

### YEARLY STATUS REPORT - 2021-2022

Part A		
Data of the Institution		
1.Name of the Institution	MAHENDRA COLLEGE OF ENGINEERING	
• Name of the Head of the institution	Dr.N.MOHANASUNDARARAJU	
• Designation	PRINCIPAL	
• Does the institution function from its own campus?	Yes	
Phone no./Alternate phone no.	04272482884	
• Mobile no	9443695412	
Registered e-mail	principal@mahendracollege.com	
• Alternate e-mail	iqac@mahendracollege.com	
• Address	ATTUR MAIN ROAD, MINNAMPALLI	
• City/Town	SALEM	
• State/UT	TAMILNADU	
• Pin Code	636106	
2.Institutional status		
Affiliated /Constituent	AFFILIATED	
• Type of Institution	Co-education	
• Location	Rural	
Financial Status	Self-financing	

• Name of the Affiliating University	ANNA UNIVERSITY, CHENNAI
• Name of the IQAC Coordinator	Dr.S.BALAMURUGAN
• Phone No.	04272482884
Alternate phone No.	04276542333
• Mobile	9994921548
• IQAC e-mail address	iqac@mahendracollege.com
Alternate Email address	hodmech@mahendracollege.com
3.Website address (Web link of the AQAR (Previous Academic Year)	https://www.mahendracollege.com/A OAR/AOAR%202020-21.pdf
4.Whether Academic Calendar prepared during the year?	Yes
• if yes, whether it is uploaded in the Institutional website Web link:	http://www.mahendracollege.com/do wnloads/Academic%20calendar.pdf

#### **5.Accreditation Details**

Cycle	Grade	CGPA	Year of Accreditation	Validity from	Validity to
Cycle 1	B++	2.99	2019	08/02/2019	07/02/2024

#### 6.Date of Establishment of IQAC

05/02/2016

7.Provide the list of funds by Central / State Government UGC/CSIR/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.,

Institutional/Depa rtment /Faculty	Scheme	Funding Agency		Year of award with duration	Amount
ECE	Seminar/Symp osia/Worksho p	CSIR		2022	25000
Bio- Medical Engineering Department	Seminar/Symp osia/Worksho p	CSIR		2022	20000
ECE	Student Project Scheme	TNSCST		2022	7500
Mechanical	Student Project Scheme	TNS	CST	2022	7500
ECE	Seminar/Symp osia/Worksho p	CS	IR	2022	10000
8.Whether compos NAAC guidelines	ition of IQAC as pe	r latest	Yes		
• Upload latest IQAC	notification of format	ion of	View File	2	
9.No. of IQAC mee	etings held during th	ne year	3		
compliance t	nutes of IQAC meeti to the decisions have the institutional web	been	Yes		
-	upload the minutes of d Action Taken Repor		No File U	Jploaded	
-	received funding fr acy to support its ac	-	No		
• If yes, menti	on the amount				

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

Planned to participate actively in IIC activities and to secure better ratings. As the result of these planning and actions 4 star rating is achieved

Planned to conduct more number of FDPs and Quality initiative programme. Outcome : 16 FDPs and 4 Quality initiative programme were conducted.

Directed the departments to attract more research projects. Outcome: Three research projects of worth Rs.18,05,000/- were attracted by three departments.

Directed the departments to conduct more number of value added/add on courses to the students. Outcome 15 Value added courses are conducted

Planned to strengthen Academic and Administrative audit. Outcome: Achieved

Planned to promote Green energy initiatives inside the campus: As the result E - vehicles have been developed and deployed in the campus

**12.Plan of action chalked out by the IQAC in 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
Planned to conduct quality enhancement programme	Four such programme were conducted
Attract funds for Research Projects	Three research projects of worth Rs.18,05,000/- were attracted by three departments.
Planned to strengthen Academic and Administrative audit.	Systematic procedure is laid down to conduct academic administrative audit
Planned to strengthen Mentoring system	Continuous Efforts are in place for achieving this goal
13.Whether the AQAR was placed before statutory body?	Yes

• Name of the statutory body

Name	Date of meeting(s)
GOVERNING COUNCIL	25/03/2022

#### 14.Whether institutional data submitted to AISHE

Year	Date of Submission
2020-21	26/02/2022

#### **15.Multidisciplinary** / interdisciplinary

Mahendra College of Engineering, Salem, Tamilnadu is offering both U.G and P.G programmes in various Engineering disciplines. The programmes offered in various streams gain a multidisciplinary status to the institution. The programmes offered fall under CBCS (Choice Based Credit System) pattern. The courses are named as Core, Professional Elective, Open Elective, Skill based courses, and Value based course with specific number of credits to each course. Almost all the P.G and U.G programmes have experiential learning in the form of Projects, Field visits, Study Tours, and Internships. To sensitize the students to environmental issues and to make them eco conscious, a course on Environmental Studies is included in the curriculum for all U.G students. A course on Value Education with a special focus on the essential human values is also included in the curriculum. The scope of various programmes and the specific objectives of various courses ensure holistic development of the students. Being an affiliated institution, the college follows the procedures framed by the Parent University regarding the entry level qualification needed for a programme, and duration of a programme. The institution is limited in enabling multiple entry and exits as the norms are decided by the University which approves each programme offered in the college. Students registering for research programmes will be encouraged to carry out multidisciplinary research that would help in finding out appropriate solutions for the current issues and challenges. All the programmes have a nonmajor elective course / Open elective courses in which the students of a particular programme are exposed to multidisciplinary education by choosing a course in a different domain. Objective of Multidisciplinary HEIs is to convert single-stream institutions into multidisciplinary HEIs, to offer degree to the students by the HEI itself. Accordingly the strengthening of institutional infrastructure is necessary for multidisciplinary education and research.

16.Academic bank of credits (ABC):

ABC will allow students of Undergraduate and Postgraduate degree courses to exit the course and enter within a stipulated period. Being an affiliated institution, the college has less scope in taking initiatives to implement ABC system. However, the institution will follow the procedures as framed and prescribed by the affiliating University. So far, the institution has not taken any measure to register under ABC. The teachers working in our college are encouraged to offer valuable suggestion in curriculum design and development. Academic Bank of Credits shall provide to every student the facility to open unique or individual Academic Bank Accounting digital form; and the account holder shall be provided with a unique ID and access to the Standard Operating Procedure (SOP). The ABC Regulations intend to give impetus to blended learning Mode, allowing students to earn credits from various HEIs registered under this scheme and through SWAYAM, an online repository of courses. Regarding pedagogy, the teachers are always encouraged to try out new strategies that are learner centric. In teaching learning, besides, the prescribed text books and reference books, the teachers have the liberty to access any other book or material with content related to the topics prescribed in the syllabi. The teachers are also encouraged to provide additional resources / reading materials. Regarding assessments, both internal and external, the assessment criteria prescribed by the affiliating university is strictly followed.

#### **17.Skill development:**

Soft Skill enhancement is achieved by conducting special programmes on Soft Skill development with experts in the field. Besides teaching the curriculum, the institution takes various initiatives to offer value based education. Life Skill Programmes are conducted to promote values. Important days like Republic Day, Independence Day, Constitutional Day, Voter's Day, Environment Day, National Integration Day, and many other important days / events of national importance are celebrated to promote national integration. Competitions are conducted on such occasions to motivate the students and to inculcate positivity in the young minds. Every student admitted in the college at the Under Graduate level is supposed to enroll in any of the following cells or clubs like NSS, YRC, RRC, etc., which is mandatory for graduation. Life skill programmes like Yoga, Mediation, Women empowerment, Health and Hygiene, etc., are organized with the services of industry experts who are pioneer in this domain.

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

India is a treasure-trove of culture, developed over thousands of years and manifested in the form of arts, works of literature, customs, traditions, linguistic expressions, artefacts, heritage, and more. In particular, language helps the people to understand others expressions. Right expressions are needed among peers, and strangers, and influence the tone of conversation. The tone, perception of experience, etc., are the reflection and record of a culture. Culture is, thus, encased in our languages. Since its inception, the college has been promoting the culture and heritage of our nation. The elective courses prescribed in the programme focus on Indian tradition, culture, philosophy, and knowledge system. Being a higher learning institution, the college adopts English language as the medium of instruction. The institution has also observed the difficulties faced by students with the use of English for class room instruction. Taking the socioeconomic, cultural, and linguistic backgrounds of the students into consideration the teachers are also encouraged to go with bilingual method of teaching. It is also found that the students' receptive skills has enhanced with bilingual mode of delivery. As most of our students hail from rural backgrounds and for a better understanding of the subjects the bilingual method of delivery is encouraged in almost all programmes. The college promotes Indian culture and tradition by offering a programme on Indian Culture which is one of the rare subjects in the state.

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

Outcome-based education is a system where all the parts and aspects of education are focused on the outcomes of the course. The students take up courses with a certain goal of developing skills or gaining knowledge and they have to complete the goal by end of the course. There is no specific style or time limit of learning. The student can learn as per their choice. The faculty members, moderators, and instructors guide the students based on the outcomes. The programmes and courses prescribed in the syllabi have specific programme and course outcomes. In curriculum design and development stage sufficient representation is made to the affiliating university through BoS and Academic Council meetings to lay greater emphasis on the course outcomes. More number of courses with experiential learning is recommended to be included in the syllabi. Skill based courses, Job seeking courses, and Project works are a part of our syllabi to make our education outcome based. The teaching learning process is also more learners centric in the recent times and the institution has witnessed a shift from traditional methods of teaching. Students' assessment is made through continuous internal assessments like assignments, seminars, peer team teaching, group

318

#### discussions, and quizzes.

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

Being an affiliated institution, the college offers only regular programmes. No programme is offered through online or distance mode. In its educational journey, the college has witnessed many phases of teaching learning process. Earlier, the most popular method used for teaching was chalk and talk method. In the recent times, the education industry has been completely digitalized with the advancements in Science and Technology. Our college promotes the use of ICT in teaching learning process. The infrastructure and ICT facilities of the college are continuously augmented by our management to meet out the existing demands. The post Covid scenario has increased the use of many virtual platforms in teaching learning. Both the teacher and student community are now comfortable with many online tools for teaching. During the pandemic the institution has made the best use of blended learning. Online exams, online quizzes, webinars, online assignments along with regular physical classes have been tried by the institution as a part of blended learning.

