information	No File Uploaded

# 3.5.2 - Total amount spent on developing facilities, training teachers and clerical/project staff for undertaking consultancy during the year

52000

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File Description	Documents
Audited statements of accounts indicating the expenditure incurred on developing facilities and training teachers and staff for undertaking consultancy	<u>View File</u>
List of training programmes, teachers and staff trained for undertaking consultancy	<u>View File</u>
List of facilities and staff available for undertaking consultancy	<u>View File</u>
Any additional information	No File Uploaded

### 3.6 - Extension Activities

3.6.1 - Extension activities carried out in the neighbourhood sensitising students to social issues for their holistic development, and the impact thereof during the year

In this COVID-19 pandemic, many of our College NSS Volunteers have made significant contributions to create awareness about this deadly coronavirus during June to July-2020. M.Priya, a Volunteer from III Year B.E EEE prepared 50 packs of masks and distributed to the needy people. M. Ramya from III Year B.E EEE prepared Placards and distributed to the workers of MNREGS (100-days work) and Primary Health Centre Workers to create awareness among the public. Another Volunteer K.Devishri from III Year B.E ECE demonstrated how to wear mask properly to her neighborhood children. E.Durkambigai from III Year B.E ECE demonstrated the hand wash techniques using soap to the village people. S.Akshaya from III Year B.E. AERONAUTICAL visited Ration Shops nearby and asked the public to follow social distancing. She marked spaces of 2-meter apart for public to follow the norms. Another Volunteer P.Udhayam Lenin from III Year B.E Mechanical drew Corona Virus Images on the roads and pathways to create awareness to public about this deadly disease with the help of his friends. B. Aravind from III Year B. E Mechatronics drawn the circles in each and every shop near his neighborhood to show the importance of social distancing. A Volunteer G. Tamilvanan from III Year B. E Mechanical helped the neighbours on their needs in-case of emergency to get E-Pass.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/nss.php

# 3.6.2 - Number of awards and recognition received by the Institution, its teachers and students for extension activities from Government / Government-recognised bodies during the year

11

File Description	Documents
Number of awards for extension activities in during the year	<u>View File</u>
e-copy of the award letters	<u>View File</u>
Any additional information	<u>View File</u>

3.6.3 - Number of extension and outreach programmes conducted by the institution through NSS/NCC/Red Cross/YRC, etc. during the year (including Government-initiated programmes such as Swachh Bharat, AIDS Awareness, and Gender Sensitization and those organised in collaboration with industry, community and NGOs)

23

File Description	Documents
Reports of the events organized	<u>View File</u>
Any additional information	<u>View File</u>

# 3.6.4 - Number of students participating in extension activities listed in 3.6.3 during the year

2538

File Description	Documents
Reports of the events	<u>View File</u>
Any additional information	<u>View File</u>

### 3.7 - Collaboration

# 3.7.1 - Number of collaborative activities during the year for research/ faculty exchange/

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# student exchange/internship/on-the-job training/project work

58

File Description	Documents
Copies of documents highlighting collaboration	<u>View File</u>
Any additional information	No File Uploaded

# 3.7.2 - Number of functional MoUs with institutions of national and/or international importance, other universities, industries, corporate houses, etc. during the year (only functional MoUs with ongoing activities to be considered)

31

File Description	Documents
e-copies of the MoUs with institution/ industry/ corporate house	<u>View File</u>
Details of functional MoUs with institutions of national, international importance, other institutions etc. during the year	<u>View File</u>
Any additional information	No File Uploaded

# INFRASTRUCTURE AND LEARNING RESOURCES

# 4.1 - Physical Facilities

4.1.1 - The Institution has adequate infrastructure and physical facilities for teaching-learning, viz., classrooms, laboratories, computing equipments, etc.

The institute provides the adequate infrastructure facilities for teaching learning process. To make the educational programme more meaningful and socially relevant, the institution focus on outcome based education method. It creates an ambience to produce students with the ability to cope with recent trends and technologies. The academic landscape sprawls widely with Administrative block with Principal room, spacious, airy classrooms with sufficient desks, Laboratories with latest Software and equipment, Central library with well stacked resources for the students and faculty members, hygienic and well maintained Canteen facility, Students' Amenity Centre. The built up area includes vast auditorium with 1000 seating arrangements, focus lights, Podium and PA settings. The institution provides other essential facilities like Medical

needs, high speed internet connectivity, a good transport facility for the students and faculty, the separate Rest room facilities in all the blocks for boys and girls. The institute offers the quality learning environment to enhance knowledge, skill and attitude of all the students.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	Nil

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

The institution has adequate facilities for both co-curricular and extra-curricular activities like seminars, workshops, cultural activities, yoga, sports and games, both indoor and outdoor. For the overall development of a student, curriculum is not only the single criteria. The holistic growth should be complemented with co-curricular and extra-curricular activities. These out of class activities help to develop in all domains of life such as cognitive, emotional, social, moral, cultural and aesthetic. The institution provides the following facilities to enhance students' community by all means.

File Description	Documents
Geotagged pictures	<u>View File</u>
Upload any additional information	<u>View File</u>
Paste link for additional information	Nil

# 4.1.3 - Number of classrooms and seminar halls with ICT-enabled facilities

41

File Description	Documents
Upload any additional information	<u>View File</u>
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	<u>View File</u>

# 4.1.4 - Expenditure for infrastructure augmentation, excluding salary, during the year (INR in Lakhs)

### 283.80

File Description	Documents
Upload audited utilization statements	<u>View File</u>
Details of Expenditure, excluding salary, during the years	<u>View File</u>
Any additional information	No File Uploaded

# 4.2 - Library as a Learning Resource

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

Total Area: 17029 Sq. ft

, reading room available

Details of Books, Journals, etc.

S.No Description Quantity 1 Books 112165 2 Titles 29964 3
National Journals 156 4 International Journals 108 5 Non Book
(Floppy /CDs/DVD ) 6220 6 E-Journals (Elsevier & DELNET ) 1280 7
E-Book ( DELNET,INTECH OPEN SCIENCE ) 6000+ 8 Project Report
4625 9 Question Bank 6038 10 Newspapers 10

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/library.php

### 4.2.2 - Institution has access to the

A. Any 4 or more of the above

# following: e-journals e-ShodhSindhu Shodhganga Membership e-books Databases Remote access to e-resources

File Description	Documents
Details of subscriptions like e- journals, e-books, e- ShodhSindhu, Shodhganga membership	<u>View File</u>
Upload any additional information	<u>View File</u>

# 4.2.3 - Expenditure on purchase of books/ e-books and subscription to journals/e-journals during the year (INR in lakhs)

### 14.54

File Description	Documents
Audited statements of accounts	<u>View File</u>
Any additional information	No File Uploaded
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the year (Data Template)	<u>View File</u>

# 4.2.4 - Usage of library by teachers and students (footfalls and login data for online access)

# 4.2.4.1 - Number of teachers and students using the library per day during the year

280

File Description	Documents
Upload details of library usage by teachers and students	<u>View File</u>
Any additional information	No File Uploaded

# 4.3 - IT Infrastructure

4.3.1 - Institution has an IT policy covering Wi-Fi, cyber security, etc. and has allocated budget for updating its IT facilities

Wireless (Wi-Fi) connectivity and Cyber security:

 Access will be given once the device registration form submitted

- Device details and MAC ID details to be entered correctly and it will be verified by the TechTeam
- Check the security level of the network by choosing the most secure connection. A MAC ID protection mechanism is used with the passphrase
- Authentication will be based on the User Level for staff members
- Scheduled timings are there to access the internet at all locations
- Connect with the correct SSID located in the campus or connection names may be rogue and could have been setup by a hacker.
- Turn off wireless network on your computer, tablet or phone when you are not using it to prevent automatic connection to open and possibly dangerous APs. Set your device to not to connect automatically to public or unknown and untrusted networks.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR_2 020-21/4_3_1.pdf

# 4.3.2 - Student - Computer ratio

Number of Students	Number of Computers
4473	1150

File Description	Documents
Upload any additional information	<u>View File</u>

# 4.3.3 - Bandwidth of internet connection in A. ?50 Mbps the Institution and the number of students on campus

File Description	Documents
Details of bandwidth available in the Institution	<u>View File</u>
Upload any additional information	<u>View File</u>

4.3.4 - Institution has facilities for e-content A. All four of the above development: Facilities available for e-content development Media Centre Audio-Visual Centre Lecture Capturing System (LCS) Mixing equipments and software for editing

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	Nil
List of facilities for e-content development (Data Template)	<u>View File</u>

# **4.4 - Maintenance of Campus Infrastructure**

# 4.4.1 - Expenditure incurred on maintenance of physical and academic support facilities, excluding salary component, during the year (INR in lakhs)

### 1490.19

File Description	Documents
Audited statements of accounts	<u>View File</u>
Upload any additional information	No File Uploaded

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

The College has well established standard systems and procedures for maintaining the Physical, Academic and Support facilities. The Faculty and Staff In-charge ensure various aspects of utilization and maintenance of the Physical, Academic and Support facilities Classrooms, Laboratories, Library, Computers, Hostels, Sports complex, etc.

### Library usage guidelines

- Book circulation register is used for maintaining the Library usage
- The Library staff will make the entry of the issue, return, and renewal of books in Library using OPAC software.
- The Library staff will list down the new books to be included in the Library and based upon recommendations of the departments and permission from Principal and approval from Management, it is updated in the Library.
- •Due dates for renewal and returning books are observed regularly.
- •Library staff provide the login for access to DELNET or any e-journals.

Maintenance of Sports facilities

The College has Sports Complex and spacious Playground. The Indoor and Outdoor Games Equipment, Courts, Playground and Gym are supervised and maintained by the Physical Education Director and the Sweepers of the College. The grounds are maintained at regular intervals by the rollers by the marker of sports department.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR_2 020-21/4_4_2_Maintenance_Policy.pdf

### STUDENT SUPPORT AND PROGRESSION

### 5.1 - Student Support

# 5.1.1 - Number of students benefitted by scholarships and freeships provided by the Government during the year

2847

File Description	Documents
Upload self-attested letters with the list of students receiving scholarships	<u>View File</u>
Upload any additional information	<u>View File</u>

# 5.1.2 - Number of students benefitted by scholarships and freeships provided by the institution and non-government agencies during the year

### 1481

File Description	Documents
Upload any additional information	<u>View File</u>
Institutional data in prescribed format	<u>View File</u>

5.1.3 - The following Capacity Development A. All of the above and Skill Enhancement activities are organised for improving students' capabilities Soft Skills Language and Communication Skills Life Skills (Yoga, Physical fitness, Health and Hygiene)
Awareness of Trends in Technology

File Description	Documents
Link to Institutional website	http://www.mahendra.info/downloads/AQAR 2 020-21/5 1 3.pdf
Details of capability development and schemes	<u>View File</u>
Any additional information	<u>View File</u>

# 5.1.4 - Number of students benefitted from guidance/coaching for competitive examinations and career counselling offered by the institution during the year

577

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File Description	Documents
Any additional information	<u>View File</u>
Number of students benefited by guidance for competitive examinations and career counseling during the year (Data Template)	<u>View File</u>

# 5.1.5 - The institution adopts the following mechanism for redressal of students' grievances, including sexual harassment and ragging: Implementation of guidelines of statutory/regulatory bodies Creating awareness and implementation of policies with zero tolerance Mechanism for submission of online/offline students' grievances Timely redressal of grievances through appropriate committees

# A. All of the above

File Description	Documents
Minutes of the meetings of students' grievance redressal committee, prevention of sexual harassment committee and Anti-ragging committee	<u>View File</u>
Details of student grievances including sexual harassment and ragging cases	<u>View File</u>
Upload any additional information	No File Uploaded

# **5.2 - Student Progression**

# 5.2.1 - Number of outgoing students who got placement during the year

# 801

File Description	Documents
Self-attested list of students placed	<u>View File</u>
Upload any additional information	<u>View File</u>

# 5.2.2 - Number of outgoing students progressing to higher education

45

File Description	Documents
Upload supporting data for students/alumni	No File Uploaded
Details of students who went for higher education	<u>View File</u>
Any additional information	<u>View File</u>

