

ANNUAL QUALITY ASSURANCE REPORT

National Assessment and Accreditation Council (NAAC)

Submitted by:



MAHENDRA ENGINEERING COLLEGE

(Autonomous)

Mahendrapuri, Mallasamudram (West),

Tiruchengode (Taluk),

Namakkal District,

Tamilnadu – 637 503.

17th February 2016

The Annual Quality Assurance Report (AQAR) of the IQAC

(July 1, 2014- June 30 2015)

Part – A

I. Details of the Institution

1.1 Name of the Institution

1.2 Address Line 1

Address Line 2

City/Town

State

Pin Code

Institution e-mail address info@mahendrainstitutions.com"/>

Contact Nos.

Name of the Head of the Institution:

Tel. No. with STD Code:

Mobile:

Name of the IQAC Co-ordinator:

Mobile:

Mahendra En

IQAC e-mail address:

1.3 NAAC Track ID (For ex. MHCOGN 18879) TNCOGN18572

OR

1.4 NAAC Executive Committee No. & Date:
(For Example EC/32/A&A/143 dated 3-5-2004.
This EC no. is available in the right corner- bottom
of your institution's Accreditation Certificate)

EC (SC)/02/A & A/130 DATED: 10/07/2014

1.5 Website address:

www.mahendra.info

Web-link of the AQAR:

<http://www.mahendra.info/aqar2014-2015.doc>

For ex. <http://www.ladykeanecollege.edu.in/AQAR2012-13.doc>

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 st Cycle	A	3.06	2014	2014-2019
2	2 nd Cycle				
3	3 rd Cycle				
4	4 th Cycle				

1.7 Date of Establishment of IQAC: DD/MM/YYYY

01/11/2012

1.8 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC ((for example AQAR 2010-11 submitted to NAAC on 12-10-2011))

1.9 Institutional Status

University State Central Deemed Private

Affiliated College Yes No

Constituent College Yes No

Autonomous college of UGC Yes No

Regulatory Agency approved Institution Yes No

(eg. AICTE, BCI, MCI, PCI, NCI)

Type of Institution Co-education Men Women

Urban Rural Tribal

Financial Status Grant-in-aid UGC 2(f) UGC 12B

Grant-in-aid + Self Financing Totally Self-financing

1.10 Type of Faculty/Programme

Arts Science Commerce Law PEI (Phys Edu)

TEI (Edu) Engineering Health Science Management

Others (Specify)

MCA & MBA

1.11 Name of the Affiliating University (*for the Colleges*)

ANNA UNIVERSITY, CHENNAI

1.12 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University YES

University with Potential for Excellence - UGC-CPE -

DST Star Scheme - UGC-CE -

UGC-Special Assistance Programme - DST-FIST YES

UGC-Innovative PG programmes

-

Any other (*Specify*)

-

UGC-COP Programmes

-

2. IQAC Composition and Activities

2.1 No. of Teachers

8

2.2 No. of Administrative/Technical staff

2

2.3 No. of students

2

2.4 No. of Management representatives

1

2.5 No. of Alumni

2

2.6 No. of any other stakeholder and

2

Community representatives

2.7 No. of Employers/ Industrialists

2

2.8 No. of other External Experts

2.9 Total No. of members

19

2.10 No. of IQAC meetings held

2

2.11 No. of meetings with various stakeholders:

No.