#### **Extended Profile**

#### **1.Programme**

1.1

Number of courses offered by the institution across all programs during the year

File Description	Documents		
Data Template	<u>View File</u>		
2.Student			
2.1	1179		

Number of students during the year

File Description	Documents
Institutional Data in Prescribed Format	<u>View File</u>
2.2	518
Number of seats earmarked for reserved category a Govt. rule during the year	s per GOI/ State

File Description	Documents	
Data Template	<u>View File</u>	
2.3		325
Number of outgoing/ final year students during the	year	
File Description	Documents	
Data Template		<u>View File</u>
3.Academic		
3.1		208
Number of full time teachers during the year		
File Description	Documents	
Data Template	View File	
3.2	208	
Number of sanctioned posts during the year		
File Description	Documents	
Data Template	View File	
4.Institution		
4.1		52
Total number of Classrooms and Seminar halls		
4.2		303.83484
Total expenditure excluding salary during the year (INR in lakhs)		
4.3		646
Total number of computers on campus for academi	c purposes	
Par	rt B	
CURRICULAR ASPECTS		
1.1 - Curricular Planning and Implementation		

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

The Institution is affiliated to Anna University, Chennai and the curriculum, syllabi prescribed by the University are strictly adhered. For effective teaching - learning process, the Institution has identified the following steps of pedagogic and educational administrative procedures.

- Prior planning of Academic activities and preparation of institute academic calendar in alignment with the University Academic schedule.
- Updating the library facilities and e-journals in line with Curriculum and syllabus changes of the University for the Regulations in force. Course allocation to faculty based on their specialization, Experience and faculty members'interests.
- The Course file prepared by the faculty includes Vision & Mission statements of the Institute and Department, Programme Educational Objectives (PEOs) Statements and mapping with PO and CO, Time table, Course Syllabus, Course Data Sheet, Lesson plan, Course materials, Content beyond syllabus, Assignments topics, Tutorial Problems.
- The Record of class work includes the Topic covered, Mode of delivery, date & period, details of students, percentage of attendance, Assignments Marks, Internal Assessment Marks, Slow learners and Students Counselling Particulars.
- Systematic examination process, standard question papers as per Bloom's Taxonomy, proper and prompt evaluation
- Online learning became much more widespread with the outbreak of COVID-19.
- To adapt to a new way of teaching during the Covid19 crisis we have introduced on line classes with a view of maintaining uninterrupted flow of knowledge.

File Description	Documents
Upload relevant supporting document	<u>View File</u>
Link for Additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/1.1.1-Index.pdf

1.1.2 - The institution adheres to the academic calendar including for the conduct of Continuous Internal Evaluation (CIE)

Each semester in an academic year commences on the date specified by the Anna University. The university publishes in advance, the academic schedule containing plans for curricular activities based on the available working days as per University norms. It clearly specifies the dates for entering the students' attendance, test marks etc., in the University web portal. Academic calendar of the Institution is prepared well in advance immediately after the receipt of University Academic schedule.

Approval for the same is given by the Principal after effecting minor changes, if required. The academic calendar is then circulated to all faculty members before the commencement of the semester. Academic calendar of the Institution includes schedule of curricular activities, assessment dates, class tests, list of holidays and dates for conducting class committee meetings. Students are then informed about time table and academic calendar. The detailed lesson plan/teaching methodology as suited to syllabus is prepared by each faculty before the commencement of the semester.

Monitoring of implementation of lesson plan is done by Heads of the departments and corrective actions are suggested wherever required. Due to the outbreak of COVID-19 all the regular classes, continuous Internal Assessment tests/Quiz/Assignments are conducted and evaluated through online mode (Google class room) as per the Academic schedule provided.

File Description	Documents
Upload relevant supporting document	<u>View File</u>
Link for Additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/1.1.2-Index.pdf

1.1.3 - Teachers of the Institution participate in	Α.	<b>All</b>	of	the	above
following activities related to curriculum					
development and assessment of the affiliating					
University and/are represented on the					
following academic bodies during the year.					
Academic council/BoS of Affiliating University					
Setting of question papers for UG/PG					
programs Design and Development of					
Curriculum for Add on/ certificate/ Diploma					
Courses Assessment /evaluation process of the					
affiliating University					

File Description	Documents
Details of participation of teachers in various bodies/activities provided as a response to the metric	<u>View File</u>
Any additional information	<u>View File</u>

#### **1.2 - Academic Flexibility**

**1.2.1** - Number of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented

#### 1.2.1.1 - Number of Programmes in which CBCS/ Elective course system implemented

#### 13

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

#### 1.2.2 - Number of Add on /Certificate programs offered during the year

**1.2.2.1** - How many Add on /Certificate programs are added during the year. Data requirement for year: (As per Data Template)

1	5
÷	J

File Description	Documents
Any additional information	<u>View File</u>
Brochure or any other document relating to Add on /Certificate programs	<u>View File</u>
List of Add on /Certificate programs (Data Template )	<u>View File</u>

### **1.2.3** - Number of students enrolled in Certificate/ Add-on programs as against the total number of students during the year

#### 851

File Description	Documents
Any additional information	<u>View File</u>
Details of the students enrolled in Subjects related to certificate/Add-on programs	<u>View File</u>

#### **1.3 - Curriculum Enrichment**

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

- Equal opportunities are given to both the genders in terms of usage of learning resources, library facilities & infrastructural facilities, to participate in various technical events such as workshops, seminars, symposia and technical group events
- Assessment in internal exams, practical classes are impartial in relevance to gender, social status and calibre.
- Students have a compulsory course on Environmental Science and Engineering in all programs. Environmental based practical learning is implemented in some programs as content beyond syllabus.
- Professional Ethics and Human values was an Elective course for all programs in the previous regulation of the University. Now it has been made Core course in some of the programs. This course is offered to the students of all programs either as Core or as an Elective.
- An induction programme has been introduced by AICTE into the curriculum from the Academic year 2021-2022 for the newly joined first year students of all the programmes and the Universal Human Values is the anchoring activity of the Induction Programme. It gets the students of both gender to explore oneself and allows one to experience the joy of learning, stand up to peer pressure, take decisions with courage, be aware of relationships with colleagues and supporting stay in the hostel and department, be sensitive to others, etc.

File Description	Documents
Any additional information	<u>View File</u>
Upload the list and description of courses which address the Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum.	<u>View File</u>

## **1.3.2** - Number of courses that include experiential learning through project work/field work/internship during the year

#### 181

File Description	Documents
Any additional information	<u>View File</u>
Programme / Curriculum/ Syllabus of the courses	<u>View File</u>
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	<u>View File</u>
MoU's with relevant organizations for these courses, if any	<u>View File</u>
Institutional Data in Prescribed Format	<u>View File</u>

#### **1.3.3 - Number of students undertaking project work/field work/ internships**

#### 897

File Description	Documents
Any additional information	<u>View File</u>
List of programmes and number of students undertaking project work/field work/ /internships (Data Template)	<u>View File</u>

#### 1.4 - Feedback System

1.4.1 - Institution obtains feedback on the	A.	<b>All</b>	of	the	above
syllabus and its transaction at the institution					
from the following stakeholders Students					

<b>Teachers Employers Alumni</b>				
File Description	Documents			
URL for stakeholder feedback report	http://mahendracollege.com/downloads/1.4.2%2 OFeedback%20report.pdf			
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management	<u>View File</u>			
Any additional information		<u>View File</u>		
1.4.2 - Feedback process of the I be classified as follows	Institution may A. Feedback collected, analyzed and action taken and feedback available on website			
File Description	Documents			
Upload any additional information	<u>View File</u>			
URL for feedback report	http://mahendracollege.com/downloads/1.4.2%2 OFeedback%20report.pdf			
TEACHING-LEARNING AND E	VALUATION			
2.1 - Student Enrollment and Pr	ofile			
2.1.1 - Enrolment Number Num	ber of students a	admitted during the year		
2.1.1.1 - Number of students adm	nitted during th	e year		
403				
File Description	Documents			
Any additional information	<u>View File</u>			
Institutional data in prescribed format	<u>View File</u>			
<b>2.1.2</b> - Number of seats filled against seats reserved for various categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy during the year (exclusive of supernumerary seats)				

2.1.2.1 - Number of actual students admitted from the reserved categories during the year

400			
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 the learning levels of the students and organizes special Programmes for advanced learners and slow learners

A well-thought out and streamlined mechanism is present for continuous monitoring and evaluation of the students. The Institute has the system (such as consideration of qualifying examination marks, diagnosis test, internal tests, assignment preparation, tutorial performance etc.,) that helps the teachers to distinguish advanced and slow learners in a class. Accordingly special attention is given to each category of students.

Assistance provided for advanced learners:

- Advanced learners are encouraged to be a member of Professional societies
- Asked to coordinate and conduct department programs/activities
- Encouraged to present seminars in the emerging areas
- Encouraged to participate in the various technical events conducted by other colleges.
- Additional coaching is provided for competitive examinations.
- Encouraged to take up industry based projects
- Topics on content beyond syllabus taught to enhance their knowledge.

Assistance provided for slow learners:

- To improve their academic performance, extra classes with separate time table are organized to clarify the doubts.
- Provided with question bank and previous semesters' University examination question papers for all the subjects
- Extra care is provided to solve their academic and stress related activities through the respective mentors. The mentor identifies the nature of the problems and motivate them to attain their academic goals

File Description	Documents
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/2.2.1-Index.pdf
Upload any additional information	<u>View File</u>

#### 2.2.2 - Student- Full time teacher ratio (Data for the latest completed academic year)

Number of Students		Number of Teachers
1179		208
File Description	Documents	
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

Following structures and systems are available for faculty members and students to implement student centric learning to enhance the learning experience of the students: Activity based learning (ABL), Project based learning (PBL), submission of mini projects, Submission of major projects, etc. Student's seminars, hands on training make the students to involve in the participative learning process. Library, Internet facility and language lab contribute more for the activity based learning. In-plant Training, Industrial visits & Internships also make the students to learn the concept practically. Assignments are given for self learning, which involve the making of working models to explain the working concepts. Students' participative learning is encouraged during the regular class hours. Following teaching techniques are regularly followed by faculty members to encourage participative learning. Exhibition and demonstrations of working models, Group Discussions, Role play, Debate, Seminars, Soft skills training sessions are also conducted by external experts, which include Problem solving techniques. Students are also trained by the experts, in improving the presentation and communication skills.