# 5.2.3 - Number of students qualifying in state/ national/ international level examinations during the year

# 5.2.3.1 - Number of students who qualified in state/ national/ international examinations (e.g.: IIT-JAM/NET/SET/JRF/ GATE /GMAT /CAT/ GRE/ TOEFL/Civil Services/State government examinations) during the year

7

File Description	Documents
Upload supporting data for students/alumni	<u>View File</u>
Any additional information	<u>View File</u>

### 5.3 - Student Participation and Activities

# 5.3.1 - Number of awards/medals for outstanding performance in sports and/or cultural activities at inter-university / state /national / international events (award for a team event should be counted as one) during the year

38

File Description	Documents
e-copies of award letters and certificates	<u>View File</u>
Any additional information	<u>View File</u>

# 5.3.2 - Presence of an active Student Council and representation of students in academic and administrative bodies/committees of the institution

In our Institution, students are actively participating in academic and administrative bodies/committees. The students' representatives are involved in academic committees such as Class Committee wherein they participate and provide feedback on teaching to improve the academic system. Students actively

participate in Department Students' Association and Professional Societies. Students are also representatives in various administrative committees such as Anti-ragging Committee, Students Grievance Redressal Committee, Internal Complaints Committee (Prevention of Sexual Harassment). Students also participate in extra-curricular activities such as NSS, NCC and YRC. In continuation of these activities students are participating in several awareness programs in order to have societal awareness on rain water harvesting and plastic-free environment, etc. In addition students actively participate and organise many club activities, viz., Green Club, Communication and Literary Club, Design Club and Societal activities to explore and emphasize their field of interest. The mentor-mentee system of 1:15 focuses on counselling students (slow learners) and promotes the collaborative learning in academic activities and career guidance. Students also play active role in the department association activities like workshops, symposium, conference, etc. The key role of the student representative is governing the program committee, planning and execution of activities. Majority of the students are registered under various professional societies like IE(I),ICI,CSI,ISTE,IEEEandASCE.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR_2 020-21/5_3_2.pdf

# 5.3.3 - Number of sports and cultural events / competitions organised by the institution

4

File Description	Documents
Report of the event	<u>View File</u>
List of sports and cultural events / competitions organised per year	<u>View File</u>
Upload any additional information	No File Uploaded

# 5.4 - Alumni Engagement

5.4.1 - The Alumni Association and its Chapters (registered and functional) contribute significantly to the development of the institution through financial and other support services

Alumni Association plays a prime role in networking the graduates with the Institution. Our Institution has an active Alumni Association with the office bearers as given below: Chairman - Dr.S.Raju, Professor and Head / Information and Technology, 2. Secretary -Dr.N.Viswanathan, Professor and Head / Electronics and Communication Engineering, 3. Treasurer -Mr.S.Premkumar, Assistant Professor, Computer Science and Engineering, and Alumni members. The Alumni Association meets every year and conduct the General Body Meeting to decide important activities such as Alumni day celebration, alumni meet and alumni mentors, etc. The Mahendra-alumni meet is conducted at national and international level. At national level the alumni meets are conducted in Bangalore, Coimbatore, Chennai and various places. The Alumni working in those regions are gathered and alumni day has been celebrated to share their experience and industrial exposure. The Institution has initiated a novel Mahendra Alumni Interactive Lecture Series(MAILS), wherein the alumni are invited by every department to deliver special lectures to the students to enable them gain the field exposure, technical skills, employment and entrepreneurship skills. Each Department organises around 6-10 MAILS programs in a year, and also alumni mentors have been identified for every 250 students in order to guide them for their better placements and technical knowledge sharing, etc. The alumni also help to schedule internships and in-plant training for the students in the various fields of interest.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://alumni.mahendra.info/gallery.php?p  age=public

# **5.4.2 - Alumni's financial contribution** during the year

D. 2 Lakhs - 5 Lakhs

File Description	Documents
Upload any additional information	<u>View File</u>

# 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

### Vision:

To be an Internationally recognized Institute for Engineering Education and Research with Ethical Values.

### Mission:

- To ensure the effective use of resources to mould the students as professionals and entrepreneurs
- To enhance the industry-institute interaction for innovative technology practice
- To encourage the faculty members and students for advanced research
- To inculcate ethical values among the faculty members and students

The Institute is governed by the Governing Council consisting of the Chairman, Management representatives, Experts from academia, industry and the Principal. The collective leadership continuously focuses on the Vision and Mission of the Institute. Offering good quality engineering education and pursuing research with ethical values are the two key features in the vision statement as perceived by the institute leadership. The mission statement spells out the means or strategy to accomplish the vision. The Institute has well established modern infrastructure and standard academic system in place to mould the students are professionals. The College has established Centres of Excellence in many prominent and emerging areas for active industry-institute interaction to train the students for current industrial needs and also enable the faculty members to participate in research activities in emerging areas.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR 2 020-21/6 1 1.pdf

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# 6.1.2 - Effective leadership is reflected in various institutional practices such as decentralization and participative management

The Institution functions with a decentralized governance system. The Head of the Institution is functioning effectively with the culture of participative management. He plans and decides the Academic Calendar for each semester in consultation with the HODs and Management. The Academic Calendar consists of Total no. of Working days, Holidays, Internal Test slots, Department Activities/Events, Exam fees payment dates, , FDPs, Last working day, End Semester Examination duration, Reopening date for the next semester, etc. It is circulated amongst all faculty members and students for their information and record. The Heads of the Departments plan and decide the academic activities and assign the responsibilities to the faculty members. Every Department prepares the subject allocation, Time-Table, purchase and maintenance of equipment and consumables, plans Innovative teaching techniques and best practices, organizes FDPs, IOT courses, conferences, symposia, guest lectures and workshops, and sign MoUs with industries for industrial visits, in-plant trainings, internships and placement.

File Description	Documents
Upload strategic plan and deployment documents on the website	<u>View File</u>
Upload any additional information	No File Uploaded
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR_2 020-21/6_1_2.pdf

# 6.2 - Strategy Development and Deployment

- 6.2.1 The institutional Strategic/Perspective plan has been clearly articulated and implemented
- (i) Starting new courses in emerging areas and Admission of Students:

The Institute with a strategic plan starts new courses in emerging and futuristic technological areas. Admission plays vital role for the growth of every College. Admission rules and

regulations are articulated as per the Tamilnadu State Government and Directorate of Technical Education in respect of Single Window Counselling and Management quota seats. There shall also be a merit-based, lateral admission of students having Diploma qualification to the second year of all programmes at the College in accordance with the Government rules applicable for such courses. The College website, prospectus and the curriculum handbook provide relevant information about the institution and the programmes being offered. The prospectus gives details of eligibility norms for admission. It is given to the applicants along with the application form. A customized admission software package has been developed to facilitate smooth admission process. In 2019 the College started new UG programmes in specialized areas namely B.Tech. Chemical Engineering, B.Tech. Food Technology and B.Tech. Pharmaceutical Engineering. In 2020 the College started programmes in emerging areas such as Artificial Intelligence and Cyber Security, which have attracted good number of students.

File Description	Documents
Strategic Plan and deployment documents on the website	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR_2 020-21/6_2_1.pdf
Upload any additional information	No File Uploaded

6.2.2 - The functioning of the various institutional bodies is effective and efficient as visible from the policies, administrative set-up, appointment and service rules, procedures, etc.

Mahendra Engineering College has an established system for administration and academic activities. The statutory bodies such as Governing body, Academic Council, Finance Committee and Board of Studies for every department are constituted with eminent personalities as per UGC guidelines. All these bodies meet regularly and deliberate on policy, academic, financial, curriculum and related matters. The minutes of the meetings and outcome is shared with the HODs, faculty members and other members for information and execution.

Several non-statutory committees as per UGC/AICTE guidelines are constituted and there is a good representation from faculty

members and students in such committees to ensure participation, transparency and easy flow of information at all levels.

The College maintains the desired faculty-student ratio as per IACTE norms and recruits faculty members and non-teaching staff on regular basis. Appointment orders are issued to those who are recruited and as and when they join, they are given awareness on their duties and responsibilities, procedures, service rules, etc.

File Description	Documents
Paste link to Organogram on the institution webpage	http://www.mahendra.info/downloads/AQAR_2 020-21/6_2_2-MEC - ORNOGRAM - FINAL.pdf
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/statutory commit tee.php

# 6.2.3 - Implementation of e-governance in areas of operation: Administration Finance and Accounts Student Admission and Support Examination

B. Any three of the above

File Description	Documents
ERP (Enterprise Resource Planning) Documen	<u>View File</u>
Screen shots of user interfaces	<u>View File</u>
Details of implementation of e- governance in areas of operation	<u>View File</u>
Any additional information	No File Uploaded

# **6.3 - Faculty Empowerment Strategies**

6.3.1 - The institution has effective welfare measures for teaching and non-teaching staff and avenues for their career development/progression

The College has good welfare measures for teaching and nonteaching staff and students as described below:

### For Teaching Staff:

- Free transport facilities.
- Waiver of fees for teachers' children in the Institution.
- Medical leave and Maternity leave.
- Supporting for education of children of the teachers in the group institutions.
- Sponsoring for attending conference, workshops and FDPs for career progression
- Incentive for publication of papers / research articles, patents, books.
- Rewards, Medals for producing University Ranks.
- Cash awards for academic excellence.
- Special Study Leave (SSL) to pursue higher education.
- Subsidized canteen fares.
- Group Insurance.
- Online NPTEL course fee reimbursement for career progression.

# For Non-Teaching Staff:

- Educational support to the children of the staff.
- Marriage gifts with the sanction of one week leave.
- Medical leave / maternity leave.
- Free transport facilities.
- Special Study Leave (SSL) for higher studies.
- Incentive for attending orientation programmes, workshops and conferences.
- Incentive for vehicle utilization or transport allowance.
- Incentive for dress materials for housekeeping staff.
- Subsidized canteen fare.
- Group Insurance.

### For Students:

- Government Scholarships,
- Management Scholarships.
- Free Transport facilities to SC/ST Students,
- Free food and Hostel facilities to SC/ST Students.
- Cash awards for University Rank Holders, Semester Toppers.
- Travel expenses, Cash awards for good performers in Sports, Culturals, etc.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR_2 020-21/6_3_1.pdf

# 6.3.2 - Number of teachers provided with financial support to attend conferences / workshops and towards payment of membership fee of professional bodies during the year

### 105

File Description	Documents
Upload any additional information	<u>View File</u>
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	<u>View File</u>

# **6.3.3** - Number of professional development / administrative training programmes organized by the Institution for its teaching and non-teaching staff during the year

36

File Description	Documents
Reports of the Human Resource Development Centres (UGC HRDC/ASC or other relevant centres)	<u>View File</u>
Upload any additional information	<u>View File</u>

# 6.3.4 - Number of teachers who have undergone online/ face-to-face Faculty Development Programmes during the year: (Professional Development Programmes, Orientation / Induction Programmes, Refresher Courses, Short-Term Course, etc.)