2

Faculty

12

Non-Teaching Staff Students

2

Alumni

18

Others

-

2.12 Has IQAC received any funding from UGC during the year?

Yes

No

If yes, mention the amount

-

2.13 Seminars and Conferences (only quality related)

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

-

Mahendra Engineering

College,

(Autonomous),

Name

Post. TN

-

1

Total Nos. International National State Institution Level

(ii) Themes

Quality Assurance

2.14 Significant Activities and contributions made by IQAC

- In order to conduct academic audit, a core committee comprising the Managing Director, the Principal, IQAC coordinator & Dean was constituted. The academic audit was held from Nov 2014-Dec 2014. The significant activities and contributions made by IQAC are as follows.
- The institution have been motivated to conducted and share the faculties knowledge by faculties for the faculties in the name of “TASKS –Teacher Acclaimed Skills for Knowledge Sharing for teachers” (Theme: “**by the TEACHERS for the TEACHERS**”) totally 75 programs were conducted during this period.
- To understand the basics and fundamental concepts of critical subjects which was identified by the students, the institution was also conducted 40 programmes in the name of “**Faculty Deeper Learning Program**” (FDLP).
- To create innovative thinking and technical talent to the students, the institution has conducting innovative contest in the name of “**MAGIC – Mahendra underGraduate Innovation Contest**” for all branches Circuit and Non-Circuit Braches.

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year *

Plan of Action	Achievements
<ul style="list-style-type: none"> ➤ Admission – all the seats are to be filled up ➤ To establish centre of excellence for each department ➤ To become top 10 college in Tamil Nadu. 	<ul style="list-style-type: none"> ➤ All the seats in Government Quota and self financing stream were filled up. ➤ 9 centre of excellence were established. ➤ The Competition Success Review-2014 has ranked our college as 10th among all Engineering Colleges in TamilNadu and also ranked as the 12th among the

<p>➤ To impart and provide Industry based education</p> <p>➤ Best Innovative practice : Mahendra- a Step ahead</p>	<p>promising Engineering Colleges of Excellence.</p> <p>➤ An "Innovative Campus Award" for encouraging students to submit more number of project submissions highlighting the importance of research and innovation by International Society for Scientific Research & Development, Bangalore (ISSRD).</p> <p>➤ The campus study environment is different and also to feel the difference in academia. The institution is conducting many programmes to enrich the students knowledge to make them world class Engineer, such as.</p> <ul style="list-style-type: none"> • Mahendra International Lecture Series (MILeS) • Mahendra Alumni Lecture Series (MAILS) • Teachers Acclaimed Seminar for Knowledge Sharing (TASKS) • Faculty Academic Contribution towards Excellence (FACE) • Mahendra Undergraduate Innovation Contest (MAGIC)
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** Attach the Academic Calendar of the year as Annexure.*

Plan of Action	Achievements
<p>➤ Plan to establish Technology Learning Center.</p> <p>➤ Plan to launch digital library</p> <p>➤ To create Structural Engineering Laboratory for R&D purpose</p>	<p>➤ Established 5 numbers of Technology Learning Centres</p> <p>➤ Established digital library</p> <p>➤ Created Structural Engineering Laboratory</p>

2.15 Whether the AQAR was placed in statutory body Yes No

Management Syndicate Any other body

Provide the details of the action taken

- To strengthen industrial knowledge of students, Nine (9) centre of excellence were established and students were trained in practical methods.
- Soft skill training and skill based training were conducted for all the students.
- MAGIC (Mahendra Undergraduate Innovation Contest) were Organized and cash prize was awarded to first three best projects in Civil, Mechanical, Computer and Circuit stream.
- Student's projects were carried out at HAL, L&T, TVS, and many reputed companies.
- Various skill development and knowledge enhancing program like Mahendra Alumni Lecture Series (MAILS), Teachers Acclaimed Seminar for Knowledge Sharing (TASKS), Faculty Academic Contribution towards Excellence (FACE), Faculty Deeper Learning Program (FDLP) were conducted.
- Organized various IIT workshops and seminars
- Mahendra Alumni students were sponsored around 12 lakhs for the present students those financially poor.
- Alumni meet was conducted at Chennai and Bangalore in the month of January 2014 and December 2014 respectively. Through meet some of the Alumni students offered placements and trainings to pursuing students.