File Description	Documents
Upload any additional information	<u>View File</u>
Link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/2.3.1-Index.pdf

2.3.2 - Teachers use ICT enabled tools for effective teaching-learning process. Write description in maximum of 200 words

Faculty members are combining technology with traditional mode of instruction to engage students in long term learning. Institution uses Information and Communication Technology (ICT) tools in education to support, enhance, and optimize the delivery of education. Faculty members are encouraged to use power-point presentations in their teaching by using LCD projectors. Following ICT tools are used by our faculty members Projectors, Desktop / Laptops, Wi-fi connectivity, Digital / e Resources, Smart boards, audio systems, etc. Three seminar halls are equipped with all digital facilities. Auditorium is equipped with mike, projector, cameras and computer system. Online Classes are conducted through Google Meet and managed through Google Classroom. MOOC Platforms (NPTEL, Coursera, SAP, Udemy, Edx etc.,) are used by the faculty members for the effective teaching. Digital Library resources (DELNET, E-journals) are used by our faculty members. Seminar and Conference rooms are digitally equipped where guest lectures, expert talks and various competitions are regularly organized for students. Faculties prepare online quiz for students after the completion of each unit with the help of Google Forms. Students are counseled with the help of Google meet. Recording of video lectures is made available to students for continuous learning and future referencing. YouTube videos relating to the subjects are effectively used to explain the subjects at ease.

File Description	Documents
Upload any additional information	<u>View File</u>
Provide link for webpage describing the ICT enabled tools for effective teaching-learning process	<u>View File</u>

**2.3.3** - Ratio of mentor to students for academic and other related issues (Data for the latest completed academic year )

# 2.3.3.1 - Number of mentors 108 File Description Documents Upload, number of students enrolled and full time teachers on roll View File Circulars pertaining to assigning mentors to mentees View File Mentor/mentee ratio View File

#### 2.4 - Teacher Profile and Quality

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

#### 208

File Description	Documents
Full time teachers and sanctioned posts for year (Data Template)	<u>View File</u>
Any additional information	<u>View File</u>
List of the faculty members authenticated by the Head of HEI	<u>View File</u>

2.4.2 - Number of full time teachers with Ph. D. / D.M. / M.Ch. /D.N.B Superspeciality / D.Sc. / D.Litt. during the year (consider only highest degree for count)

### 2.4.2.1 - Number of full time teachers with Ph. D. / D.M. / M.Ch. /D.N.C Superspeciality / D.Sc. / D.Litt. during the year

#### 20

File Description	Documents
Any additional information	<u>View File</u>
List of number of full time teachers with Ph. D. / D.M. / M.Ch./ D.N.B Super specialty / D.Sc. / D.Litt. and number of full time teachers for year (Data Template)	<u>View File</u>

**2.4.3** - Number of years of teaching experience of full time teachers in the same institution (Data for the latest completed academic year)

#### **2.4.3.1** - Total experience of full-time teachers

#### 1194

File Description	Documents
Any additional information	<u>View File</u>
List of Teachers including their PAN, designation, dept. and experience details(Data Template)	<u>View File</u>

#### 2.5 - Evaluation Process and Reforms

2.5.1 - Mechanism of internal assessment is transparent and robust in terms of frequency and mode. Write description within 200 words.

#### THEORY COURSES

The internal assessment marks are calculated based on the three term tests. Internal tests are conducted as per the academic schedule of Anna University. Each test carries maximum of fifty marks and cumulative becomes 150 marks. This 150 mark is divided uniformly across all COs of the course. This mark is rounded of to 100 Marks as per the regulation. This will be taken as 20 percentage weightage in the total marks of the subject. The calculation procedure is educated to the students, within one week from the commencement of the classes when they are in first year of study. Further there is a system to upload attendance and Internal test marks in the University web portal at regular intervals. Students can view those details by logging in to the web portal of Anna University.

#### LABORATORY COURSES

Seventy five marks are awarded for the conduct of practical classes and this 75 mark is divided in to three subsections. They are Observation (25 marks), Record (25 marks) and 25 marks for the number of experiments conducted. Apart from this a midterm practical examination is conducted for the each practical course for 100 marks. This 100 mark is reduced to 25 marks. Hence internal mark for the practical course is calculated for a total of 100 marks.

#### PROJECT WORK

Four project reviews are conducted for the project work. Out of four reviews last three reviews are taken in to consideration for awarding the internal marks out of 100.

File Description	Documents
Any additional information	<u>View File</u>
Link for additional information	
	https://assessmentonline.naac.gov.in/public/
	<pre>index.php/admin/get_file?file_path=eyJpdiI6I</pre>
	<u>lRaZ3V2NnJLbWx6QVlFeXFTTUs5SHc9PSIsInZhbHVlI</u>
	joib3J6VU00VEFKVGRKQzhrczhMRExxUVFqRHdibVlrV
	nZkVnhtcmpnNXgwNVJ0MGk2bTRjc3JXaGpKMzhTTlFlM
	<u>iIsIm1hYyI6IjUwYjg1MGEyY2FiYmFkMjE4ZGIzY2ZmN</u>
	jRjNzYwOGM0ODA1NjE1YTJmMGExMGUyOGIwOTdkNzg5M
	<u>2UzMWY1ZWIiLCJ0YWciOiIifQ==</u>

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

On the first week of every semester, students are informed about the system of internal examination process in class committee meetings. Internal examinations for the theory courses, practical courses and project work are calculated as per the procedures laid down in the regulation of Anna University and the same is explained in the metric 2.5.1. Internal evaluation reforms: Each department has Examination Coordinator for smooth conduction of Internal Tests. The results of each test are strictly declared within a week of the conclusion of the test. The answer scripts of examinations are issued to the students after evaluation to provide opportunity to find any discrepancies and bring it to the notice of faculty concerned. The corrected answer scripts are randomly verified by HOD & Dean Academics to ensure the standard in the evaluation process. If any grievances regarding internal examination are brought by the students, they are immediately taken up by the faculty concerned and necessary corrections are made within two days, if the claim made by the student is genuine. Evaluated answer scripts are verified, accepted and signed by the students. The evaluation of students is displayed on notice board Marks in internal tests are uploaded in Anna University web portal. Students can view their internal marks through their login in University web portal. Parents are informed about their ward's marks through letters sent from the department.

File Description	Documents
Any additional information	<u>View File</u>
Link for additional information	
	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/2.5.2-Index.pdf
	<u>021-2022/2.5.2-111dex.pd1</u>

#### 2.6 - Student Performance and Learning Outcomes

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

All departments in the institution have defined their POs, PSOs, PEOs & COs along with Vision, Mission statements, through a systematic process. These outcome statements are disseminated to the teachers and students as explained below: Communication to teachers: All the faculty members are maintaining the course files for the courses taught by them. The prominent content in these course files are the PEOs, POs, PSOs of the relevant Program. Course Outcomes are framed by the faculty and they are also available in course files for that particular course. During the Pedagogy program conducted before the commencement of new semester, a dedicated session is conducted explaining the PEOs, POs, PSOs and COs. Communication to students: The Outcome statements are displayed in prominent locations of the respective program. The importance of these outcomes is explained to the students in Tutor ward meetings, Class Committee meetings and department events. Also, these statements are published in the department profile in the college website. For all the internal tests conducted by the Institution, faculty member prepares the internal test questions as per Bloom's Taxonomy and also marking the corresponding Course outcome for a particular question.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for Additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/2.6.1-Index.pdf
Upload COs for all Programmes (exemplars from Glossary)	<u>View File</u>

2.6.2 - Attainment of Programme outcomes and course outcomes are evaluated by the institution.

Following assessment methods are used for the attainment of Course Outcomes, Program Outcomes and Program Specific Outcomes.

1. Direct Assessment (80%)

1a. Continuous Internal Evaluation Examination (20%):