130

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File Description	Documents
Summary of the IQAC report	<u>View File</u>
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	<u>View File</u>
Upload any additional information	No File Uploaded

# 6.4 - Financial Management and Resource Mobilization

# 6.4.1 - Institution conducts internal and external financial audits regularly

Mahendra Engineering College has qualified Chartered Accountants (Internal Auditors) to supervise the Internal Audit functions and ensure that all the procedures and guidelines set by the Board of Governance and Management are strictly adhered to while carrying out the transactions. The Chartered Accountants also ensure that the recording of transactions are carried out in the ERP and participate in the purchase procedure/approval initiated by the respective HOD/ Dean of the faculty. Apart from the above Mahendra Educational Trust has two External Internal Auditors for carrying out the procedural, transactional and compliance Audit and submit their reports. They submit either Quarterly or Half Yearly Audit reports with their observations and highlighting the corrective measures that need to be taken to ensure proper financial transactions and management. In addition the Finance Committee meeting is conducted regularly, which look into yearly budget allocation, utilization funds, expenditure, etc.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR 2 020-21/6 4 1.pdf

# 6.4.2 - Funds / Grants received from non-government bodies, individuals, and philanthropists during the year (not covered in Criterion III and V) (INR in lakhs)

Nil

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File Description	Documents
Annual statements of accounts	<u>View File</u>
Details of funds / grants received from non-government bodies, individuals, philanthropists during the year	No File Uploaded
Any additional information	No File Uploaded

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

The major source of mobilization of fund is the fee from students. The other sources include the grants received from Govt. and other organizations for research and consultancy activities. Revenue is also generated from conducting Govt., exams and by extending testing services to nearby industries, and offering values added courses and training to the students. The funds generated are optimally utilized to meet the recurring, non-recurring, maintenance and related expenditure during every financial year.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR 2 020-21/6 4 3.pdf

# **6.5 - Internal Quality Assurance System**

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing quality assurance strategies and processes visible in terms of incremental improvements made during the preceding year with regard to quality (in case of the First Cycle): Incremental improvements made during the preceding year with regard to quality and post-accreditation quality initiatives (Second and subsequent cycles)