PART-B

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	4	-	4	-
PG	11	-	11	2
UG	11	-	11	9
PG Diploma	-	-	-	-
Advanced Diploma	-	-	-	-
Diploma	-	-	-	-
Certificate	-	-	-	4
Others	-	-	-	-
Total	26	-	26	15

Interdisciplinary	1		1	
Innovative	-	-	-	-

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options

(ii) Pattern of programmes:

	Number of programmes
Semester	22
Trimester	-
Annual	-

1.3 Feedback from stakeholders* Alumni Parents Employers Students
(On all aspects)

Mode of feedback : Online Manual Co-operating schools (for PEI)

**Please provide an analysis of the feedback in the Annexure*

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

- Revision was made in Autonomous R-2015 curriculum and syllabus to make Industry ready graduates. Also Choice based credit system was introduced from the academic year 2015-16.
- In Autonomous Regulation 2013, restructured the curriculum and syllabus as per the recent trends.

1.5 Any new Department/Centre introduced during the year. If yes, give details.

- B.E Agriculture Engineering course was approved by AICTE and affiliated with ANNA University
- M.E Construction Engineering course was approved by AICTE.
- M.E Manufacturing Engineering course was approved by AICTE.
- MSME Center of excellence “**Product Development Center**” was established on 11th April 2015.
- DANFOSS training center was established.
- WIPRO MISSION 10X training center was established.
- Soft Skill Training cell was established.
- Structuring Engineering R&D laboratory was established.

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty	Total	Asst. Professors	Associate Professors	Professors	Others
	272	178	22	7	65

2.2 No. of permanent faculty with Ph.D.

26

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
25	-	-	-	-	-	-	-	-	-

2.4 No. of Guest and Visiting faculty and Temporary faculty

24

1

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	22	62	23
Presented papers	59	85	21
Resource Persons	3	17	22

2.6 Innovative processes adopted by the institution in Teaching and Learning:

The institution has introduced many innovative methods in teaching and learning process like industrial co-Teaching, Web enabled learning, soft copy of learning materials uploaded in all students Tablet-PC's.

Having MoU with Wipro Learning Form and conducted a programme such as Mission10X. Established totally Nine (9) Centre of excellence in the institution, also signed MoU with L&T Form work and Harita - TVS.

2.7 Total No. of actual teaching days

180

During this academic year

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions)

Double Valuation

2.9 No. of faculty members involved in curriculum Restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop

30	40	13
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2.10 Average percentage of attendance of students

87%

2.11 Course/Programme wise distribution of pass percentage:

UG	Pass %	PG	Pass %
EEE	69	ME(Communication System)	87
ECE	63	ME(VLSI)	70
EIE	48	ME(Control Systems)	92
CSE	62	M.E (CAD)	94
IT	41	M.E(CSE)	94
CIVIL	63	M.E.(CN)	72
MECH	72	MBA	85
MECH&AUTO	86	MCA	80
MCT	65	M.E(Structural)	90
AERO	40	M.E (CM)	76
AGRI	75	M.E (MF)	85

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

- By conducting academic quality audit through interaction with department and its documents.
- By suggesting the conduct of remedial actions towards academics.
- Optimization and integration of modern methods of teaching and learning that improves the academic quality culture.
- To develop a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the institution. To promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices.

- To get feedback from the students.

Strategies IQAC shall evolve mechanisms and procedures for,

- Ensuring timely, efficient and progressive performance of academic, administrative and financial tasks;
- The relevance and quality of academic and research programmes;
- Equitable access to and affordability of academic programmes for various sections of society; d) Optimization and integration of modern methods of teaching and learning;
- The credibility of evaluation procedures;
- Ensuring the adequacy, maintenance and proper allocation of support structure and services;
- Sharing of research findings and networking with other institutions in India and abroad.