This type of performance assessment is carried out through the

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examinations conducted thrice in a semester. Each and every internal
examination is a tool for assessing the attainment of course
outcomes.
1b. Semester End Examination (80%):
Semester End examination conducted by the university comprising
entire syllabus of the course is a measure for assessing whether all
the Course Outcomes are attained or not.
2. Indirect Assessment (20%):
Students' Exit Feedback - 10%
Employers' Feedback - 5 %
Alumni feedback - 5 %
The attainment levels in the range of 1 to 3 are decided by
following ways:
1. 60% to 69% of the students score above 55% marks = Attainment
level 1
2. 70% to 74% of the students score above 55% marks = Attainment
level 2
3. Above 75% of the students score above 55% marks = Attainment
level 3
From the attainment levels of course outcomes, the attainment levels
of POs and PSOs are derived. All the entries are made in a
programmed Excel sheet providing the necessary input data like
students' details, marks obtained for each question, level of
attainment etc., the final attainment levels are obtained
automatically.
                        Documents
File Description
Upload any additional
                                          View File
information
Paste link for Additional
information
                        http://www.mahendracollege.com/AQAR/AQAR%202
                                  021-2022/2.6.2-Index.pdf
```

2.6.3 - Pass percentage of Students during the year

### **2.6.3.1** - Total number of final year students who passed the university examination during the year

#### 242

File Description	Documents
Upload list of Programmes and number of students passed and appeared in the final year examination (Data Template)	<u>View File</u>
Upload any additional information	<u>View File</u>
Paste link for the annual report	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/2.6.3-Index.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.mahendracollege.com/AQAR/AQAR%202021-2022/2.7.1-Index.pdf

#### **RESEARCH, INNOVATIONS AND EXTENSION**

**3.1 - Resource Mobilization for Research** 

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

**3.1.1.1 - Total Grants from Government and non-governmental agencies for research projects / endowments in the institution during the year (INR in Lakhs)** 

#### 6.6

File Description	Documents
Any additional information	<u>View File</u>
e-copies of the grant award letters for sponsored research projects /endowments	<u>View File</u>
List of endowments / projects with details of grants(Data Template)	<u>View File</u>

3.1.2 - Number of teachers recognized as research guides (latest completed academic year)

#### 3.1.2.1 - Number of teachers recognized as research guides

#### 80

	1
File Description	Documents
Any additional information	<u>View File</u>
Institutional data in prescribed format	<u>View File</u>

**3.1.3** - Number of departments having Research projects funded by government and non government agencies during the year

**3.1.3.1** - Number of departments having Research projects funded by government and nongovernment agencies during the year

4

File Description	Documents
List of research projects and funding details (Data Template)	<u>View File</u>
Any additional information	<u>View File</u>
Supporting document from Funding Agency	<u>View File</u>
Paste link to funding agency website	https://www.tanscst.tn.gov.in/rails/active_s torage/disk/eyJfcmFpbHMiOnsibWVzc2FnZSI6IkJB aDdDRG9JYTJWNVNTSWRSelpPWjFSaGNIcDNRamxqTVVa RVJqUTRha3hsT0ZaWkJqb0dSVlE2RUdScGMzQnZjMmww YVc5dVNTSmJhVzVzYVc1bE95Qm1hV3hsYm1GdFpUMGlV MUJUVWw4eU1ESXhYMk52Y1hCeVpYTnpaV1F1Y0dSbUlq c2dabWxzWlc1aGJXVXFQVlZVUmkwNEp5ZFRVRk5TWHpJ d01qRmZZMj10Y0hKbGMzTmxaQzV3WkdZR093WlVPaEZq YjI1MFpXNTBYM1I1Y0dWSkloUmhjSEJzYVdOaGRHbHZi aT13WkdZR093WlUiLCJleHAiOiIyMDIzLTA2LTE5VDEw OjAyOjI5Ljk0OVoiLCJwdXIiOiJibG9iX2tleSJ9fQ== 7c61807525178166302fe139013a3632389d1bb0/S PSR 2021 compressed.pdf?content type=applica tion%2Fpdf&disposition=inline%3B+filename%3D %22SPSR 2021 compressed.pdf%22%3B+filename%2 A%3DUTF-8%27%27SPSR 2021 compressed.pdf

#### **3.2 - Innovation Ecosystem**

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

#### of knowledge

The management encourages faculty members and students to carry out Research works for innovative eco system.

Research Centers: The Institution has Anna University approved Research Centers in three Engineering Departments for the students to register for their Ph.D programs. Currently 27 Research scholars are pursuing their Doctoral degree under 8 eligible Supervisors.

Institution Innovation Council (IIC): The institution has active IIC for promoting innovation in research through organizing programs for young engineers to familiarize them in the facets of Intellectual Property Rights (IPR), Entrepreneurship development, and leading the way to enhance patent publications. Our institution had organized 12 workshops/seminars relating to IPR. The institution had published 6 patents out of which one patent is granted in the academic year 2021-22. As the result our students have designed and fabricated few notable projects such as E- vehicle, 360 Degree Flexible Drilling Machine, Bio gas plant, etc. Among this 2 projects are funded by TNSCST.

Our institution had been certified by the Government of India, Ministry of Commerce and Industry, for active participation in the National Intellectual Property Awareness Mission (NIPAM).

Collaborative Research: The institution had signed MoU with 2 companies for promoting Collaborative research works. Currently three different projects are under progress.

Publication: The Institute is publishing an International journal by name "International Journal of Applied Science & Technology (IJASE)" with ISSN 2454-9967 (Print) and 2349-5359 (online).

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/3.2.1-Index.pdf

**3.2.2** - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

**3.2.2.1** - Total number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year wise during the year

10	
File Description	Documents
Report of the event	<u>View File</u>
Any additional information	<u>View File</u>
List of workshops/seminars during last 5 years (Data Template)	<u>View File</u>

#### 3.3 - Research Publications and Awards

#### 3.3.1 - Number of Ph.Ds registered per eligible teacher during the year

#### 3.3.1.1 - How many Ph.Ds registered per eligible teacher within the year

27

File Description	Documents
URL to the research page on HEI website	http://www.mahendracollege.com/research inte grity.php?research&research integrity
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc (Data Template)	<u>View File</u>
Any additional information	<u>View File</u>

### **3.3.2** - Number of research papers per teachers in the Journals notified on UGC website during the year

#### 3.3.2.1 - Number of research papers in the Journals notified on UGC website during the year

37

File Description	Documents
Any additional information	<u>View File</u>
List of research papers by title, author, department, name and year of publication (Data Template)	<u>View File</u>

### **3.3.3** - Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during the year

### **3.3.3.1** - Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year wise during year

#### 16

File Description	Documents
Any additional information	<u>View File</u>
List books and chapters edited volumes/ books published (Data Template)	<u>View File</u>

#### **3.4 - Extension Activities**

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

Serving the neighborhood community and sensitizing students to social issues is a critical component of an institution to exhibit the social responsibility. Mahendra College of Engineering (MCE) is committed to social responsibilities. The Institution encourages promotion of community services through various forums and cells.

NSS /NCC / YRC Units: The National Service Scheme (NSS) Unit of MCE has become an important tool in sensitizing students and ensuring their direct participation in various social activities. To create an impact on social well being and social awareness, the Institution had taken effective measures in conducting Awareness programs such as Drug awareness, World Earth Day rally, Covid Vaccination awareness camp, Plastic Awareness camp, etc., under the schemes like Ayushman Bharath Yojna. Swach Bharath Abhiyaan and Nasha Mukt Bharath Abhiyaan.

Unnat Bharat Abhiyan: The institution is taking keen interest in developing the rural areas with the support of young engineers to achieve sustainable development and betterment in the quality of the lives of village people under Unnat Bharat Abhiyan. Mahendra College of Engineering had adopted 5 nearby villages namely Minnampalli, Periyagoundapuram, Chinnagoundapuram, Karipatti and Kullampatti. The interested students under the scheme had completed Village Survey which spot out their basic infrastructure and amenities requirements.

File Description	Documents
Paste link for addition information	al <u>http://www.mahendracollege.com/AQAR/AQAR%202</u> 021-2022/3.4.1-Index.pdf
Upload any addition information	<u>View File</u>

**3.4.2** - Number of awards and recognitions received for extension activities from government / government recognized bodies during the year

**3.4.2.1** - Total number of awards and recognition received for extension activities from Government/ Government recognized bodies year wise during the year

File Description	Documents
Any additional information	<u>View File</u>
Number of awards for extension activities in last 5 year (Data Template)	<u>View File</u>
e-copy of the award letters	<u>View File</u>

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

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

#### 15

2

File Description	Documents
Reports of the event organized	<u>View File</u>
Any additional information	<u>View File</u>
Number of extension and outreach Programmes conducted with industry, community etc for the during the year (Data Template)	<u>View File</u>

3.4.4 - Number of students participating in extension activities at 3.4.3. above during year

## 3.4.4.1 - Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year wise during year

#### 1415

File Description	Documents
Report of the event	<u>View File</u>
Any additional information	<u>View File</u>
Number of students participating in extension activities with Govt. or NGO etc (Data Template)	<u>View File</u>

#### 3.5 - Collaboration

**3.5.1** - Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship during the year

**3.5.1.1** - Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship year wise during the year

47

File Description	Documents
e-copies of related Document	<u>View File</u>
Any additional information	<u>View File</u>
Details of Collaborative activities with institutions/industries for research, Faculty	<u>View File</u>

### **3.5.2** - Number of functional MoUs with institutions, other universities, industries, corporate houses etc. during the year

**3.5.2.1** - Number of functional MoUs with Institutions of national, international importance, other universities, industries, corporate houses etc. year wise during the year

11

File Description	Documents
e-Copies of the MoUs with institution./ industry/corporate houses	<u>View File</u>
Any additional information	<u>View File</u>
Details of functional MoUs with institutions of national, international importance, other universities etc during the year	<u>View File</u>

#### 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 equipment etc.

The institute has a policy for the creation and enhancement of infrastructure depending on the AICTE/ Anna University requirements due to change in the curriculum, student admission, and introduction of any additional courses. Under IQAC, the college has appointed a committee for infrastructure and learning resources, involving senior staff and student members on the committee.

The institution facilitates learning through smart classrooms. Presently, there are 52 well-ventilated classrooms available in the campus. Out of which 32classrooms are equipped with LCD projectors and LAN/Wi-Fi connectivity. The college has two seminar halls and one auditorium to conduct seminars, conferences, guest lectures, workshops and functions for students and faculty. All seminar halls have adequate seating capacity, and these are equipped with LCD projectors, whiteboards, raised platforms, and a public address system with internet access. The institution has provided enriched technology to conduct the classes with students through online platforms like Google Meet, Zoom, Webex, Google Classroom, etc. The laboratories are spacious and equipped with the necessary functional equipment and instruments. Further, there are 7 computer labs with total of 646 computers. The institution has a spacious library with adequate seating capacity, a good collection of books, and a separate reference section with a computer section to accesses on line journals. The institute has a separate data centre with an internet facility with leased line of internet of 64 Mbps.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/4.1.1-Index.pdf

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

The institute promotes a wide range of extracurricular activities beyond the confines of class rooms. These activities help to develop character among the students. The institute has an individual multipurpose hall and an auditorium for conducting cultural events.