IQAC has contributed significantly to institutionalize quality procedures and assurance strategies, which has brought incremental improvements in the following areas.

```
(a)Academics: (i) Students pass(%) : UG : 90.43 %
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PG: 98.54 %

(ii) Graduation Index: 91.30 %

(iii) Placement : UG : 91.94 %

PG: 96.29 %

(b) Research: (i) Publications: 131 (Journals)

(ii) Conferences: 112 (Conferences)

(iiI) Patents: 14

(iv)Research grants received: 57 Lakhs

(c) Innovation: IIC organized 21 programmes in the themes of Creativity, Design, Ideation, Research, Start-up, Entrepreneurship, etc. Our Institute's Innovation Cell (IIC) is ranked by MHRD-AICTE by 4-star rating for innovation and entrepreneurship activities and ranked in ARIIA Band 'B' (Ranks 26-50) by MHRD-AICTE during 2020 and ranked in ARIIA Band 'EXCELLENT', during 2021 in the category of Self-Financing Institutions.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR_2 020-21/6_5_1.pdf

6.5.2 - The institution reviews its teaching-learning process, structures and methodologies of operation and learning outcomes at periodic intervals through its IQAC as per norms

IQAC plays a vital role in quality assurance and continuous improvement. IAQC, through regular Internal Quality Audit, reviews the teaching-learning process, adherence to procedures, updating documents, etc. Three Class Committee meetings are conducted during every semester to get feedback from faculty members and student representatives to review and improve teaching-learning. Feedback from the students is also obtained during every semester. It is collected and consolidated by Class Advisers, analyzed and any corrective action needed is taken by the concerned HOD/Department. Also faculty performance appraisal using AICTE 360 degree appraisal format is introduced for overall improvement.

IQAC also conducts an External Audit by External Peer Team, once

in a year, which reviews the academic activities, progress, improvement, and suggests measures for sustenance or further improvement.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR 2 020-21/6 5 2.pdf

6.5.3 - Quality assurance initiatives of the institution include Regular meeting of the IQAC Feedback collected, analysed and used for improvement of the institution Collaborative quality initiatives with other institution(s) Participation in NIRF Any other quality audit recognized by state, national or international agencies (such as ISO Certification)

A. Any 4 or all of the above

File Description	Documents
Paste the web link of annual reports of the Institution	http://www.mahendra.info/igac.php
Upload e-copies of accreditations and certification	<u>View File</u>
Upload details of quality assurance initiatives of the institution	<u>View File</u>
Upload any additional information	No File Uploaded

### INSTITUTIONAL VALUES AND BEST PRACTICES

### 7.1 - Institutional Values and Social Responsibilities

7.1.1 - Measures initiated by the Institution for the promotion of gender equity during the year

Mahendra Engineering College endeavors to provide an equal opportunity that encourages all-round progress of women members both professionally and personally. The Institute constantly strives to ensure that women from all walks of life, on the

campus, are treated with respect and dignity. It is committed to make the environment safe and congenial for the female students, staff.

Mahendra Engineering College has established "Women Empowerment Cell" (WEC) on 31/10/2017. The cell mandates programmes on sensitizing the community towards gender equity and related issues. The cell aims at creating awareness on rights and duties; it also provides a forum for discussion and deliberation on a range of issues from opportunities to empowerment. The goal of WEC is to bring about the advancement, development and empowerment of women. WEC seeks to mould the young women force on the campus to achieve milestones of success in their life. Aiming at intellectual and social upliftment of the students, the cell stands for facilitating women empowerment through seminars, guest lectures, awareness programmes and other welfare activities.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR_2 020-21/7_1_1.pdf

# 7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation: Solar energy Biogas plant Wheeling to the Grid Sensor-based energy conservation Use of LED bulbs/power-efficient equipment

B. Any 3 of the above

File Description	Documents
Geotagged Photographs	<u>View File</u>
Any other relevant information	No File Uploaded

7.1.3 - Describe the facilities in the institution for the management of the following types of degradable and non-degradable waste (within a maximum of 200 words)

Eco-friendliness in the campus is the policy of the college. Lawns and gardens are maintained with utmost care.

• College has been certified as per the ISO green environment policy No.14001:2004.

- Rain water harvesting has been improved in the campus.
- All infrastructure including building materials, doors, windows, black board, solar lights are made up of eco-friendly products.
- Creating awareness among students to cultivate plants, and to avoid plastics through Community orientation programme.
- Waste water treatment plant was established.
- Use of plastics on the campus has been prohibited following the mass campaigning by the EcoClub.

At various locations on the campus, two different containers are provided for collection and segregation of waste, namely biodegradable waste and non-degradable waste. So the waste management in terms of separate collection, segregation and disposal is implemented

File Description	Documents
Relevant documents like agreements/MoUs with Government and other approved agencies	No File Uploaded
Geotagged photographs of the facilities	<u>View File</u>
Any other relevant information	No File Uploaded

# 7.1.4 - Water conservation facilities available in the Institution: Rain water harvesting Bore well /Open well recharge Construction of tanks and bunds Waste water recycling Maintenance of water bodies and distribution system in the campus

A. Any 4 or all of the above

File Description	Documents
Geotagged photographs / videos of the facilities	<u>View File</u>
Any other relevant information	No File Uploaded

### 7.1.5 - Green campus initiatives include

# 7.1.5.1 - The institutional initiatives for greening the campus are as follows:

- A. Any 4 or All of the above
- 1. Restricted entry of automobiles
- 2. Use of bicycles/ Battery-powered vehicles
- 3. Pedestrian-friendly pathways
- 4. Ban on use of plastic
- 5. Landscaping

File Description	Documents
Geotagged photos / videos of the facilities	<u>View File</u>
Various policy documents / decisions circulated for implementation	<u>View File</u>
Any other relevant documents	No File Uploaded

# 7.1.6 - Quality audits on environment and energy undertaken by the institution

# 7.1.6.1 - The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following:

A. Any 4 or all of the above

- 1. Green audit
- 2. Energy audit
- 3. Environment audit
- **4.** Clean and green campus recognitions/awards
- **5.** Beyond the campus environmental promotional activities

File Description	Documents
Reports on environment and energy audits submitted by the auditing agency	<u>View File</u>
Certification by the auditing agency	<u>View File</u>
Certificates of the awards received	<u>View File</u>
Any other relevant information	No File Uploaded

7.1.7 - The Institution has a disabled-friendly and barrier-free environment:
Ramps/lifts for easy access to classrooms and centres Disabled-friendly washrooms
Signage including tactile path lights, display boards and signposts Assistive technology and facilities for persons with disabilities: accessible website, screen-reading software, mechanized equipment, etc. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading materials, screen reading, etc.

A. Any 4 or all of the above

File Description	Documents
Geotagged photographs / videos of facilities	<u>View File</u>
Policy documents and brochures on the support to be provided	No File Uploaded
Details of the software procured for providing assistance	No File Uploaded
Any other relevant information	No File Uploaded

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e. tolerance and harmony towards cultural, regional, linguistic, communal, socio-economic and other diversities (within a maximum of 200 words).

Our College admits students from various parts of the nation, belonging to various cultures, regions, religions, linguistic communities and socio-economic backgrounds and has thus created an inclusive environment in terms of diversity, outreach, equality, fairness, tolerance and harmony. The Vision and Mission of the Institute focus on ethical values, harmony, universal human values, etc. All are treated equally with dignity and to promote professional climate and congenial environment. In order to promote good interaction and mix of students from different diversities, several Clubs, NSS, NCC, RRC, Sports activities are organised and students are encouraged to participate actively.

File Description	Documents
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	<u>View File</u>

7.1.9 - Sensitization of students and employees of the institution to constitutional obligations: values, rights, duties and responsibilities of citizens:

The College organizes Induction programme for the First year students wherein they are sensitized about importance of engineering education, goals, career, life skills, Universal Human Values, etc. An awareness programme for the newly recruited faculty members is organized during every year to sensitize the faculty members on the importance of Engineering education, their duties and responsibilities, obligations, etc.

Important courses such as Professional Ethics and Human Values, Universal Human Values, Constitution of India have been introduced as mandatory courses for all programmes of engineering to enable students acquire the essence of Human Values, Gender Equity, Fraternity, Harmony, Right Understanding, Complementariness, Constitutional obligations, fundamental rights, duties and responsibilities of citizens, ethical human conduct, trustworthiness and mutual cooperation, etc.

More than 25 faculty members including the Principal participated in the 5-day workshop on Universal Human Values organized by AICTE during 2020-21 and benefitted from the essence of human values, ethics, rights, duties, harmony, etc. Many of these faculty members teach the Universal Human Values course to all UG students. In additional they have understood the importance of Constitution of India and some of them teach the mandatory audit course, Constitution of India to all UG students.

File Description	Documents
Details of activities that inculcate values necessary to transform students into responsible citizens	<u>View File</u>
Any other relevant information	No File Uploaded

7.1.10 - The institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic sensitization programmes in this regard: The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff Annual awareness programmes on the Code of Conduct are organized

A. All of the above

File Description	Documents
Code of Ethics - policy document	<u>View File</u>
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programmes, etc. in support of the claims	<u>View File</u>
Any other relevant information	No File Uploaded

# 7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

The College celebrates / organizes national and international commemorative and calendar days in order to highlight the importance of those days amongst students and faculty members. The following commemorative and calendar days are observed during the academic year 2020-21.

ACADEMIC YEAR (2020-2021)

S. No.

Date

Name of the Activity
Place
No. of Volunteers
1
June to July
Novel Corona Virus Awareness Activity
Volunteers Residential Places
50
2
05-06-2020
World Environment Day
Volunteers Residential Places
55
3
21-06-2020
International Yoga Day
Volunteers Residential Places
20
4
09.08.2020
То
15.08.2020

# Fit India Movement-Fitness Week Volunteers Residential Places 15 5 01-10-2020 National Voluntary Blood Donation Day Saravana Hospital, Salem 01 6 2.11.2020 Blood Donors Club Mahendra Engineering College, Namakkal 20 7 31.1.2021 Polio Drops Vaccination Camp Erode 02 8 26.02.2021 Say No To Plastic Thiruchengode

03

9 15.03.2021 India's 75 Years of Independence Celebration Mahendra Engineering College, Namakkal 98 10 25.01.2020 National Voters Day Mahendra Engineering College, Namakkal 36 11 25.03.2021 Friends Of Police Vivekanandha Engineering College, Namakkal 36

12

27.03.2021

Voters Awareness Campaign

Volunteers Residential Places

10

13

05.04.2021

Awareness Programme for Young Voters

# Mahendra Engineering College, Namakkal

97

14

06.04.2021

Election Day

Mallasamudram

37

15

10.04.2021

COVID Vaccination Thiruvizha

Ramapuram

15

File Description	Documents
Annual report of the celebrations and commemorative events for during the year	<u>View File</u>
Geotagged photographs of some of the events	<u>View File</u>
Any other relevant information	No File Uploaded

### 7.2 - Best Practices

7.2.1 - Provide the weblink on the Institutional website regarding the Best practices as per the prescribed format of NAAC

http://www.mahendra.info/iqac.php

File Description	Documents
Best practices in the Institutional website	http://www.mahendra.info/iqac.php
Any other relevant information	Nil

### 7.3 - Institutional Distinctiveness

7.3.1 - Highlight the performance of the institution in an area distinct to its priority and thrust (within a maximum of 200 words)

The vision of our College is to be an internationally recognized institute for engineering education and research with ethical values. So the primary objective of the Institution is the pursuit of Academic Excellence, Research and Placements. The technical knowledge gained by the students is complimented by imbibing interpersonal skills and spirit of entrepreneurship that makes them competitive enough to face the global challenges and emerge as achievers. To achieve this, the College has focused on the distinctive area of establishing various Centres of Excellence in collaboration with prominent industries, through which students achieve their academic excellence to meet industrial standards.

### Part B

### **CURRICULAR ASPECTS**

# 1.1 - Curriculum Design and Development

1.1.1 - Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which are reflected in Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the various Programmes offered by the Institution.

Our College is an autonomous institution, which has duly constituted Board of Studies for each discipline of study. Each programme has well defined Programme Educational Objectives (PEOs) and Programme Specific Outcomes (PSOs). The PEOs are based upon the Institute Mission for holistic needs. The PSOs define the programme-specific and deeper specializations to develop man power to meet the local/regional needs of industry. The POs reflect the national and global developmental needs. All the POs and PSOs are attained by offering a set of courses over a period of 8 semesters in UG programmes and 4 semesters in PG programmes.

The curriculum and syllabi for both undergraduate and postgraduate programs is designed and developed by the Boards of Studies based upon the AICTE model curriculum and by taking the opinion/suggestions/feedback from the University nominee, Academic expert, Industry experts, Faculty members and Alumni. The curriculum has a good balance of courses covering Basic-Sciences, Humanities and Sciences, Basic-Engineering, Programme-Core, Programme-Electives, Open Electives, Employability-Enhancement Courses, Personality-Development, Competency-Development courses, etc. Each course has a set of 5-6 COs, which are mapped to one or many relevant POs and PSOs. The curriculum is modified and updated from time to time on yearly basis based upon the changes in industry and societal needs..

File Description	Documents
Upload additional information, if any	<u>View File</u>
Link for additional information	Nil

# 1.1.2 - Number of Programmes where syllabus revision was carried out during the year

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20

File Description	Documents
Minutes of relevant Academic Council/BOS meeting	<u>View File</u>
Details of syllabus revision during the year	<u>View File</u>
Any additional information	<u>View File</u>

# 1.1.3 - Number of courses focusing on employability/entrepreneurship/ skill development offered by the Institution during the year

109

File Description	Documents
Curriculum / Syllabus of such courses	<u>View File</u>
Minutes of the Boards of Studies/ Academic Council meetings with approval for these courses	<u>View File</u>
MoUs with relevant organizations for these courses, if any	<u>View File</u>
Any additional information	<u>View File</u>

# 1.2 - Academic Flexibility

# 1.2.1 - Number of new courses introduced across all programmes offered during the year

100

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<u>View File</u>
Any additional information	<u>View File</u>
Institutional data in prescribed format (Data Template)	<u>View File</u>

# 1.2.2 - Number of Programmes offered through Choice Based Credit System (CBCS)/Elective Course System

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#### 26

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<u>View File</u>
Any additional information	<u>View File</u>
List of Add on /Certificate programs (Data Template)	<u>View File</u>

#### 1.3 - Curriculum Enrichment

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

As the Mission of the Institute is to inculcate ethical values, the College focuses on integrating cross-cutting and interdisciplinary issues to enable students develop wholesome personality.

In this context, important courses such as Professional Ethics and Human Values, Universal Human Values, Environmental Science and Engineering, Constitution of India, Managerial Economics have been introduced as mandatory courses for all programmes of engineering to enable students acquire the essence of Human Values, Gender Equity, Fraternity, Harmony, Right Understanding, Complementariness, etc. These courses in addition to other courses such as Disaster Management, Non-Conventional Energy Resources help the students understand the environmental concerns, energy requirements, disaster prevention and mitigation, and the need for sustainability of ecosystem, etc.

Professional Ethics and Human Values, Universal Human Values:

To instill ethical, moral, social and universal values, the College has introduced a mandatory course, namely Professional Ethics and Human Values, which is renamed by AICTE as Universal Human Values as 3-credit course during III/IV or V/VI semesters for all B.E./B.Tech programmes. These courses help students gain a holistic view of the values, ethics, self, society and profession, right understanding, harmony, ethical human conduct, trustworthiness and mutual cooperation.

File Description	Documents
Upload the list and description of the courses which address issues related to Gender, Environment and Sustainability, Human Values and Professional Ethics in the curriculum	<u>View File</u>
Any additional information	<u>View File</u>

# 1.3.2 - Number of value-added courses for imparting transferable and life skills offered during the year

15

File Description	Documents
List of value-added courses	<u>View File</u>
Brochure or any other document relating to value-added courses	<u>View File</u>
Any additional information	<u>View File</u>

# 1.3.3 - Number of students enrolled in the courses under 1.3.2 above

1869

File Description	Documents
List of students enrolled	<u>View File</u>
Any additional information	<u>View File</u>

# 1.3.4 - Number of students undertaking field work/projects/ internships / student projects

1640

File Description	Documents
List of programmes and number of students undertaking field projects / internships / student projects	<u>View File</u>
Any additional information	<u>View File</u>

# 1.4 - Feedback System

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# 1.4.1 - Structured feedback and review of the syllabus (semester-wise / year-wise) is obtained from 1) Students 2) Teachers 3) Employers and 4) Alumni

#### A. All 4 of the above

File Description	Documents
Provide the URL for stakeholders' feedback report	http://www.mahendra.info/downloads/AQAR _2020-21/1_4_1_1_4_2_Feedback.pdf
Upload the Action Taken Report of the feedback as recorded by the Governing Council / Syndicate / Board of Management	<u>View File</u>
Any additional information	<u>View File</u>

# **1.4.2 - The feedback system of the Institution comprises the following**

A. Feedback collected, analysed and action taken made available on the website

File Description	Documents
Provide URL for stakeholders' feedback report	http://www.mahendra.info/downloads/AQAR _2020-21/1_4_1_1_4_2_Feedback.pdf
Any additional information	<u>View File</u>

## TEACHING-LEARNING AND EVALUATION

#### 2.1 - Student Enrollment and Profile

#### 2.1.1 - Enrolment of Students

# 2.1.1.1 - Number of students admitted (year-wise) during the year

#### 1236

File Description	Documents
Any additional information	<u>View File</u>
Institutional data in prescribed format	<u>View File</u>

2.1.2 - Number of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc.) as per the reservation policy during the year (exclusive of supernumerary seats)

#### 1191

File Description	Documents
Any additional information	<u>View File</u>
Number of seats filled against seats reserved (Data Template)	<u>View File</u>

## 2.2 - Catering to Student Diversity

2.2.1 - The institution assesses students' learning levels and organises special programmes for both slow and advanced learners.

The Faculty members assess the students learning and identify Bright Students and Slow Learners by continuously monitoring their academic performance and participation in curricular and co-curricular activities. Students who consistently score above 60% in Internal Assessments and previous End Semester Examinations are considered as Fast Learners and those who score below 50% in Internal Assessments and have arrears in previous End Semester Examinations are considered as Slow learners.

Measures to Encourage Fast learners

- Students are encouraged to present papers on technological advancements at national and international events. Partial financial support is extended for soft skill development, other training and placement activities. Additional library cards are issued to enable them to access more reference books on recommendation of HODs.

Measures to Support Slow Learners:

- The slow learners are identified and Special Coaching is provided during evening.
- Extra coaching classes, tutorial classes, assignments, discussing previous end semester question papers and providing question banks with answer keys, etc. are followed to improve academic performance of the slow learners. Retest is also conducted for slow learners to improve their performance.
- Students are encouraged periodically by inviting the alumni

for seminars through Mahendra Alumni Lecture Series (MAILS) program.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	Nil

#### 2.2.2 - Student – Teacher (full-time) ratio

Year	Number of Students	Number of Teachers
20/03/2020	4473	374

File Description	Documents
Upload any additional information	<u>View File</u>

## 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:

The faculty members adopt various innovative Teaching-Learning methodologies to create the best learning environment for students. These methodologies include classroom teaching, ppt presentations, video lectures, and collaborative learning with illustrations.

- The following innovative teaching techniques have been introduced and implemented by collaborative work amongst faculty members and students:
- Flipped Classroom (Participative Learning)
- Blended Learning (Experiential Learning)
- Activity/Project
- Students are motivated to pursue online courses from NPTEL/Swayam to learn advanced concepts and improve problem solving skills.

File Description	Documents
Upload any additional information	<u>View File</u>
Link for additional Information	http://www.mahendra.info/downloads/AQAR _2020-21/2_3_1.pdf

# 2.3.2 - Teachers use ICT-enabled tools including online resources for effective teaching and learning

ICT facilities and LCD projectors are installed in lecture halls. Online resources and e-Learning facilities like NPTEL video lectures are used by both faculty members and students for effective teaching and learning. In addition e-Books, e-Journals, DELNET and Digital library services are used by faculty members for extended reference of material for teaching. Also Guest Lectures by industrial experts and online Webinars/Seminars, IIT/NIT Lecture series are organized by faculty members on specific topics for enhanced learning. Industrial co-teaching courses are introduced, which are partially delivered by Industry experts to enhance practical knowledge.