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher courses	69
UGC – Faculty Improvement Programme	29
HRD programmes	07
Orientation programmes	26
Faculty exchange programme	38
Staff training conducted by the university	07
Staff training conducted by other institutions	50
Summer / Winter schools, Workshops, etc.	76
Others	71

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	67	-	-	-
Technical Staff	38	-	-	-

Criterion – III**3. Research, Consultancy and Extension****3. Research, Consultancy and Extension**

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

- Mahendra-TVS Harita- Center for Research on Product Development and Manufacturing Technologies” was established on March 2014.
- Mahendra Educational Institutions, signed Memorandum of Understanding (MoU) on 11th April 2015 with Micro, Small and Medium Enterprise (MSME), Government of India and Bypro Technologies, Chennai to establish Professional Development center.
- Received IE (I) grant for R&D project entitled: Production of Biogas from Agro Industrial wastes in the month of June 2015.
- Department of chemistry has got approval for R & D Center from Anna University, Chennai.
- Department of Mechanical Engineering has signed MOU with Maaruti coach builders (P) Ltd., Karur on 26th May, 2015.
- Patent filed - Hybrid Ash Bricks, (5075/CHE/2014), Hybrid Ash Aggregate Concrete (5727/CHE/2014), Building Health Monitoring Device (5728/CHE/2014)
- For improving the research activity, Civil department has tie-up with Indian Concrete Institute which promotes research in the department
- In addition that to expose the research knowledge and also to compete with international standard Civil Engineering Department invited Dr.S.Neelamani, senior principal scientist, Programme manager, Kuwait research institute Kuwait (UAE) to the Campus to give address to the faculties and students.
- Department of Civil Engineering signed MoU with All India Federation of Civil Engineering Association, Tamil Nadu and RR Construction and Dimensions.

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	-	-	-	-
Outlay in Rs. Lakhs	-	-	-	-

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	-	1	-	-
Outlay in Rs. Lakhs	-	0.15	-	-

3.4 Details on research publications

	International	National	Others
Peer Review Journals	93	18	-
Non-Peer Review Journals	31	3	-
e-Journals	3	1	-
Conference proceedings	55	30	-

3.5 Details on Impact factor of publications:

Range Average h-index Nos. in SCOPUS

3.6 Research funds sanctioned and received from various funding agencies, industry and other organizations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	-	--	-	-
Minor Projects	2014-15	IE (I)	15000	15000
Interdisciplinary Projects	-	-	-	-
Industry sponsored	-	-	-	-
Projects sponsored by the University/ College	-	-	-	-
Students research projects <i>(other than compulsory by the University)</i>	-	-	-	-
Any other(Specify)	2014-15	ICTACT-EDC	100000	100000
	2014-15	TNST	1200000	12,00,000
Total	-	-	13,15000	13,15,000

3.7 No. of books published i) With ISBN No. Chapters in Edited Books

ii) Without ISBN No.

3.8 No. of University Departments receiving funds from

UGC-SAP	<input type="text" value="-"/>	CAS	<input type="text" value="-"/>	DST-FIST	<input type="text" value="-"/>
DPE	<input type="text" value="-"/>			DBT Scheme/funds	<input type="text" value="-"/>

3.9 For colleges

Autonomy	<input checked="" type="checkbox"/>	CPE	<input type="text" value="-"/>	DBT Star Scheme	<input type="text" value="-"/>
INSPIRE	<input type="text" value="-"/>	CE	<input type="text" value="-"/>	Any Other (specify)	<input type="text" value="-"/>

3.10 Revenue generated through consultancy

3.11 No. of conferences

organized by the Institution

Level	International	National	State	University	College
Number	3	1			
Sponsoring agencies	MEC	MEC			

3.12 No. of faculty served as experts, chairpersons or resource persons

3.13 No. of collaborations

International

National

Any other

3.14 No. of linkages created during this year

3.15 Total budget for research for current year in lakhs :

From Funding agency

From Management of University/College

Total

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	3
	Granted	-
International	Applied	-
	Granted	-
Commercialised	Applied	-
	Granted	-