The Department of Physical Education has all the facilities to promote sports and games. It includes 100 meters of mud track for track and field events. The playground has many sports fields like basketball, volleyball, football, Handball, Kabaddi, Kho-Kho, cricket, netball, hockey, etc. Facilities are also available for Indoor games like chess, carom, table tennis, etc. State level, district-level, and University-level tournaments are being conducted on the college campus.

The institute has a yoga and meditation hall for the benefit of students and teachers. The yoga is conducted for students through the yoga club. Yoga Day is organized every year. Students are encouraged to perform yoga during college cultural events and they take part in competitions and bring laurels and plaudits to the institution.

To explore and nourish the hidden talents among the students, every year the institution organizes various cultural events like dance, singing, skits, debate, street play, fireless cooking, fashion show, etc. The institution has an excellent sound and music system. The institution has also taken the initiative to create many student clubs to involve the students in club activities.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://mahendracollege.com/AQAR/AQAR%202021 -2022/4.1.2-PROOF.pdf

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

#### 32

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/4.1.3-Index.pdf
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	<u>View File</u>

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

**4.1.4.1 - Expenditure for infrastructure augmentation, excluding salary during the year (INR in lakhs)** 

#### 18

File Description	Documents
Upload any additional information	<u>View File</u>
Upload audited utilization statements	<u>View File</u>
Upload Details of budget allocation, excluding salary during the year (Data Template	<u>View File</u>

#### 4.2 - Library as a Learning Resource

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

Library automation and computerization

- A database of books, journals/magazines, students and staff members and number of tokens are created in the software.
- After the physical segregation of books under various disciplines, the same is carried out in the computer system program with interlinking accession numbers and call numbers.
- Books issuance, renewals and return are monitored through the

software.

• Books can be retrieved by feeding in author's name, book title, Key word, Accession No, etc.

OPAC

OPAC has different types of searching options like simple, advanced, and Boolean searches. We have integrated OPAC with digital library access outside the campus by WEB OPAC.

MEMBER LOGIN/LOGOUT: Software having member log-in and log-out module to authenticate attendance in the library for students and staff. It is possible to generate login reports according to date, month, year-wise.

The college is a member of INFLIBNET for Shodhganga.

E-Access to Engineering e-books and e-journals are subscribed and made available to students. College provides online access to a number of refereed journals to promote research culture. The library has received Elsevier certificate for enriching years of relationship with online resources.E-journals are subscribed from Springer comprising Electrical, Electronics, Mechanical, and Computer-related subjects

DELNET facilitates: 500+ e-Journals and 2000+ e-books are available through DELNET.

File Description	Documents	
Upload any additional information		<u>View File</u>
Paste link for Additional Information		mahendracollege.com/AQAR/AQAR%202
4.2.2 - The institution has subscr following e-resources e-journals ShodhSindhu Shodhganga Mem books Databases Remote access	e- bership e-	A. Any 4 or more of the above

File Description	Documents
Upload any additional information	<u>View File</u>
Details of subscriptions like e- journals,e-ShodhSindhu, Shodhganga Membership etc (Data Template)	<u>View File</u>

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

### **4.2.3.1** - Annual expenditure of purchase of books/e-books and subscription to journals/e-journals during the year (INR in Lakhs)

#### 11.77758

File Description	Documents
Any additional information	<u>View File</u>
Audited statements of accounts	<u>View File</u>
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** - Number per day usage of library by teachers and students (foot falls and login data for online access) (Data for the latest completed academic year)

#### 4.2.4.1 - Number of teachers and students using library per day over last one year

193

File Description	Documents
Any additional information	<u>View File</u>
Details of library usage by teachers and students	<u>View File</u>

#### 4.3 - IT Infrastructure

4.3.1 - Institution frequently updates its IT facilities including Wi-Fi

The IT Infrastructure and associated facilities have been augmented periodically, when there is a requirement. The computer systems'RAM,graphics card and other hardware items are upgraded as per the needs and requirements of the University Curriculum. All licensed academic software are updated regularly. The Institution provides full-fledged computing facilities with necessary software and Wi-Fi facilities in the campus. Totally 646 computers are available across various laboratories and departments for the benefit of students and faculty members. These computers are upgraded every year to meet the students' requirements.

Data Centre: Data Centre is well equipped with high-end equipment like DHCP Server, DNS Server, Firewall Server, Storage Server, Ubuntu server, Communication server, Cisco 2800 series router, Network Video Recorder, Wireless Authentication Server, Web portal Server, etc.

Wi-Fi: The Institution is networked with fiber optic cables, 24 hour Internet connectivity at the speed of 64 Mbps and about 20 Wi-Fi points spread over the entire campus of All-Academic Blocks, Auditorium, Library, Seminar Halls and Hostels(Girls and Boys), etc.

Information Security: M470 Watch Guard scans to actively block attacks and any intrusion. These M470 firewalls are rated for 201-300 users, 19.6 GBPS firewall throughput, and 5.2 GBPS VPN. Entire network is protected with Quick heal Endpoint Security antivirus software. Domain Controller login features enables us to safeguard any unauthorized access to critical data of professors, resources used in the network and to effectively track the system accessed/last login etc.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/4.3.1-Index.pdf

#### **4.3.2 - Number of Computers**

#### 646

File Description	Documents
Upload any additional information	<u>View File</u>
List of Computers	<u>View File</u>
4.3.3 - Bandwidth of internet con Institution	nnection in the A. ? 50MBPS

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

#### 4.4 - Maintenance of Campus Infrastructure

**4.4.1** - Expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the year (INR in Lakhs)

**4.4.1.1 - Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component during the year (INR in lakhs)** 

#### 243.35136

File Description	Documents
Upload any additional information	<u>View File</u>
Audited statements of accounts	<u>View File</u>
Details about assigned budget and expenditure on physical facilities and academic support facilities (Data Templates)	<u>View File</u>

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

The institution policies for creating and enhancing the infrastructure facilities are framed primarily for facilitating teaching learning process, following the norms and the guidelines of the AICTE and Anna University. Mahendra College of Engineering has created well equipped laboratories, ventilated class rooms, auditorium, library, hostel for boys and girls, gymnasium, power backup and computing facility with internet over the years. Periodical maintenance, repair and upkeep of UPS, AC, reprography machine, printers, generator, water purifier and digital duplicator are done by the service providers and every department maintains a stock register for the available equipment. Proper inspection is done and verification of stock takes place at the end of every year.

The repair and servicing of the laboratory equipments were carried out by the service providers when ever required. Regular maintenance and servicing of all vehicles are properly carried out. Where ever necessary AMC is done with suppliers and proper insurance are made. Well trained technicians are involved in the maintenance of infrastructure facilities and equipment of the institution. Painting and needed repairs are carried out then and there.

The electronic surveillance facilities installed in the campus are maintained by the supplier of the equipment as and when required. The maintenance of computers, supporting hardware, LAN and Wi-Fi across the campus are taken care of our internal Computer Data Centre technicians.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/4.4.2-Index.pdf

#### STUDENT SUPPORT AND PROGRESSION

#### 5.1 - Student Support

**5.1.1** - Number of students benefited by scholarships and free ships provided by the Government during the year

**5.1.1.1 -** Number of students benefited by scholarships and free ships provided by the Government during the year

1051

File Description	Documents
Upload self attested letter with the list of students sanctioned scholarship	<u>View File</u>
Upload any additional information	<u>View File</u>
Number of students benefited by scholarships and free ships provided by the Government during the year (Data Template)	<u>View File</u>

## 5.1.2 - Number of students benefitted by scholarships, free ships etc. provided by the institution / non- government agencies during the year

**5.1.2.1** - Total number of students benefited by scholarships, free ships, etc provided by the institution / non- government agencies during the year

52		
File Description	Documents	
Upload any additional information		<u>View File</u>
Number of students benefited by scholarships and free ships institution / non- government agencies in last 5 years (Date Template)		<u>View File</u>
5.1.3 - Capacity building and skills enhancement initiatives taken by the institution include the following: Soft skills Language and communication skills Life skills (Yoga, physical fitness, health and hygiene) ICT/computing skills		
File Description	Documents	
Link to Institutional website	http://www.	<u>mahendracollege.com/cbse.php?acti</u> <u>vities&amp;cbse</u>
Any additional information		<u>View File</u>
Details of capability building and skills enhancement initiatives (Data Template)		<u>View File</u>
5.1.4 - Number of students benefitted by guidance for competitive examinations and career counseling offered by the institution during the year		
924		
5.1.4.1 - Number of students ber counseling offered by the institu	• •	nce for competitive examinations and career year
924		
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 has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases Implementation of guidelines of statutory/regulatory bodies Organization wide awareness and undertakings on policies with zero tolerance Mechanisms for submission of online/offline students' grievances Timely redressal of the grievances through appropriate committees

File Description	Documents
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	<u>View File</u>
Upload any additional information	<u>View File</u>
Details of student grievances including sexual harassment and ragging cases	<u>View File</u>

#### **5.2 - Student Progression**

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

#### 5.2.1.1 - Number of outgoing students placed during the year

267

File Description	Documents
Self-attested list of students placed	<u>View File</u>
Upload any additional information	<u>View File</u>
Details of student placement during the year (Data Template)	<u>View File</u>

#### **5.2.2** - Number of students progressing to higher education during the year

#### **5.2.2.1** - Number of outgoing student progression to higher education

3

File Description	Documents
Upload supporting data for student/alumni	<u>View File</u>
Any additional information	<u>View File</u>
Details of student progression to higher education	<u>View File</u>

**5.2.3** - Number of students qualifying in state/national/ international level examinations during the year (eg: JAM/CLAT/GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/State government examinations)

5.2.3.1 - Number of students qualifying in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State government examinations) during the year

03

File Description	Documents
Upload supporting data for the same	<u>View File</u>
Any additional information	<u>View File</u>
Number of students qualifying in state/ national/ international level examinations during the year (Data Template)	<u>View File</u>

#### 5.3 - Student Participation and Activities

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

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

1

File Description	Documents
e-copies of award letters and certificates	<u>View File</u>
Any additional information	<u>View File</u>
Number of awards/medals for outstanding performance in sports/cultural activities at univer sity/state/national/international level (During the year) (Data Template)	<u>View File</u>

5.3.2 - Institution facilitates students' representation and engagement in various administrative, cocurricular and extracurricular activities (student council/ students representation on various bodies as per established processes and norms )