During pandemic and post-pandemic faculty members conducted online classes extensively using through Google meet/Google classroom. Online assessments, quiz, Flipped teaching and Blended learning are also practiced and implemented by the faculty members and students. In-house Competency and Personality development trainings are provided every semester to make the students industry ready.

File Description	Documents
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	http://www.mahendra.info/downloads/AQAR _2020-21/2_3_2.pdf
Upload any additional information	<u>View File</u>

## 2.3.3 - Ratio of students to mentor for academic and other related issues

#### 2.3.3.1 - Number of mentors

225

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File Description	Documents
Upload year-wise number of students enrolled and full-time teachers on roll	<u>View File</u>
Circulars with regard to assigning mentors to mentees	No File Uploaded

# 2.3.4 - Preparation and adherence to Academic Calendar and Teaching Plans by the institution

The Principal office prepares Academic Calendar for each semester in consultation with the HODs and Management. The Academic Calendar consists of Opening/Reopening date, Total no.of Working-days, Holidays, Internal Test slots, End Semester Exam fees payment dates, Last working day, End Semester Practical and Theory Examination dates, Reopening date for the next semester, etc. It is circulated amongst all faculty members and students for their information and record. Based upon the Academic Calendar the Heads of the Departments plan and decide the academic activities and assign the responsibilities to the faculty members. Every Department plans to prepare the timetable, subject allocation, etc. Every faculty member accordingly prepares the Preamble for each subject with the name of the course, course Objectives, Pre-

requisites,Outcomes,Textbooks,references, etc. The faculty member also prepare lecture plan/teaching plan/session plan and implement accordingly.

The Controller of Examinations-plans, conducts and monitors the Internal tests, End-Semester-Examinations for each semester in line with the schedule received from the affiliating-university. The Departments and CoE office largely adhere to the dates given in the Academic Calendar except minor deviation in the event of unforeseen holidays, disasters, pandemic, etc. In addition a Target plan is prepared for organizing conferences, symposia, guest lectures, webinars, workshops, FDPs, Alumni-lectures, Innovative &best-practices, etc.

File Description	Documents
Upload the Academic Calendar and Teaching Plans during the year	<u>View File</u>

# 2.4 - Teacher Profile and Quality

# 2.4.1 - Number of full-time teachers against sanctioned posts during the year

374

File Description	Documents
Year-wise full-time teachers and sanctioned posts for the year	<u>View File</u>
List of the faculty members authenticated by the Head of HEI	<u>View File</u>
Any additional information	No File Uploaded

# 2.4.2 - Number of full-time teachers with PhD/ D.M. / M.Ch. / D.N.B Super-Specialty / DSc / DLitt during the year

60

File Description	Documents
List of number of full-time teachers with PhD./ D.M. / M.Ch. / D.N.B Super-Specialty / D.Sc. / D.Litt. and number of full-time teachers for 5 years	<u>View File</u>
Any additional information	No File Uploaded

# 2.4.3 - Total teaching experience of full-time teachers in the same institution: (Full-time teachers' total teaching experience in the current institution)

374

File Description	Documents
List of teachers including their PAN, designation, Department and details of their experience	<u>View File</u>
Any additional information	<u>View File</u>

#### 2.5 - Evaluation Process and Reforms

# 2.5.1 - Number of days from the date of last semester-end/ year- end examination till the declaration of results during the year

#### 15 days

File Description	Documents
List of Programmes and the date of last semester-end / year-end examinations and the date of declaration of result	<u>View File</u>
Any additional information	<u>View File</u>

# 2.5.2 - Number of students' complaints/grievances against evaluation against the total number who appeared in the examinations during the year

0

File Description	Documents
Upload the number of complaints and total number of students who appeared for exams during the year	<u>View File</u>
Upload any additional information	<u>View File</u>

# 2.5.3 - IT integration and reforms in the examination procedures and processes including Continuous Internal Assessment (CIA) have brought in considerable improvement in the Examination Management System (EMS) of the Institution

Our Institution has an exclusive web based Examination Management System (EMS) named as COXCO, which has been created and integrated with all necessary modules to conduct the Examination and process the results smoothly. The Examination Cell collects the Student data and updates the same in the EMS software module. The important activities

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#### include:

- Planning and conducting the Continuous Internal Assessment tests for each semester of all UG & PG students as per the College Academic Calendar. The final score is computed, considering various components of the continuous assessment processes. It is verified by the Examination Coordinators, Class Advisors and finally approved by the HOD, which is entered in the EMS by individual faculty members.
- Central valuation of end semester examination theory scripts is conducted by the BoS Chairman of the individual Departments where 50% internal and 50% external Evaluators are appointed and the marks are entered in the EMS module.
- Conducting malpractice committee meeting if needed, by Malpractice Cases Consideration Committee (MCCC).
   Minutes of the MCCC will be approved by the authorities concerned and punishments will be awarded to the students.
- Processing of results, announcement of results and printing of grade sheets; timeline is to be followed for each activity.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR 2020-21/2_5_3.pdf

#### 2.6 - Student Performance and Learning Outcomes

2.6.1 - Programme Outcomes and Course Outcomes for all Programmes offered by the institution are stated and displayed on the website and communicated to teachers and students

Every Department has prepared the Programme Educational Objectives (PEOs), Programme Outcomes (POs) and Programme Specific Outcomes (PSOs). The Vision and Mission statements, PEOs, POs and PSOs are properly disseminated among all the students as follows:

 Hardcopy of Vision, Mission, PEOs and PSOs are distributed to the students and their parents/guardians during orientation meet in first year

- Displayed in all classrooms, laboratories and notice boards
- Also, the Vision, Mission, PSOs and PEOs are made available in

Institute website http://www.mahendra.info/

• Awareness sessions were conducted in physical classroom and online sessions were conducted through Google meet to create awareness among all students.

While taking classes, each faculty member used to create awareness about Course Outcomes (COs) among the students. They also discuss about CO-PO mapping, assessment criteria, attainment, etc.

File Description	Documents
Upload COs for all courses (exemplars from the Glossary)	<u>View File</u>
Upload any additional information	<u>View File</u>
Link for additional Information	http://www.mahendra.info/be programmes offered.php

# 2.6.2 - Attainment of Programme Outcomes and Course Outcomes as evaluated by the institution

- Using the Bloom's Taxonomy action verbs COs are defined for all courses in the curriculum and syllabi.
- With a better understanding of the Course Outcomes, CO-PO mapping is made properly for all courses by the course coordinators and the same is duly verified by program coordinator.
- Curriculum gap if any is identified and minimized by introducing new subjects / augmented topics in the syllabus in addition to providing the contents beyond the syllabus towards the attainment of POs and PSOs.
- The faculty members used to calculate the CO attainment for their respective courses and the Department/Programme Coordinator(s) calculate the PO and PSO attainments. Much attention is given to the slow learners to improve their academic performance so as to improve the attainment level.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/be programmes offered.php

#### 2.6.3 - Pass Percentage of students

# 2.6.3.1 - Total number of final year students who passed in the examinations conducted by Institution

988

File Description	Documents
Upload list of Programmes and number of students appear for and passed in the final year examinations	<u>View File</u>
Upload any additional information	<u>View File</u>
Paste link for the annual report	http://www.mahendra.info/downloads/AQAR _2020-21/2_6_3.pdf

#### 2.7 - Student Satisfaction Survey

# 2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design its own questionnaire). Results and details need to be provided as a weblink

http://www.mahendra.info/iqac.php

## RESEARCH, INNOVATIONS AND EXTENSION

#### 3.1 - Promotion of Research and Facilities

3.1.1 - The institution's research facilities are frequently updated and there is a well-defined policy for promotion of research which is uploaded on the institutional website and implemented

The College has modern laboratory facilities with Centres of Excellence in major disciplines of study to encourage faculty members and students to pursue research. The facilities are regularly updated using the funds from the Management and

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grants received from AICTE under MODROBS and RPS schemes. The Institute has a well-defined policy for promoting research and related activities. It can be accessed from the College website at http://www.mahendra.info/research.php

The College has a Director for R&D who coordinates the research activities such as motivating and guiding the faculty members in preparing research proposals seeking funding from government and non government agencies, encouraging faculty members to publish their research work in reputed national and international journals, etc. He is the Editor-in-Chief of the refereed journal, namely International Journal of Advance Science and Engineering (IJASE), published by our Group Institutions. https://mahendrapublications.com

File Description	Documents
Upload the Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	<u>View File</u>
Provide URL of policy document on promotion of research uploaded on the website	http://www.mahendra.info/research.php
Any additional information	<u>View File</u>

#### 3.1.2 - The institution provides seed money to its teachers for research

# 3.1.2.1 - Seed money provided by the institution to its teachers for research during the year (INR in lakhs)

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File Description	Documents
Minutes of the relevant bodies of the institution regarding seed money	<u>View File</u>
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	<u>View File</u>
List of teachers receiving grant and details of grant received	<u>View File</u>
Any additional information	<u>View File</u>

# 3.1.3 - Number of teachers who were awarded national / international fellowship(s) for advanced studies/research during the year

6

File Description	Documents
e-copies of the award letters of the teachers	<u>View File</u>
List of teachers and details of their international fellowship(s)	<u>View File</u>
Any additional information	<u>View File</u>

## 3.2 - Resource Mobilization for Research

# 3.2.1 - Grants received from Government and Non-Governmental agencies for research projects, endowments, Chairs during the year (INR in Lakhs)

8320440

File Description	Documents
e-copies of the grant award letters for research projects sponsored by non- governmental agencies/organizations	<u>View File</u>
List of projects and grant details	<u>View File</u>
Any additional information	No File Uploaded

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## 3.2.2 - Number of teachers having research projects during the year

32

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR 2020-21/3 2 2.pdf
List of research projects during the year	<u>View File</u>

## 3.2.3 - Number of teachers recognised as research guides

22

File Description	Documents
Upload copies of the letter of the university recognizing teachers as research guides	<u>View File</u>
Institutional data in Prescribed format	<u>View File</u>

# **3.2.4** - Number of departments having research projects funded by Government and Non-Government agencies during the year

7

File Description	Documents
Supporting document from Funding Agencies	<u>View File</u>
Paste link to funding agencies' website	http://www.mahendra.info/research.php
Any additional information	<u>View File</u>

# 3.3 - Innovation Ecosystem

3.3.1 - Institution has created an ecosystem for innovations and creation and transfer of knowledge supported by dedicated centres for research, entrepreneurship, community orientation, incubation, etc.

Our College has around 10 Centres of Excellence and an EDC, and has created a good ecosystem for creativity, innovation,

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new product development, and to promote entrepreneurship activities.

Our Institute's Innovation Cell (IIC) is ranked by MHRD-AICTE by 4-star rating for innovation and entrepreneurship activities and ranked in ARIIA Band 'B' (Ranks 26-50) by MHRD-AICTE during 2020 and ranked in ARIIA Band 'EXCELLENT', during 2021 in the category of Self-Financing Institutions.

The Departments have organized I & E activities, preincubation events for the benefit of students and faculty innovators. The details of dedicated Centers of Excellence, events/programmes organized, students/faculty participated, etc., are given in the ARIIA report 2020-21.

http://www.mahendra.info/pdf/ARIIA-2020-21.pdf

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/pdf/ARIIA-2020 -21.pdf

# 3.3.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year

56

File Description	Documents
Report of the events	<u>View File</u>
List of workshops/seminars conducted during the year	<u>View File</u>
Any additional information	No File Uploaded

#### 3.4 - Research Publications and Awards

# 3.4.1 - The Institution ensures implementation of its Code of Ethics for Research uploaded in the website through the following: Research Advisory Committee Ethics Committee Inclusion of Research Ethics in the research

# methodology course work Plagiarism check through authenticated software

File Description	Documents
Code of Ethics for Research, Research Advisory Committee and Ethics Committee constitution and list of members of these committees, software used for plagiarism check	<u>View File</u>
Any additional information	<u>View File</u>

# 3.4.2 - Number of PhD candidates registered per teacher (as per the data given with regard to recognized PhD guides/ supervisors provided in Metric No. 3.2.3) during the year

# 3.4.2.1 - Number of PhD students registered during the year

88

File Description	Documents
URL to the research page on HEI website	http://www.mahendra.info/research.php
List of PhD scholars and details like name of the guide, title of thesis, and year of registration	<u>View File</u>
Any additional information	<u>View File</u>

# 3.4.3 - Number of research papers per teacher in CARE Journals notified on UGC website during the year

159

File Description	Documents
List of research papers by title, author, department, and year of publication	<u>View File</u>
Any additional information	No File Uploaded

# ${\bf 3.4.4}$ - Number of books and chapters in edited volumes / books published per teacher during the year

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34

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR _2020-21/3_4_4.xls

# 3.4.5 - Bibliometrics of the publications during the year based on average Citation Index in Scopus/ Web of Science/PubMed

# 3.4.5.1 - Total number of Citations in Scopus during the year

61

File Description	Documents
Any additional information	<u>View File</u>
Bibliometrics of the publications during the year	<u>View File</u>

# 3.4.6 - Bibliometrics of the publications during the year based on Scopus/ Web of Science – h-Index of the University

# 3.4.6.1 - h-index of Scopus during the year

14

File Description	Documents
Bibiliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	<u>View File</u>
Any additional information	No File Uploaded

# 3.5 - Consultancy

# 3.5.1 - Revenue generated from consultancy and corporate training during the year (INR in lakhs)

1845000

File Description	Documents
Audited statements of accounts indicating the revenue generated through consultancy and corporate training	No File Uploaded
List of consultants and revenue generated by them	<u>View File</u>
Any additional information	No File Uploaded

# 3.5.2 - Total amount spent on developing facilities, training teachers and clerical/project staff for undertaking consultancy during the year

52000

File Description	Documents
Audited statements of accounts indicating the expenditure incurred on developing facilities and training teachers and staff for undertaking consultancy	<u>View File</u>
List of training programmes, teachers and staff trained for undertaking consultancy	<u>View File</u>
List of facilities and staff available for undertaking consultancy	<u>View File</u>
Any additional information	No File Uploaded

#### 3.6 - Extension Activities

3.6.1 - Extension activities carried out in the neighbourhood sensitising students to social issues for their holistic development, and the impact thereof during the year

In this COVID-19 pandemic, many of our College NSS Volunteers have made significant contributions to create awareness about this deadly coronavirus during June to July-2020. M.Priya, a Volunteer from III Year B.E EEE prepared 50 packs of masks and distributed to the needy people. M. Ramya from III Year B.E EEE prepared Placards and distributed to the workers of MNREGS (100-days work) and Primary Health Centre Workers to create awareness among the public. Another Volunteer K.Devishri from III Year B.E ECE demonstrated how to wear

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mask properly to her neighborhood children. E.Durkambigai from III Year B.E ECE demonstrated the hand wash techniques using soap to the village people. S.Akshaya from III Year B.E. AERONAUTICAL visited Ration Shops nearby and asked the public to follow social distancing. She marked spaces of 2-meter apart for public to follow the norms. Another Volunteer P.Udhayam Lenin from III Year B.E Mechanical drew Corona Virus Images on the roads and pathways to create awareness to public about this deadly disease with the help of his friends. B.Aravind from III Year B.E Mechatronics drawn the circles in each and every shop near his neighborhood to show the importance of social distancing. A Volunteer G.Tamilvanan from III Year B.E Mechanical helped the neighbours on their needs in-case of emergency to get E-Pass.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/nss.php

# 3.6.2 - Number of awards and recognition received by the Institution, its teachers and students for extension activities from Government / Government-recognised bodies during the year

11

File Description	Documents
Number of awards for extension activities in during the year	<u>View File</u>
e-copy of the award letters	<u>View File</u>
Any additional information	<u>View File</u>

3.6.3 - Number of extension and outreach programmes conducted by the institution through NSS/NCC/Red Cross/YRC, etc. during the year (including Government-initiated programmes such as Swachh Bharat, AIDS Awareness, and Gender Sensitization and those organised in collaboration with industry, community and NGOs)

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23

File Description	Documents
Reports of the events organized	<u>View File</u>
Any additional information	<u>View File</u>

# 3.6.4 - Number of students participating in extension activities listed in 3.6.3 during the year

2538

File Description	Documents
Reports of the events	<u>View File</u>
Any additional information	<u>View File</u>

#### 3.7 - Collaboration

# 3.7.1 - Number of collaborative activities during the year for research/ faculty exchange/ student exchange/ internship/ on-the-job training/ project work

58

File Description	Documents
Copies of documents highlighting collaboration	<u>View File</u>
Any additional information	No File Uploaded

3.7.2 - Number of functional MoUs with institutions of national and/or international importance, other universities, industries, corporate houses, etc. during the year (only functional MoUs with ongoing activities to be considered)

31

File Description	Documents
e-copies of the MoUs with institution/ industry/ corporate house	<u>View File</u>
Details of functional MoUs with institutions of national, international importance, other institutions etc. during the year	<u>View File</u>
Any additional information	No File Uploaded

#### INFRASTRUCTURE AND LEARNING RESOURCES

#### 4.1 - Physical Facilities

4.1.1 - The Institution has adequate infrastructure and physical facilities for teaching-learning, viz., classrooms, laboratories, computing equipments, etc.

The institute provides the adequate infrastructure facilities for teaching learning process. To make the educational programme more meaningful and socially relevant, the institution focus on outcome based education method. It creates an ambience to produce students with the ability to cope with recent trends and technologies. The academic landscape sprawls widely with Administrative block with Principal room, spacious, airy classrooms with sufficient desks, Laboratories with latest Software and equipment, Central library with well stacked resources for the students and faculty members, hygienic and well maintained Canteen facility, Students' Amenity Centre. The built up area includes vast auditorium with 1000 seating arrangements, focus lights, Podium and PA settings. The institution provides other essential facilities like Medical needs, high speed internet connectivity, a good transport facility for the students and faculty, the separate Rest room facilities in all the blocks for boys and girls. The institute offers the quality learning environment to enhance knowledge, skill and attitude of all the students.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	Nil

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

The institution has adequate facilities for both cocurricular and extra-curricular activities like seminars, workshops, cultural activities, yoga, sports and games, both indoor and outdoor. For the overall development of a student, curriculum is not only the single criteria. The holistic growth should be complemented with co-curricular and extracurricular activities. These out of class activities help to develop in all domains of life such as cognitive, emotional, social, moral, cultural and aesthetic. The institution provides the following facilities to enhance students' community by all means.

File Description	Documents
Geotagged pictures	<u>View File</u>
Upload any additional information	<u>View File</u>
Paste link for additional information	Nil

## 4.1.3 - Number of classrooms and seminar halls with ICT-enabled facilities

#### 41

File Description	Documents
Upload any additional information	<u>View File</u>
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	<u>View File</u>

# 4.1.4 - Expenditure for infrastructure augmentation, excluding salary, during the year (INR in Lakhs)

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#### 283.80

File Description	Documents
Upload audited utilization statements	<u>View File</u>
Details of Expenditure, excluding salary, during the years	<u>View File</u>
Any additional information	No File Uploaded

## 4.2 - Library as a Learning Resource

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

Total Area:17029 Sq. ft

• , reading room available

Details of Books, Journals, etc.

S.No Description Quantity 1 Books 112165 2 Titles 29964 3
National Journals 156 4 International Journals 108 5 Non Book
(Floppy /CDs/DVD ) 6220 6 E-Journals (Elsevier & DELNET )
1280 7 E-Book ( DELNET,INTECH OPEN SCIENCE ) 6000+ 8 Project
Report 4625 9 Question Bank 6038 10 Newspapers 10

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/library.php