3.17 No. of research awards/ recognitions received by faculty and research fellows
Of the institute in the year

Total	International	National	State	University	Dist	College
5		1		4		

3.18 No. of faculty from the Institution

who are Ph. D. Guides

and students registered under them

3.19 No. of Ph.D. awarded by faculty from the Institution

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF SRF Project Fellows Any other

3.21 No. of students Participated in NSS events:

University level State level

National level International level

3.22 No. of students participated in NCC events:

University level State level

National level International level

3.23 No. of Awards won in NSS:

University level State level

National level International level

3.24 No. of Awards won in NCC:

University level State level

National level International level

3.25 No. of Extension activities organized

University forum	<input type="text" value="-"/>	College forum	<input type="text" value="10"/>		
NCC	<input type="text" value="2"/>	NSS	<input type="text" value="2"/>	Any other	<input type="text" value="-"/>

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

1. Youth Awakening Day Celebrated on November 14 & 15 2015 at MEC
2. 15 NCC Cadets participated in Combined Annual Training Camp at KSR College of Technology, Tiruchengode during 04.07.2014 and 14.07.2014.
3. NCC Cadet participated in National Integration Camp at Darjeeling from 08.12.2014 to 19.12.2014.
4. Through macro-miracle club students visited rural based schools and render the service in April 2015.
5. Visited the schools to teach the science in practical way in the topic of "Explore the science" during March 2015.
6. NSS students conducted the blood donation camp on 16th March 2015.
7. Awareness on eye donation and Dental camp was held on May 2015.
8. Awareness program on study at abroad for all students was conducted on April 2015.
9. Awareness Programme on "Health Care" was conducted on 31st Jan 2015.
10. Blood Donation camp organized on 7th October 2015 at MEC

Criterion – IV**4. Infrastructure and Learning Resources****4.1 Details of increase in infrastructure facilities:**

The campus area is 20.55 acre. The buildings, furniture and equipments are put to optimum use and are available for teaching-learning process and evaluation, co-curricular, extra-curricular, research and extension activities.

Facilities	Existing	Newly Created	Source of Fund	Total
Campus Area	20.55 acre	-		
Class Rooms (Sq.m)	5282.00	253.00		
Laboratories (Sq.m)	7507.00	1050.00		

Seminar Halls(Sq.m)	2556.00	500.00		
No. of important equipments purchased (\geq 1-0lakh during the current year)		8		
Value of the equipments purchased during the year(Rs.in Lakhs)		4,099,863		

4.2 Computerization of administration and library:

A system engineer is appointed for the maintenance of the computers and its accessories. If any Problem arises in any of the computers, it is entered in a complaint slip and handed over to the Director of Computer Centre. Every day the system engineer goes through the complaint slip and takes necessary steps to maintain the instruments in good condition. Periodical pest control Measures are taken to maintain books and journals in the library in good condition.

- The library provides open access to staff and students.
- At the beginning of every semester, the Librarian addresses the students, explaining the
- Methods of using the library resources.
- Auto Lib software facilitates the borrowing and issue of books quickly.
- Journals and magazines are kept in open racks.
- The librarian and five library assistants ensure the use and security of resources in the Library. CC TV has been established in the library for security purpose.

4.3 Library services:

The college library has raised its resources up to 110,000 volumes .22214 new books and 227journals/magazines have been added to the existing resources in the Library. In order to enhance the resources in e-library, 550 new CDs and DVDs were purchased and added to the e-collection. DELNET service & Auto Lib software facilitates the borrowing and issue of books quickly.