The institution has various committees with student representatives who are actively involved in various academic and administrative decision-making processes. The student representatives are made available in the following committee and their functions are as stated below. Representatives of Class Committee are doing important role in ensuring the highest quality learning by representing the entire students of the class. Anti-Ragging Committee is responsible to ensure the college campus to be free from ragging. Prevention of Sexual Harassment Committee is responsible to ensure the college campus to be free from eve teasing. The Sports Committee is to encourage the students to maintain their health, physical fitness, mind power, etc. Internal Complaints Committee is to provide reliable, safe and secured academic environment to students and working ambience to all female members.Hostel Committee coordinators play an important role regarding food quality and other general facilities in the hostel. College Magazine Committee provide a platform for students to express themselves through various forms of writing like research articles, comments on current topics, literary/creative writing. The SC/ST welfare committee was started with an objective to enable them to live in society with dignity and self-esteem and without fear or violence or suppression from the dominant castes and to improve the socio-economic conditions of the SCs and STs. inaddition to the above Women Empowerment Cell, Institution Innovation Council (IIC) and Entrepreneur Development Cell have students representation

File Description	Documents	
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/5.3.2-Index.pdf	
Upload any additional information	<u>View File</u>	

**5.3.3** - Number of sports and cultural events/competitions in which students of the Institution participated during the year (organized by the institution/other institutions)

## **5.3.3.1** - Number of sports and cultural events/competitions in which students of the Institution participated during the year

#### 36

File Description	Documents
Report of the event	<u>View File</u>
Upload any additional information	<u>View File</u>
Number of sports and cultural events/competitions in which students of the Institution participated during the year (organized by the institution/other institutions (Data Template)	<u>View File</u>

#### 5.4 - Alumni Engagement

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

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

The strength of the institution gets multiplied through this global network with the support provided by the alumni. The alumni form the major strength and they are the brand ambassadors of the institution. Strongly believing this concept, the Alumni Association was formed in the year 2011 under the banner "Mahendra College of Engineering Alumni Association" with the Reg. No:133/2011.

The alumni visit the institution to deliver Guest lectures and seminars for the students in their areas of expertise and motivate

the young minds. Successful entrepreneurs from the alumni are invited to talk on their success stories at various occasions in the Institution.

The alumni also help the final year students of the various streams of engineering, business administration and computer applications to get their placements and summer internship in their companies or to assist them get through their reference.

They also assist the students for placement in public and private sector organizations. Regular alumni association meetings pave the way for the successful placements of the students.

Alumni Contribution:

- Recruitment of students by alumni
- Projects Sponsorship for final year students
- Providing internship opportunities to students
- Technical guidance and expertise to students participating in various competitions.
- Training programs and guest lecturers for the students
- Supporting industrial visits
- Donation of books, printers and equipments

File Description	Documents
Paste link for additional information	https://mahendracollege.com/AQAR/AQAR%202021 _2022/5.4.1-PROOF.pdf
Upload any additional information	View File

### 5.4.2 - Alumni contribution during the year (INR in Lakhs)

A. ? 5Lakhs

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 and in tune with the vision and mission of the institution

Vision

Mahendra College of Engineering is committed to be a leader in Higher Education achieving excellence through world class learning environment for Science and Technology with a blend of advanced research to create ethical and competent professionals.

Mission

- To provide a conducive atmosphere to impart innovative knowledge and commendable skills through quality education by continuous improvement and customization of teaching
- To nurture research attitude and bring about tangible developments with dynamic Industry - Institute Interaction
- To create society oriented citizens with professional ethics.

The Philanthropic Founder Chairman, Mr.M.G.Bharathkumar has a deep vision of serving the society with the motto "Service to the nation in the cause of Education".

Based on the recommendations of the Governing Council, commencement of new courses, expansion of infrastructure, implementation of strategy and other vital decisions are discussed with the Principal and Heads of departments. Management headed by the Chairman ensures that periodical meetings of Governing Council are conducted to discuss policy matters.

Institution has a perspective plan for development. Modernization of existing facilities, implementation of new ventures for R&D, expansion of infrastructure facilities like laboratories, library resources, classrooms, meeting halls and sports facilities are important aspects in the annual plan of Institution.

Scheduling of industrial visits, conferences, workshops, seminars, FDPs, association activities, club activities, sports tournaments, recruitment and functions is done after discussions with HODs, conveners and team leaders.

Principal and Dean-Academics take decisions in the academic matters conforming to the regulations of the affiliating University.

File Description	Documents
Paste link for additional information	https://mahendracollege.com/AQAR/AQAR%202021 _2022/6.1.1.PROOF.pdf
Upload any additional information	<u>View File</u>

6.1.2 - The effective leadership is visible in various institutional practices such as decentralization and participative management.

Decentralization: The institution functions with a decentralized governance system. Heads of department have been permitted with the authority of deciding the activities and delegating responsibilities to the staff members. Every department decides individually on timetable, subject allocation, purchase and maintenance of equipment and consumables, organizing conferences, symposia, guest lectures and workshops and recommends industrial visits, in-plant trainings, internships and MoUs in consultation with Department Advisory Committee. Heads of Department have the powers to plan their academic, co-curricular and Extra-curricular activities, technical events, Resource Persons to be invited etc., aligning with the Academic Calendar of the Institution. Principal and Heads of Department are given financial powers up to Rs.25000 and Rs.5000 respectively for the purchase of consumables and any other contingency.

Participative management: Institution is functioning effectively with the culture of participative management which enables the faculty and students to give their suggestions for improvement. All the academic activities are decentralized and decisions are taken based on discussion and deliberations in the class committee meetings, department meetings, faculty meetings, HODs' meetings with Principal and HODs meetings with Chairman. Principal coordinates with the departments, administration and management. Participative management provides extensive scope for having collaboration among the departments and ensures the quality of planning and implementation of all the activities in the institution uniformly. Management, Principal, Dean-Academics, Heads of Department, Teaching and Non-teaching Staff and administrative staff work towards a common goal of achieving Excellence.

File Description	Documents
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/6.1.2-Index.pdf
Upload any additional information	<u>View File</u>

#### 6.2 - Strategy Development and Deployment

6.2.1 - The institutional Strategic/ perspective plan is effectively deployed

Institution aims to ensure that students benefit from a high quality learning environment that includes spacious classrooms, wellequipped laboratories, state-of-the-art computing facilities, rich and diverse knowledge resource centers, smart class rooms, seminar halls, auditorium, top class sporting facilities with indoor and outdoor complexes, practice and rehearsal halls for cultural activities, feel at home hostel accommodation facilities and extensive facilities for on-campus training and placement.

With the intention of providing ample avenues, enhancing the infrastructure facilities in the form of new construction to accommodate classrooms, laboratories, auditorium and library facilities have been in the agenda of the continuous process. Though the needed facilities are in place as per requirements and regulations of affiliating university, they are enriched with the aim of fulfilling the goals in the strategic plans which go beyond the syllabus as well to make the student fraternity not only professionals, but also responsible citizens who can contribute for the development of society and the nation.

In the academic year 2021-22,

- Library reading area space in increased.
- A new Centre of Excellence for "Internet of Things" established with new Equipments.
- Building space for Community Radio Station Studio is created and a Communication tower for the same is installed.

File Description	Documents
Strategic Plan and deployment documents on the website	<u>View File</u>
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/6.2.1-Index.pdf
Upload any additional information	<u>View File</u>

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

Governing Council, the highest body of policy making, meets periodically to discuss various issues and aspects related to the development of the Institution. It includes review of the Institution strategic plan, which sets the academic aims and objectives of the Institution and identifies the financial, physical and administration strategies. Governing Council considers the recommendations of various Department Advisory Committees (DAC) and it chalks out a roadmap to achieve the goals of the Institution.

Institution has established various functional units for smooth functioning of different tasks.Principal is the chairperson of administrative and academic activities of the institution. Heads of department take the responsibility of executing all administrative and academic activities of the department.The Principal is responsible for the co-ordination of all the Academic activities, Cocurricular and Extra-curricular activities in accordance with the norms and standards prescribed by AICTE, Anna University and the Government of Tamil Nadu.

Next major role is played by the following cells/ committee in the successful conduct of all functions smoothly. College office affairs, administrative office affairs, scholarship cell, transport cell, research cell, training and placement cell, college redressal anti-ragging committee, women development cell, higher education cell, academic audit cell, admission cell, student welfare cell, NSS and alumni association, etc. Institution has well stated specific Human Resource policy handbook.

File Description	Documents
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/6.2.2-Index.pdf
Link to Organogram of the institution webpage	http://www.mahendracollege.com/downloads/6.2 .2%200rganization%20Structure.pdf
Upload any additional information	<u>View File</u>
6.2.3 - Implementation of e-gove areas of operation Administration Accounts Student Admission an Examination File Description	on Finance and
-	
ERP (Enterprise Resource	<u>View File</u>
Planning)Document	
Planning)Document Screen shots of user inter faces	<u>View File</u>
	<u>View File</u> <u>View File</u>

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

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

Welfare measures for teaching staff

- Free transport facilities.
- Waiver of fees for teachers' children in the Institution.
- Medical leave and Maternity / Paternity leave.
- Supporting for education of teachers' children in the group institutions.
- Sanction of one week leave for the wedding of Staff members.
- Gifts and mementoes during Teachers' Day celebrations.
- Financial support for attending conference, workshops and FDPs.
- Incentive for publication of papers / research articles.
- Reward for producing University Ranks.
- Cash awards for academic excellence / 100% pass.

- Special Study Leave (SSL) to pursue higher education.
- Faculty Retreat.
- Subsidized canteen fares.
- Group Insurance.

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Welfare schemes for non-teaching staff
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- Employees State Insurance (ESI) Scheme
- Educational support to the children of the staff.
- Sanction of one week leave for the wedding of Staff members.
- Granting medical leave / maternity / paternity leave.
- Free transport facilities.
- Special Study Leave (SSL) for higher studies.
- Incentive for attending orientation & Skill Development programmes
- Faculty Retreat.
- Incentive for dress materials
- Incentive for vehicle utilization or transport allowance for drivers
- Subsidized canteen fares
- Group Insurance.

File Description	Documents
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/6.3.1-Index.pdf
Upload any additional	<u>View File</u>