# 4.2.2 - Institution has access to the following: e-journals e-ShodhSindhu Shodhganga Membership e-books Databases Remote access to e-resources

A. Any 4 or more of the above

File Description	Documents
Details of subscriptions like e- journals, e-books, e- ShodhSindhu, Shodhganga membership	<u>View File</u>
Upload any additional information	<u>View File</u>

# 4.2.3 - Expenditure on purchase of books/ e-books and subscription to journals/e-journals during the year (INR in lakhs)

#### 14.54

File Description	Documents
Audited statements of accounts	<u>View File</u>
Any additional information	No File Uploaded
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the year (Data Template)	<u>View File</u>

# 4.2.4 - Usage of library by teachers and students (footfalls and login data for online access)

# 4.2.4.1 - Number of teachers and students using the library per day during the year

280

File Description	Documents
Upload details of library usage by teachers and students	<u>View File</u>
Any additional information	No File Uploaded

#### 4.3 - IT Infrastructure

4.3.1 - Institution has an IT policy covering Wi-Fi, cyber security, etc. and has allocated budget for updating its IT facilities

Wireless (Wi-Fi) connectivity and Cyber security:

- Access will be given once the device registration form submitted
- Device details and MAC ID details to be entered correctly and it will be verified by the TechTeam
- Check the security level of the network by choosing the most secure connection. A MAC ID protection mechanism is used with the passphrase
- Authentication will be based on the User Level for staff members
- Scheduled timings are there to access the internet at

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#### all locations

- Connect with the correct SSID located in the campus or connection names may be rogue and could have been setup by a hacker.
- Turn off wireless network on your computer, tablet or phone when you are not using it to prevent automatic connection to open and possibly dangerous APs. Set your device to not to connect automatically to public or unknown and untrusted networks.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR 2020-21/4_3_1.pdf

# 4.3.2 - Student - Computer ratio

Number of Students	Number of Computers
4473	1150

File Description	Documents
Upload any additional information	<u>View File</u>

# **4.3.3 - Bandwidth of internet connection** in the Institution and the number of students on campus

A. ?50 Mbps

File Description	Documents
Details of bandwidth available in the Institution	<u>View File</u>
Upload any additional information	<u>View File</u>

# 4.3.4 - Institution has facilities for econtent development: Facilities available for e-content development Media Centre Audio-Visual Centre Lecture Capturing System (LCS)

A. All four of the above

# Mixing equipments and software for editing

File Description	Documents
Upload any additional information	View File
Paste link for additional information	Nil
List of facilities for e-content development (Data Template)	View File

#### 4.4 - Maintenance of Campus Infrastructure

# 4.4.1 - Expenditure incurred on maintenance of physical and academic support facilities, excluding salary component, during the year (INR in lakhs)

# 1490.19

File Description	Documents
Audited statements of accounts	<u>View File</u>
Upload any additional information	No File Uploaded

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

The College has well established standard systems and procedures for maintaining the Physical, Academic and Support facilities. The Faculty and Staff In-charge ensure various aspects of utilization and maintenance of the Physical, Academic and Support facilities Classrooms, Laboratories, Library, Computers, Hostels, Sports complex, etc.

Library usage guidelines

- Book circulation register is used for maintaining the Library usage
- The Library staff will make the entry of the issue, return, and renewal of books in Library using OPAC software.
- The Library staff will list down the new books to be included in the Library and based upon recommendations of the

departments and permission from Principal and approval from Management, it is updated in the Library.

- •Due dates for renewal and returning books are observed regularly.
- •Library staff provide the login for access to DELNET or any e-journals.

Maintenance of Sports facilities

The College has Sports Complex and spacious Playground. The Indoor and Outdoor Games Equipment, Courts, Playground and Gym are supervised and maintained by the Physical Education Director and the Sweepers of the College. The grounds are maintained at regular intervals by the rollers by the marker of sports department.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR _2020-21/4_4_2_Maintenance_Policy.pdf

#### STUDENT SUPPORT AND PROGRESSION

#### 5.1 - Student Support

# **5.1.1 - Number of students benefitted by scholarships and freeships provided by the Government during the year**

2847

File Description	Documents
Upload self-attested letters with the list of students receiving scholarships	<u>View File</u>
Upload any additional information	<u>View File</u>

# 5.1.2 - Number of students benefitted by scholarships and freeships provided by the institution and non-government agencies during the year

1481

File Description	Documents
Upload any additional information	<u>View File</u>
Institutional data in prescribed format	<u>View File</u>

# 5.1.3 - The following Capacity Development and Skill Enhancement activities are organised for improving students' capabilities Soft Skills Language and Communication Skills Life Skills (Yoga, Physical fitness, Health and Hygiene) Awareness of Trends in Technology

A. All of the above

File Description	Documents
Link to Institutional website	http://www.mahendra.info/downloads/AQAR 2020-21/5 1 3.pdf
Details of capability development and schemes	<u>View File</u>
Any additional information	<u>View File</u>

# 5.1.4 - Number of students benefitted from guidance/coaching for competitive examinations and career counselling offered by the institution during the year

#### 577

File Description	Documents
Any additional information	<u>View File</u>
Number of students benefited by guidance for competitive examinations and career counseling during the year (Data Template)	<u>View File</u>

# 5.1.5 - The institution adopts the following mechanism for redressal of students' grievances, including sexual harassment and ragging: Implementation of guidelines of statutory/regulatory bodies Creating awareness and implementation of policies with zero tolerance Mechanism

#### A. All of the above

# for submission of online/offline students' grievances Timely redressal of grievances through appropriate committees

File Description	Documents
Minutes of the meetings of students' grievance redressal committee, prevention of sexual harassment committee and Anti-ragging committee	<u>View File</u>
Details of student grievances including sexual harassment and ragging cases	<u>View File</u>
Upload any additional information	No File Uploaded

## 5.2 - Student Progression

# 5.2.1 - Number of outgoing students who got placement during the year

801

File Description	Documents
Self-attested list of students placed	<u>View File</u>
Upload any additional information	<u>View File</u>

## 5.2.2 - Number of outgoing students progressing to higher education

45

File Description	Documents
Upload supporting data for students/alumni	No File Uploaded
Details of students who went for higher education	View File
Any additional information	<u>View File</u>

# **5.2.3** - Number of students qualifying in state/ national/ international level examinations during the year

# 5.2.3.1 - Number of students who qualified in state/ national/ international examinations (e.g.: IIT-JAM/NET/SET/JRF/ GATE /GMAT /CAT/ GRE/

#### TOEFL/Civil Services/State government examinations) during the year

7

File Description	Documents
Upload supporting data for students/alumni	<u>View File</u>
Any additional information	<u>View File</u>

# 5.3 - Student Participation and Activities

# 5.3.1 - Number of awards/medals for outstanding performance in sports and/or cultural activities at inter-university / state /national / international events (award for a team event should be counted as one) during the year

38

File Description	Documents
e-copies of award letters and certificates	<u>View File</u>
Any additional information	<u>View File</u>

# 5.3.2 - Presence of an active Student Council and representation of students in academic and administrative bodies/committees of the institution

In our Institution, students are actively participating in academic and administrative bodies/committees. The students' representatives are involved in academic committees such as Class Committee wherein they participate and provide feedback on teaching to improve the academic system. Students actively participate in Department Students' Association and Professional Societies. Students are also representatives in various administrative committees such as Anti-ragging Committee, Students Grievance Redressal Committee, Internal Complaints Committee (Prevention of Sexual Harassment). Students also participate in extra-curricular activities such as NSS, NCC and YRC. In continuation of these activities students are participating in several awareness programs in order to have societal awareness on rain water harvesting and plastic-free environment, etc. In addition students actively participate and organise many club activities, viz., Green Club, Communication and Literary Club, Design Club and Societal activities to explore and emphasize their field of interest. The mentor-mentee system of 1:15 focuses on counselling students (slow learners) and promotes the collaborative learning in academic activities and career

guidance. Students also play active role in the department association activities like workshops, symposium, conference, etc. The key role of the student representative is governing the program committee, planning and execution of activities. Majority of the students are registered under various professional societies like IE(I), ICI, CSI, ISTE, IEEE and ASCE.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR 2020-21/5_3_2.pdf

#### 5.3.3 - Number of sports and cultural events / competitions organised by the institution

4

File Description	Documents
Report of the event	<u>View File</u>
List of sports and cultural events / competitions organised per year	<u>View File</u>
Upload any additional information	No File Uploaded

## 5.4 - Alumni Engagement

5.4.1 - The Alumni Association and its Chapters (registered and functional) contribute significantly to the development of the institution through financial and other support services

Alumni Association plays a prime role in networking the graduates with the Institution. Our Institution has an active Alumni Association with the office bearers as given below: Chairman - Dr.S.Raju, Professor and Head / Information and Technology, 2. Secretary -Dr.N.Viswanathan, Professor and Head / Electronics and Communication Engineering, 3. Treasurer - Mr.S.Premkumar, Assistant Professor, Computer Science and Engineering, and Alumni members. The Alumni Association meets every year and conduct the General Body Meeting to decide important activities such as Alumni day celebration, alumni meet and alumni mentors, etc. The Mahendra-alumni meet is conducted at national and

international level. At national level the alumni meets are conducted in Bangalore, Coimbatore, Chennai and various places. The Alumni working in those regions are gathered and alumni day has been celebrated to share their experience and industrial exposure. The Institution has initiated a novel Mahendra Alumni Interactive Lecture Series (MAILS), wherein the alumni are invited by every department to deliver special lectures to the students to enable them gain the field exposure, technical skills, employment and entrepreneurship skills. Each Department organises around 6-10 MAILS programs in a year, and also alumni mentors have been identified for every 250 students in order to guide them for their better placements and technical knowledge sharing, etc. The alumni also help to schedule internships and in-plant training for the students in the various fields of interest.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://alumni.mahendra.info/gallery.php ?page=public

# **5.4.2 - Alumni's financial contribution** during the year

D. 2 Lakhs - 5 Lakhs

File Description	Documents
Upload any additional information	<u>View File</u>

#### 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

#### Vision:

To be an Internationally recognized Institute for Engineering Education and Research with Ethical Values.

#### Mission:

 To ensure the effective use of resources to mould the students as professionals and entrepreneurs

- To enhance the industry-institute interaction for innovative technology practice
- To encourage the faculty members and students for advanced research
- To inculcate ethical values among the faculty members and students

The Institute is governed by the Governing Council consisting of the Chairman, Management representatives, Experts from academia, industry and the Principal. The collective leadership continuously focuses on the Vision and Mission of the Institute. Offering good quality engineering education and pursuing research with ethical values are the two key features in the vision statement as perceived by the institute leadership. The mission statement spells out the means or strategy to accomplish the vision. The Institute has well established modern infrastructure and standard academic system in place to mould the students are professionals. The College has established Centres of Excellence in many prominent and emerging areas for active industry-institute interaction to train the students for current industrial needs and also enable the faculty members to participate in research activities in emerging areas.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR 2020-21/6_1_1.pdf

# 6.1.2 - Effective leadership is reflected in various institutional practices such as decentralization and participative management

The Institution functions with a decentralized governance system. The Head of the Institution is functioning effectively with the culture of participative management. He plans and decides the Academic Calendar for each semester in consultation with the HODs and Management. The Academic Calendar consists of Total no. of Working days, Holidays, Internal Test slots, Department Activities/Events, Exam fees payment dates, , FDPs, Last working day, End Semester Examination duration, Reopening date for the next semester, etc. It is circulated amongst all faculty members and students for their information and record. The Heads of the

Departments plan and decide the academic activities and assign the responsibilities to the faculty members. Every Department prepares the subject allocation, Time-Table, purchase and maintenance of equipment and consumables, plans Innovative teaching techniques and best practices, organizes FDPs, IOT courses, conferences, symposia, guest lectures and workshops, and sign MoUs with industries for industrial visits, in-plant trainings, internships and placement.

File Description	Documents
Upload strategic plan and deployment documents on the website	<u>View File</u>
Upload any additional information	No File Uploaded
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR 2020-21/6_1_2.pdf

#### 6.2 - Strategy Development and Deployment

- 6.2.1 The institutional Strategic/ Perspective plan has been clearly articulated and implemented
- (i) Starting new courses in emerging areas and Admission of Students:

The Institute with a strategic plan starts new courses in emerging and futuristic technological areas. Admission plays vital role for the growth of every College. Admission rules and regulations are articulated as per the Tamilnadu State Government and Directorate of Technical Education in respect of Single Window Counselling and Management quota seats. There shall also be a merit-based, lateral admission of students having Diploma qualification to the second year of all programmes at the College in accordance with the Government rules applicable for such courses. The College website, prospectus and the curriculum handbook provide relevant information about the institution and the programmes being offered. The prospectus gives details of eligibility norms for admission. It is given to the applicants along with the application form. A customized admission software package has been developed to facilitate smooth admission process. In

2019 the College started new UG programmes in specialized areas namely B.Tech. Chemical Engineering, B.Tech. Food Technology and B.Tech. Pharmaceutical Engineering. In 2020 the College started programmes in emerging areas such as Artificial Intelligence and Cyber Security, which have attracted good number of students.

File Description	Documents
Strategic Plan and deployment documents on the website	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR _2020-21/6_2_1.pdf
Upload any additional information	No File Uploaded

6.2.2 - The functioning of the various institutional bodies is effective and efficient as visible from the policies, administrative set-up, appointment and service rules, procedures, etc.

Mahendra Engineering College has an established system for administration and academic activities. The statutory bodies such as Governing body, Academic Council, Finance Committee and Board of Studies for every department are constituted with eminent personalities as per UGC guidelines. All these bodies meet regularly and deliberate on policy, academic, financial, curriculum and related matters. The minutes of the meetings and outcome is shared with the HODs, faculty members and other members for information and execution.

Several non-statutory committees as per UGC/AICTE guidelines are constituted and there is a good representation from faculty members and students in such committees to ensure participation, transparency and easy flow of information at all levels.

The College maintains the desired faculty-student ratio as per IACTE norms and recruits faculty members and non-teaching staff on regular basis. Appointment orders are issued to those who are recruited and as and when they join, they are given awareness on their duties and responsibilities, procedures, service rules, etc.

File Description	Documents
Paste link to Organogram on the institution webpage	http://www.mahendra.info/downloads/AQAR 2020-21/6 2 2-MEC - ORNOGRAM - FINAL.pdf
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/statutory_committee.php

# 6.2.3 - Implementation of e-governance in areas of operation: Administration Finance and Accounts Student Admission and Support Examination

B. Any three of the above

File Description	Documents
ERP (Enterprise Resource Planning) Documen	<u>View File</u>
Screen shots of user interfaces	<u>View File</u>
Details of implementation of e-governance in areas of operation	<u>View File</u>
Any additional information	No File Uploaded

#### **6.3 - Faculty Empowerment Strategies**

6.3.1 - The institution has effective welfare measures for teaching and non-teaching staff and avenues for their career development/ progression

The College has good welfare measures for teaching and nonteaching staff and students as described below:

#### For Teaching Staff:

- Free transport facilities.
- Waiver of fees for teachers' children in the Institution.
- Medical leave and Maternity leave.
- Supporting for education of children of the teachers in the group institutions.
- Sponsoring for attending conference, workshops and FDPs

- for career progression
- Incentive for publication of papers / research articles, patents, books.
- Rewards, Medals for producing University Ranks.
- Cash awards for academic excellence.
- Special Study Leave (SSL) to pursue higher education.
- Subsidized canteen fares.
- Group Insurance.
- Online NPTEL course fee reimbursement for career progression.

#### For Non-Teaching Staff:

- Educational support to the children of the staff.
- Marriage gifts with the sanction of one week leave.
- Medical leave / maternity leave.
- Free transport facilities.
- Special Study Leave (SSL) for higher studies.
- Incentive for attending orientation programmes, workshops and conferences.
- Incentive for vehicle utilization or transport allowance.
- Incentive for dress materials for housekeeping staff.
- Subsidized canteen fare.
- Group Insurance.

#### For Students:

- Government Scholarships,
- Management Scholarships.
- Free Transport facilities to SC/ST Students,
- Free food and Hostel facilities to SC/ST Students.
- Cash awards for University Rank Holders, Semester Toppers.
- Travel expenses, Cash awards for good performers in Sports, Culturals, etc.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR 2020-21/6_3_1.pdf

# 6.3.2 - Number of teachers provided with financial support to attend conferences / workshops and towards payment of membership fee of professional bodies during the year

105

File Description	Documents
Upload any additional information	<u>View File</u>
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	<u>View File</u>

## 6.3.3 - Number of professional development / administrative training programmes organized by the Institution for its teaching and non-teaching staff during the year

36

File Description	Documents
Reports of the Human Resource Development Centres (UGC HRDC/ASC or other relevant centres)	<u>View File</u>
Upload any additional information	<u>View File</u>

# 6.3.4 - Number of teachers who have undergone online/ face-to-face Faculty Development Programmes during the year: (Professional Development Programmes, Orientation / Induction Programmes, Refresher Courses, Short-Term Course, etc.)

130

File Description	Documents
Summary of the IQAC report	<u>View File</u>
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	<u>View File</u>
Upload any additional information	No File Uploaded

#### 6.4 - Financial Management and Resource Mobilization

#### 6.4.1 - Institution conducts internal and external financial audits regularly

Mahendra Engineering College has qualified Chartered Accountants (Internal Auditors) to supervise the Internal Audit functions and ensure that all the procedures and guidelines set by the Board of Governance and Management are strictly adhered to while carrying out the transactions. The Chartered Accountants also ensure that the recording of transactions are carried out in the ERP and participate in the purchase procedure/approval initiated by the respective HOD/ Dean of the faculty. Apart from the above Mahendra Educational Trust has two External Internal Auditors for carrying out the procedural, transactional and compliance Audit and submit their reports. They submit either Quarterly or Half Yearly Audit reports with their observations and highlighting the corrective measures that need to be taken to ensure proper financial transactions and management. In addition the Finance Committee meeting is conducted regularly, which look into yearly budget allocation, utilization funds, expenditure, etc.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR _2020-21/6_4_1.pdf

## 6.4.2 - Funds / Grants received from non-government bodies, individuals, and philanthropists during the year (not covered in Criterion III and V) (INR in lakhs)

#### Nil

File Description	Documents
Annual statements of accounts	<u>View File</u>
Details of funds / grants received from non- government bodies, individuals, philanthropists during the year	No File Uploaded
Any additional information	No File Uploaded

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

The major source of mobilization of fund is the fee from students. The other sources include the grants received from Govt. and other organizations for research and consultancy activities. Revenue is also generated from conducting Govt., exams and by extending testing services to nearby industries, and offering values added courses and training to the students. The funds generated are optimally utilized to meet the recurring, non-recurring, maintenance and related expenditure during every financial year.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR 2020-21/6 4 3.pdf

#### 6.5 - Internal Quality Assurance System

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing quality assurance strategies and processes visible in terms of incremental improvements made during the preceding year with regard to quality (in case of the First Cycle): Incremental improvements made during the preceding year with regard to quality and post-accreditation quality initiatives (Second and subsequent cycles)

IQAC has contributed significantly to institutionalize quality procedures and assurance strategies, which has brought incremental improvements in the following areas.

```
(a)Academics: (i) Students pass(%): UG: 90.43 %
```

PG: 98.54 %

(ii) Graduation Index : 91.30 %

(iii) Placement : UG : 91.94 %

PG: 96.29 %

(b) Research: (i) Publications: 131 (Journals)

(ii) Conferences: 112 (Conferences)

- (iiI) Patents: 14
- (iv)Research grants received: 57 Lakhs
- (c) Innovation: IIC organized 21 programmes in the themes of Creativity, Design, Ideation, Research, Start-up, Entrepreneurship, etc. Our Institute's Innovation Cell (IIC) is ranked by MHRD-AICTE by 4-star rating for innovation and entrepreneurship activities and ranked in ARIIA Band 'B' (Ranks 26-50) by MHRD-AICTE during 2020 and ranked in ARIIA Band 'EXCELLENT', during 2021 in the category of Self-Financing Institutions.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR 2020-21/6_5_1.pdf

6.5.2 - The institution reviews its teaching-learning process, structures and methodologies of operation and learning outcomes at periodic intervals through its IQAC as per norms

TQAC plays a vital role in quality assurance and continuous improvement. IAQC, through regular Internal Quality Audit, reviews the teaching-learning process, adherence to procedures, updating documents, etc. Three Class Committee meetings are conducted during every semester to get feedback from faculty members and student representatives to review and improve teaching-learning. Feedback from the students is also obtained during every semester. It is collected and consolidated by Class Advisers, analyzed and any corrective action needed is taken by the concerned HOD/Department. Also faculty performance appraisal using AICTE 360 degree appraisal format is introduced for overall improvement.

IQAC also conducts an External Audit by External Peer Team, once in a year, which reviews the academic activities, progress, improvement, and suggests measures for sustenance or further improvement.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendra.info/downloads/AQAR _2020-21/6_5_2.pdf

- 6.5.3 Quality assurance initiatives of the institution include Regular meeting of the IQAC Feedback collected, analysed and used for improvement of the institution Collaborative quality initiatives with other institution(s) Participation in NIRF Any other quality audit recognized by state, national or international agencies (such as ISO Certification)
- A. Any 4 or all of the above

File Description	Documents
Paste the web link of annual reports of the Institution	http://www.mahendra.info/iqac.php
Upload e-copies of accreditations and certification	<u>View File</u>
Upload details of quality assurance initiatives of the institution	<u>View File</u>
Upload any additional information	No File Uploaded

#### INSTITUTIONAL VALUES AND BEST PRACTICES

#### 7.1 - Institutional Values and Social Responsibilities

7.1.1 - Measures initiated by the Institution for the promotion of gender equity during the year

Mahendra Engineering College endeavors to provide an equal opportunity that encourages all-round progress of women members both professionally and personally. The Institute constantly strives to ensure that women from all walks of life, on the campus, are treated with respect and dignity. It is committed to make the environment safe and congenial for the female students, staff.

Mahendra Engineering College has established "Women Empowerment Cell" (WEC) on 31/10/2017. The cell mandates programmes on sensitizing the community towards gender equity and related issues. The cell aims at creating awareness on rights and duties; it also provides a forum for discussion and deliberation on a range of issues from opportunities to empowerment. The goal of WEC is to bring about the advancement, development and empowerment of women. WEC seeks to mould the young women force on the campus to achieve milestones of success in their life. Aiming at intellectual and social upliftment of the students, the cell stands for facilitating women empowerment through seminars, guest lectures, awareness programmes and other welfare activities.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.mahendra.info/downloads/AQAR _2020-21/7_1_1.pdf

# 7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation: Solar energy Biogas plant Wheeling to the Grid Sensor-based energy conservation Use of LED bulbs/power-efficient equipment

B. Any 3 of the above

File Description	Documents
Geotagged Photographs	<u>View File</u>
Any other relevant information	No File Uploaded

7.1.3 - Describe the facilities in the institution for the management of the following types of degradable and non-degradable waste (within a maximum of 200 words)

Eco-friendliness in the campus is the policy of the college. Lawns and gardens are maintained with utmost care.

- College has been certified as per the ISO green environment policy No.14001:2004.
- Rain water harvesting has been improved in the campus.

- All infrastructure including building materials, doors, windows, black board, solar lights are made up of ecofriendly products.
- Creating awareness among students to cultivate plants, and to avoid plastics through Community orientation programme.
- Waste water treatment plant was established.
- Use of plastics on the campus has been prohibited following the mass campaigning by the EcoClub.

At various locations on the campus, two different containers are provided for collection and segregation of waste, namely bio-degradable waste and non-degradable waste. So the waste management in terms of separate collection, segregation and disposal is implemented

File Description	Documents
Relevant documents like agreements/MoUs with Government and other approved agencies	No File Uploaded
Geotagged photographs of the facilities	View File
Any other relevant information	No File Uploaded

# 7.1.4 - Water conservation facilities available in the Institution: Rain water harvesting Bore well /Open well recharge Construction of tanks and bunds Waste water recycling Maintenance of water bodies and distribution system in the campus

A. Any 4 or all of the above

File Description	Documents
Geotagged photographs / videos of the facilities	<u>View File</u>
Any other relevant information	No File Uploaded

#### 7.1.5 - Green campus initiatives include

## 7.1.5.1 - The institutional initiatives for greening the campus are as follows:

- A. Any 4 or All of the above
- 1. Restricted entry of automobiles
- 2. Use of bicycles/ Battery-powered vehicles
- 3. Pedestrian-friendly pathways
- 4. Ban on use of plastic
- 5. Landscaping

File Description	Documents
Geotagged photos / videos of the facilities	<u>View File</u>
Various policy documents / decisions circulated for implementation	<u>View File</u>
Any other relevant documents	No File Uploaded

#### 7.1.6 - Quality audits on environment and energy undertaken by the institution

# 7.1.6.1 - The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following:

A. Any 4 or all of the above

- 1. Green audit
- 2. Energy audit
- 3. Environment audit
- 4. Clean and green campus recognitions/awards
- **5. Beyond the campus environmental promotional activities**

File Description	Documents
Reports on environment and energy audits submitted by the auditing agency	<u>View File</u>
Certification by the auditing agency	<u>View File</u>
Certificates of the awards received	<u>View File</u>
Any other relevant information	No File Uploaded

- 7.1.7 The Institution has a disabled-friendly and barrier-free environment:
  Ramps/lifts for easy access to classrooms and centres Disabled-friendly washrooms
  Signage including tactile path lights,
  display boards and signposts Assistive technology and facilities for persons with disabilities: accessible website, screen-reading software, mechanized equipment, etc. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading materials, screen reading, etc.
- A. Any 4 or all of the above

File Description	Documents
Geotagged photographs / videos of facilities	<u>View File</u>
Policy documents and brochures on the support to be provided	No File Uploaded
Details of the software procured for providing assistance	No File Uploaded
Any other relevant information	No File Uploaded

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e. tolerance and harmony towards cultural, regional, linguistic, communal, socio-economic and other diversities (within a maximum of 200 words).

Our College admits students from various parts of the nation, belonging to various cultures, regions, religions, linguistic communities and socio-economic backgrounds and has thus created an inclusive environment in terms of diversity, outreach, equality, fairness, tolerance and harmony. The Vision and Mission of the Institute focus on ethical values, harmony, universal human values, etc. All are treated equally with dignity and to promote professional climate and congenial environment. In order to promote good interaction and mix of students from different diversities, several Clubs, NSS, NCC, RRC, Sports activities are organised and students are encouraged to participate actively.

File Description	Documents
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	<u>View File</u>

## 7.1.9 - Sensitization of students and employees of the institution to constitutional obligations: values, rights, duties and responsibilities of citizens:

The College organizes Induction programme for the First year students wherein they are sensitized about importance of engineering education, goals, career, life skills, Universal Human Values, etc. An awareness programme for the newly recruited faculty members is organized during every year to sensitize the faculty members on the importance of Engineering education, their duties and responsibilities, obligations, etc.

Important courses such as Professional Ethics and Human Values, Universal Human Values, Constitution of India have been introduced as mandatory courses for all programmes of engineering to enable students acquire the essence of Human Values, Gender Equity, Fraternity, Harmony, Right Understanding, Complementariness, Constitutional obligations, fundamental rights, duties and responsibilities of citizens, ethical human conduct, trustworthiness and mutual cooperation, etc.

More than 25 faculty members including the Principal participated in the 5-day workshop on Universal Human Values organized by AICTE during 2020-21 and benefitted from the essence of human values, ethics, rights, duties, harmony, etc. Many of these faculty members teach the Universal Human Values course to all UG students. In additional they have understood the importance of Constitution of India and some of them teach the mandatory audit course, Constitution of India to all UG students.

File Description	Documents
Details of activities that inculcate values necessary to transform students into responsible citizens	<u>View File</u>
Any other relevant information	No File Uploaded

7.1.10 - The institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic sensitization programmes in this regard: The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff Annual awareness programmes on the Code of Conduct are organized

A. All of the above

File Description	Documents
Code of Ethics - policy document	<u>View File</u>
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programmes, etc. in support of the claims	<u>View File</u>
Any other relevant information	No File Uploaded

7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

The College celebrates / organizes national and international commemorative and calendar days in order to highlight the importance of those days amongst students and faculty members. The following commemorative and calendar days are observed during the academic year 2020-21.