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

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

157

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 programs organized by the institution for teaching and non-teaching staff during the year

## **6.3.3.1** - Total number of professional development /administrative training Programmes organized by the institution for teaching and non teaching staff during the year

#### 16

File Description	Documents
Reports of the Human Resource Development Centres (UGCASC or other relevant centres).	No File Uploaded
Reports of Academic Staff College or similar centers	No File Uploaded
Upload any additional information	<u>View File</u>
Details of professional development / administrative training Programmes organized by the University for teaching and non teaching staff (Data Template)	<u>View File</u>

6.3.4 - Number of teachers undergoing online/face-to-face Faculty development Programmes (FDP) during the year (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course etc.)

**6.3.4.1** - Total number of teachers attending professional development Programmes viz., Orientation / Induction Programme, Refresher Course, Short Term Course during the year

#### 110

File Description	Documents
IQAC report summary	<u>View File</u>
Reports of the Human Resource Development Centres (UGCASC or other relevant centers)	No File Uploaded
Upload any additional information	<u>View File</u>
Details of teachers attending professional development programmes during the year (Data Template)	<u>View File</u>

#### 6.3.5 - Institutions Performance Appraisal System for teaching and non- teaching staff

Management evaluates the performance of the faculty based on teaching, research, participation in department activities, ability to work in a team, arranging co-curricular and extracurricular activities and publications. The appraisal system motivates the staff to excel and put in the best of their efforts.

Faculty members are given an opportunity to present their achievements and credentials through the self appraisal forms. This form contains various information like publications in journals, skill up gradations, SWOC analysis etc.,

A team comprising senior faculty, both internal and external, evaluates the staff, analyzing the following factors.

- Experience.
- Skill up gradation through participation in Conferences, Workshops, Faculty Development programs.
- Innovative teaching practices.
- Pursuing higher studies Ph.D / PDF
- Research activities and obtaining patents.
- Results produced in the University Examinations.
- Publications in the Scopus indexed / impact factor / e journals & conference proceedings.
- Publication of books.
- Consultancy & Sponsored research projects.
- Mentoring and Counseling techniques.
- Feedback from HOD and Principal.
- Feedback from students.
- Awards state and national level.
- Initiatives in conducting co-curricular and extra-curricular activities

Following factors are considered in the appraisal system for non-teaching staff.

- Experience.
- Skill up gradation through Orientation Programs, Refresher Course, Short Term Courses.
- Higher Studies.
- Feedback from HOD and Principal.
- Active participation in team work.
- Work Discipline.

File Description	Documents
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/6.3.5-Index.pdf
Upload any additional information	<u>View File</u>

#### 6.4 - Financial Management and Resource Mobilization

6.4.1 - Institution conducts internal and external financial audits regularly Enumerate the various internal and external financial audits carried out during the year with the mechanism for settling audit objections within a maximum of 200 words

Periodical Internal Audits are performed by officials deputed from Trust office and reports are prepared before the Auditor's external audit which normally happens after the closure of the accounts in all respects. External Audit is done by the Statutory Auditors after 30th June of the subsequent year.

During the course of Internal Audit, all required steps are taken to regularize the accounts and to obtain confirmations for the credit balances, to collect documentary evidences wherever necessary in respect of payments, compliances of T.D.S. and Statutory Formalities and Reconciliation of unit wise balances with the Control Accounts and Bank Reconciliations.

Subsequently, External Statutory Audit is conducted by the auditors and the final audit report with audit findings are submitted to the Management. The consolidation of the findings of the Institutions with Trust Central office will be completed and the annual returns will be submitted to Income tax Authorities, Registrar of Societies, Tamil Nadu and to other authorities concerned.

File Description	Documents
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/6.4.1-Index.pdf
Upload any additional information	<u>View File</u>

**6.4.2** - Funds / Grants received from non-government bodies, individuals, philanthropers during the year (not covered in Criterion III)

**6.4.2.1** - Total Grants received from non-government bodies, individuals, Philanthropers during the year (INR in Lakhs)

File Description	Documents
Annual statements of accounts	No File Uploaded
Any additional information	No File Uploaded
Details of Funds / Grants received from of the non- government bodies, individuals, Philanthropers during the year (Data Template)	<u>View File</u>

6.4.3 - Institutional strategies for mobilization of funds and the optimal utilization of resources

Mobilization of Funds

• Fees Collection

Students are admitted as per the Tamil Nadu Government Higher Education Department norms by admitting 65% (or more) students through Anna University Counselling (TNEA) and 35% (or less) through Consortium of Self Financing Professional, Arts and Science Colleges in Tamil Nadu. The fees for the latter category of students will be higher than Government Quota students.

• Term Loan and Hire Purchase Loans

Institution is getting above Loans from Banks with reduced rate of interest by maintaining the liquidity, DSCR and Debt Equity Ratios which are sound and the Loans are availed.

• Corpus Donation of Trust and Trust Contribution

The Institution is functioning under the Mahendra Educational Trust. The Trust is allocating funds for the creation of capital assets like Buildings, Equipments, Books, Computers, Furniture, etc.

- Optimal Utilization
- Recurring Expenses
- Salary to staff, academic activities, maintenance and other expenses are done with fees
- Infrastructural development facilities and Building construction works

Institution applies and gets grants from AICTE schemes for purchase of modern lab equipments, purchase of latest version software and others. Institution purchases new vehicles (buses/vans), through hire purchase loans from banks and loans are repaid with reduced rates of interest from the reasonable transport charges collected from the students.

• Seminars, Conferences, FDPs and other co-curricular activities:

Institution conducts the above events regularly on various emerging technologies, innovations, research changes and needs of the society. These events are conducted from the funds received from the Professional bodies & sponsoring agencies.

File Description	Documents
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/6.4.3-Index.pdf
Upload any additional information	<u>View File</u>

#### 6.5 - Internal Quality Assurance System

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

During the lockdown periods of the COVID 19 pandemic, students should not lose the learning habit and techniques. Keeping this in mind, IQAC insisted the members to encourage and promote the online courses in a big way. Faculty members highlighted the advantage of registering and learning the NPTEL courses to the students. This effort paid off and many students took up the online courses and got benefitted.

IQAC insisted on the skill development of Faculty and staff:

During the lockdown periods of the COVID 19 pandemic, Faculty and staff members are instructed to take utmost care in staying physically healthy and safe. In addition, their mental health shall also be taken care by engaging their mind effectively. This is successfully achieved by attending Webinars of their choice and passion. All the faculty and staff members have attended several online webinars and benefitted in a tremendous manner. IQAC through various meetings continuously monitored this process.

#### Mentor - Mentee system

The key focus is on bringing the closeness (avoiding the barriers) between mentor, mentee and parents. Mentor-mentee meetings are frequent so that all academic and personal issues are discussed in a parental approach. Parents are highly comfortable to discuss the personal issues and progression of the wards with the mentor. A teaching faculty is assigned as a mentor to a group of 15 students in a class.

File Description	Documents
Paste link for additional information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/6.5.1-Index.pdf
Upload any additional information	<u>View File</u>

6.5.2 - The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the incremental improvement in various activities

IQAC of the Institution instructed the departments to organize several awareness programs to the faculty, staff and students on effective use of online platforms. The IQAC evaluates delivery effectiveness of teaching methods regularly. Teaching plans are prepared for a semester. The Syllabus is split into Lesson Plan & Session Plan. Implementation of ICT facilities also mentioned in the lesson plan. The lecture notes are prepared by the faculties and shared to the students to ensure the quality of teaching learning Process. Course file contains two parts with standard check list in each file. Course delivery and syllabus coverage is verified / checked at different stages as per the scheme of examination given by University by the Principal and HoD concerned. The teaching learning process is facilitated through qualified, trained and experienced faculty. Execution of all the skill development training are effectively monitored through a well developed, systematic procedure wherein the details about the content delivered, shortfall in the content delivered, objective met, attendance detail, remedial classes planned, evaluation criteria etc. Internal test question papers are taken by following revised Bloom's Taxanomy The knowledge absorption / assimilation by students are also gauged suitably. The effectiveness of teaching - learning process is reviewed on regular basis through Academic and Administrative Auditing, Tutor Ward Meeting and Class Committee Meeting. The outcomes are improved with effective teaching learning process, and systematic follow up

#### actions.

File Description	Documents			
Paste link for additional information	https://mahendracollege.com/AQAR/AQAR%202021 -2022/6.5.2-PROOF.pdf View File			
Upload any additional information				
6.5.3 - Quality assurance initiative	es of the A. All of the above			

6.5.3 - Quality assurance initiatives of the	А.	ALT	OI	
institution include: Regular meeting of				
Internal Quality Assurance Cell (IQAC);				
Feedback collected, analyzed and used for				
improvements Collaborative quality initiatives				
with other institution(s) Participation in NIRF				
any other quality audit recognized by state,				
national or international agencies (ISO				
Certification, NBA)				

File Description	Documents			
Paste web link of Annual reports of Institution	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/6.5.3-Index.pdf			
Upload e-copies of the accreditations and certifications	<u>View File</u>			
Upload any additional information	<u>View File</u>			
Upload details of Quality assurance initiatives of the institution (Data Template)	<u>View File</u>			

#### 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

The institution has absolutely no conciliation in the security issues. Right from the inception of the college, the management has taken serious steps to have the security to the entire campus. The security personnel monitor the movements in the campus round the clock. CCTV cameras have been installed in main places like entrance gate, library, auditorium, office, etc., for the safety of the students. The security guards near the entrance physically check the vehicles and belongings during entries to the campus and exit from the campus. The college has been fenced with concrete wall to protect any intrusion to the campus from outside. One of the main objectives of the institution is to promote education that would be sensitive to the needs of the various sections of society with special emphasis on gender equality and gender sensitivity. Students of both the genders are given equal opportunities to develop into responsible citizens of the future. The institution constantly makes efforts to maintain gender balance among the faculty members and students. Departments headed by men and women are equally balanced. Female Teaching and non-teaching faculty members are equal in number with the other gender. Similarly administrative and housekeeping departments equal with the male and female counterparts.

File Description	Documents
Annual gender sensitization action plan	http://mahendracollege.com/AQAR/AQAR%202021- 2022/7.1.1-PROOF_1.pdf
Specific facilities provided for women in terms of:a. Safety and security b. Counseling c. Common Rooms d. Day care center for young children e. Any other relevant information	http://mahendracollege.com/AQAR/AQAR%202021- 2022/7.1.1-PROOF 2.pdf

7.1.2 - The Institution has facilities for	Α.	4	or	All	of	the	above
alternate sources of energy and energy							
conservation measures Solar energy							