```
ACADEMIC YEAR (2020-2021)
S. No.
Date
Name of the Activity
Place
No. of Volunteers
1
June to July
Novel Corona Virus Awareness Activity
Volunteers Residential Places
50
2
05-06-2020
World Environment Day
Volunteers Residential Places
55
3
21-06-2020
International Yoga Day
Volunteers Residential Places
20
09.08.2020
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To
15.08.2020
Fit India Movement-Fitness Week
Volunteers Residential Places
15
5
01-10-2020
National Voluntary Blood Donation Day
Saravana Hospital, Salem
01
6
2.11.2020
Blood Donors Club
Mahendra Engineering College, Namakkal
20
7
31.1.2021
Polio Drops Vaccination Camp
Erode
02
8
26.02.2021
Say No To Plastic
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Thiruchengode
03
9
15.03.2021
India's 75 Years of Independence Celebration
Mahendra Engineering College, Namakkal
98
10
25.01.2020
National Voters Day
Mahendra Engineering College, Namakkal
36
11
25.03.2021
Friends Of Police
Vivekanandha Engineering College, Namakkal
36
12
27.03.2021
Voters Awareness Campaign
Volunteers Residential Places
10
13
```

05.04.2021

Awareness Programme for Young Voters

Mahendra Engineering College, Namakkal

97

14

06.04.2021

Election Day

Mallasamudram

37

15

10.04.2021

COVID Vaccination Thiruvizha

Ramapuram

15

File Description	Documents
Annual report of the celebrations and commemorative events for during the year	<u>View File</u>
Geotagged photographs of some of the events	<u>View File</u>
Any other relevant information	No File Uploaded

#### 7.2 - Best Practices

7.2.1 - Provide the weblink on the Institutional website regarding the Best practices as per the prescribed format of NAAC

http://www.mahendra.info/iqac.php

File Description	Documents
Best practices in the Institutional website	http://www.mahendra.info/iqac.php
Any other relevant information	Nil

#### 7.3 - Institutional Distinctiveness

## 7.3.1 - Highlight the performance of the institution in an area distinct to its priority and thrust (within a maximum of 200 words)

The vision of our College is to be an internationally recognized institute for engineering education and research with ethical values. So the primary objective of the Institution is the pursuit of Academic Excellence, Research and Placements. The technical knowledge gained by the students is complimented by imbibing interpersonal skills and spirit of entrepreneurship that makes them competitive enough to face the global challenges and emerge as achievers. To achieve this, the College has focused on the distinctive area of establishing various Centres of Excellence in collaboration with prominent industries, through which students achieve their academic excellence to meet industrial standards.

File Description	Documents
Appropriate link in the institutional website	http://www.mahendra.info/centres.php
Any other relevant information	No File Uploaded

#### 7.3.2 - Plan of action for the next academic year

The College has planned the following activities for the next academic year:

- To sign more MoUs and enhance tie-up with premier academic institutions and local industries for enhanced exposure to students and faculty members.
- To organize workshops and conferences by collaborating with Industries/Organisations.
- To organize Alumni meet in order to create Alumni centres in important cities in India and Abroad.

- To enhance training for students to improve their communication, aptitude and technical skills for improved placement.
- To establish Virtual laboratories for some practical labs.
- To promote more number of IIC activities to improve ARIIA raking and achieve NIRF ranking.
- To organize an International Conference.
- To enhance collaboration with more foreign universities
- To apply for NAAC accreditation in cycle 2.
- To plan for NBA accreditation for other eligible Programmes.