<b>Biogas plant Wheeling to the Grid Sensor-</b>							
based energy conservation Use of LED bulbs/							
power efficient equipment							

File Description	Documents		
Geo tagged Photographs	<u>View File</u>		
Any other relevant information	<u>View File</u>		

7.1.3 - Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 200 words) Solid waste management Liquid waste management Biomedical waste management E-waste management Waste recycling system Hazardous chemicals and radioactive waste management

To reduce waste in the institution, students and staff are educated on proper waste management practices through lectures, advertisement on notice boards, displaying slogan boards in the campus. The total

solid waste collected in the campus is around 15 Kg/day on an average from food wastes tree leaves, paper cups, waste paper etc. The waste is segregated at source by providing separate dustbins for Bio-degradable and non-bio-degradable solid wastes. Food waste in the canteen is monitored and displayed to the students using a white board just to create an awareness on wastage done. This could help the students to avoid consciously the wastage of food.Solid waste is collected and given to the vendor at regular intervals. Metal and wooden waste is stored and given to authorized scrap agents for further processing. Glass bottles are reused in the laboratories. Sanitary napkins are disposed of using incineration process through the incinerators kept at ladies toilets. Sewage from the rest rooms are allowed to collect in the septic tanks and the clear effluent from the septic tanks is allowed in the soak pits, where is is absorbed by the surrounding soil. The campus has centralized facility to collect e-waste from the laboratories through housekeeping personnel.

File Description	Documents			
Relevant documents like agreements / MoUs with Government and other approved agencies		<u>View File</u>		
Geo tagged photographs of the facilities		<u>View File</u>		
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			
Geo tagged photographs / videos of the facilities		<u>View File</u>		
Any other relevant information	<u>View File</u>			
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		
greening the campus are as follo				

2. Use of bicycles/ Battery-powered

of the above

# vehicles<br/>3. Pedestrian-friendly pathways<br/>4. Ban on use of plastic<br/>5. LandscapingHerein and a state of the state

facilities		
Various policy documents / decisions circulated for implementation	<u>View File</u>	
Any other relevant documents	<u>View File</u>	

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

7.1.6.1 - The institutional environment and	Α.	Any	4	or	all	
energy initiatives are confirmed through the following 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	<u>View File</u>

7.1.7 - The Institution has disabled-friendly, barrier free environment Built environment with ramps/lifts for easy access to classrooms.
Disabled-friendly washrooms Signage including tactile path, lights, display boards and signposts Assistive technology and facilities for persons with disabilities
(Divyangjan) accessible website, screen-reading software, mechanized equipment 5.
Provision for enquiry and information :
Human assistance, reader, scribe, soft copies of

reading material, screen	reading	
File Description	Documents	
Geo tagged photographs / videos of the facilities		<u>View File</u>
Policy documents and information brochures on the support to be provided		<u>View File</u>
Details of the Software procured for providing the assistance		<u>View File</u>
Any other relevant information		<u>View File</u>

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

Serving the neighbourhood community is a critical component of a socially responsible institution and Mahendra College of Engineering (MCE) is committed to social responsibilities. The Institution encourages promotion of community services through setting up various forums and cells to guide the students in these directions. The National Service Scheme (NSS) Unit, National Cadet Corps (NCC) Unit and Youth Red Cross (YRC) Unit of MCE has become an important tool in sensitizing students and ensuring their direct participation in various social activities in and around Salem, which is improving the skills of students individually and towards leadership aspects. All these activities tend to increase the student'stolerance and harmony towards cultural, regional, linguistic, communal, socioeconomic and other diversities. All the students combine for these tasks as a team and they also do the service for the people in the society of different regions with different cultural linguistic communal and socio-economic backgrounds. These activities help them to understand the people of different origin and be sensitive towards their needs and have a feeling of empathy towards the fellow students and also the people of the society.NSShelps the student to grow not only as individuals but also as a team.Volunteering for various tasks under NSS activities allows students to become confident, develop leadership skills, and learn about different people from different walks of life.

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

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

A course on human values and professional ethics is offered in the Curriculum for all the branch of engineering students. The students are being inculcated with the knowledge on human values like moral values, integrity and ethics. Students are being encouraged and motivated to be honest in their professional career. The course also stresses the role of engineers as a responsible experimenter with proper code of ethics with a balanced outlook on law. The students are being given regular programs with motivational speakers and have been brainstormed with the value rights and duties of being a responsible citizen of the country. Leaders of the institution give an awareness on values rights duties and responsibilities of citizens. During the voter's day celebrations, the students are educated on the importance of voting. National constitution day of the country is celebrated by the students and faculty members of MCE to help them understand the duties and responsibilities of being a good citizen of the country.

File Description	Documents
Details of activities that inculcate values; necessary to render students in to responsible citizens	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/7.1.9-Index.pdf
Any other relevant information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/7.1.9-Index.pdf
7.1.10 - The Institution has a pre- of conduct for students, teachers administrators and other staff an periodic programmes in this rega of Conduct is displayed on the w a committee to monitor adherence of Conduct Institution organizes ethics programmes for students,	, nd conducts ard. The Code ebsite There is ce to the Code professional

## teachers, administrators and other staff4.Annual awareness programmes on Code ofConduct are organized

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 programs etc., in support of the claims	<u>View File</u>
Any other relevant information	<u>View File</u>

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

The institute celebrates/organizes national and international commemorative days, events and festivals to inculcate the feeling of oneness and help the students realize their collective responsibility towards the society which includes the environment as well. They are given awareness on the utilization of the various resources of the environment properly so that they can be used for the future generations as well. There are many Events/Days celebrated during 2021-22 for the benefit of the students. Every National festival of India is celebrated with patriotism and great zeal. National Festivals are a national treasure that revives our spiritual values and deep-rooted sentiments and unites us to celebrate with pride. They remind us about the sacrifice of the national leaders and freedom fighters. International days and other technology day celebrations cultivates the feeling of responsible engineers and their needs and responsibilities for the society. Also, the celebration days involves events that are centred with the help of students. This organising and conduction of the events helps them develop the innate abilities strength, confidence, ability to work in team, to be sensitive towards others feelings to have empathy, to develop mutual respect and love towards the other fellow students. In general, these events help a lot in personality development of the student who is about to shape himself as a better engineer in the near future.

File Description	Documents
Annual report of the celebrations and commemorative events for the last (During the year)	<u>View File</u>
Geo tagged photographs of some of the events	<u>View File</u>
Any other relevant information	<u>View File</u>

#### 7.2 - Best Practices

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

PRACTICE- I: KNOWLEDGE SHARING FORUM FOR IDEA TANK, INNOVATION AND PATENTS.

Faculty will give their technical presentations to collegue. Recent technological developments can be selected. Topic may include journals of particular domain, patent laws, patent drafting for beginners. End of the session there will be a feedback to evaluate the understanding of the presentation. It keeps the faculty members updated on current trends related to innovation, Research and patents in the field of Science, Engineering and Technology. It facilitates knowledge transfer on other engineering branches of study. It increases the interaction level of the faculty of multipledisciplines under a common forum. Confidence level of the staff members will increase. creates a competitive environment among the staff to make better presentations. Allocation of time for all the faculty on a regular basis was a major problem encountered.

PRACTICE- II: RECORDED VIDEO LECTURES BY FACULTY

Faculty will give their recorded lectures under difficult topics and it will be uploaded in the systems present in library. Students can come to library and see and hear the video lectures when they are free. Confidence level of the students will improve. Through this event, the areas of interest of the faculty member who presented their topics are also well exhibited and their strengths can be well utilized. Faculty can view their own video presentations and can improve it regularly and can make it a better version of themselves. Information on Video Lectures Sample on the college website@:https:/ /mahendracollege.com/downloads/bestpractices%20Gallery.pdf

File I	Description	Documents
Best webs	practices in the Institutional site	http://www.mahendracollege.com/bestpractices .php?facilities&bestpractices
Any	other relevant information	http://www.mahendracollege.com/AQAR/AQAR%202 021-2022/7.2.1-Index.pdf

#### 7.3 - Institutional Distinctiveness

7.3.1 - Portray the performance of the Institution in one area distinctive to its priority and thrust within 200 words

MAHENDRA EQUIP 360° is a distinctive quality practice followed in the Institution to bring out 360° growth in every student. The slow learners will be given with additional coaching with the extra care to elevate as advanced learners. All the advanced learners will undergo a practical enriched training program in core Industries for 360 hours.

The process for this program is as follows:

1. Department will have the panel of industries for this program.

2. MoU will be signed by the Department with the Industries.

3. Students can also choose research organizations and Government laboratories for the training in addition to the industries.

4. Students will be allotted a Particular Industry for the training in every semester at least for 60 hours to the maximum of 90 hours.

5. The students shall report the type and progress of the training to the guide in regular intervals and seek his/her advice.

6. This will be practiced from third semester to seventh semester to cover 360 hours of training. Successful completion of training will yield certification from both Institute and Industry.

The students will get the opportunity to do their final year project in the industry where they trained. The Department shall nominate staff member(s) to facilitate, guide and supervise students under this scheme. The outcome of this programme will create industry ready Engineers with appropriate skill set and will pave a path for job opportunities in the industry where they trained.

File Description	Documents
Appropriate web in the Institutional website	<u>View File</u>
Any other relevant information	<u>View File</u>

7.3.2 - Plan of action for the next academic year

- To secure at least one university rank.
- To achieve at least 90% placement for the eligible students.
- To registermore than5 patents.
- To motivate and ensure at least 30% of the faculty to publish research papers in reputed journals
- To secure at least 2 funded projects through Government schemes.
- To conduct a minimum of 20 programs with Industry Collaboration.
- To Prepare at least 10% of students for Competitive exams (GATE, UPSC, etc).
- To focus on students admissionsfor UG, PG, Ph.D programme from other states.
- To focus more on faculty quality enhancement and faculty retention.
- To establish more numbers of Centers of Excellence.
- To achieve higher levels of Accreditation and ranking (NBA, NAAC, NIRF, ARIIA) from recognized government bodies and there by increasing the status quo of the institution.
- To focus more on achievement in Sports, Cultural activities and Infrastructural development to bring the institution on par with international standards.