4.4 Technology up gradation (overall)


	Total Computers	Computer Labs	Internet	Browsing Centers	Computer Centers	Office	Departments
Existing	1200	12	16	2	1	15	25

	Existing(1995- 2014)		Newly added 2014-15		Total		
	No.	Value	No.	Value	No.	Value	
Text Books	77886	34123600	22214	4500000	100100	38623600	
Reference Books	12922	566750	5050	700700	17922	1267450	
Journals	1114	2228000	227	513203	1341	2741203	
E – Resources (Delnet,IEEE,IEC etc.,)	5650	709672	1100	11500	6750	721172	
CD & Video	4123	92750	550	8025	4673	100775	
Added	60	1	4				
Total	1260	13	20	2	1	15	25

4.5 Computer, Internet access, training to teachers and students and any other programme for technology up gradation (Networking, e-Governance etc.)

- Every department has been provided with computers, LCD and internet system.
- Expansion of E-technology has enhanced the use of computers in curriculum development, teaching-learning, evaluation and research.
- Students are encouraged to make use of computers for Power Point Presentations of their seminars and projects.
- Broadband internet connectivity is given to all the departments. Internet browsing is available for teachers and students at the Internet Centre free of cost during the working hours of the library.

4.6 Amount spent on maintenance in lakhs:

i) ICT	11, 00,000
ii) Campus Infrastructure and facilities	
iii) Equipments	40, 99,863
Total	51, 99,863

Criterion – V**5. Student Support and Progression****5.1 CONTRIBUTION OF IQAC IN ENHANCING AWARENESS ABOUT STUDENT****SUPPORT SERVICES**

- ❖ IQAC helped the Student Service Centre to establish Reception counter for providing information to visitors and students, Xerox facility and Phone facility.
- ❖ Besides the Student Service Centre, a Co-operative Store, maintained by the Dept. of Commerce caters to the needs of students.
- ❖ Financial assistance extended to economically weaker students and personal counseling given by Counsellors and Teachers minimize the dropout rate in the college.
- ❖ Add-on courses for development of soft skills were offered.
- ❖ Mock Interviews were conducted at the departmental level.
- ❖ The institution publishes its updated prospectus and handbooks annually. The information content is disseminated to students at the beginning of every academic year.
- ❖ During Bridge Course, The IQAC Co-ordinator explains the salient aspects of the Choice Based Credit System.
- ❖ The Director of STAND and the Co-ordinators of extension service organizations explain the benefits of performing extension activities. The Heads of Department explain the course material and question pattern.
- ❖ Providing the information regarding various scholarships available and directing and encouraging students to avail it.

5.2 EFFORTS MADE BY THE INSTITUTION FOR TRACKING THE PROGRESSION

- ❖ The placement training programmes has been given to the students each semester and arranging the placement by providing various reputed companies.
- ❖ Our institution is conduction various technical related programmes for the enhancement for the students knowledge and skill in all aspects.
- ❖ Each and every student is motivated through the mentor and the mentor will encourage the students to participate in all the co curricular and extracurricular activities.
- ❖ Every department maintains the register file for an individual student.
- ❖ Add-on courses help students get employment opportunities.
- ❖ Tutors in the Tutor--Ward system and Counsellors provide necessary guidance to
- ❖ students in the choice of their career.
- ❖ The Alumni/ae Association maintains consistent correspondence with alumni/ae.
- ❖ Faculty advisors will provide necessary guidance to students in the choice of their career.
- ❖ Internal assessment tests and university examination results.
- ❖ Feedback from the students, Parents and alumni were collected and maintained regularly.

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
3138	376	-	-

(b) No. of students outside the state

252

(c) No. of international students

NIL

Men	No	%	Women	No	%
	2495	79.78		632	20.21

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OB C	Physically Challenged	Total
2874	224	25	193	NIL	3316	2667	275	6	179	NIL	3127

Demand ratio : 72.5 %

Dropout: 16.55 %

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

- ❖ Orientation Programmes for writing examinations such as GATE, GRE and TOEFL were organized by Entrepreneurship Development and Research Cell (ED & RC)
- ❖ Coaching classes for competitive examinations were arranged by SST.

No. of students beneficiaries

35

5.5 No. of students qualified in these examinations

NET	<input type="text"/>	ET/SLET	<input type="text"/>	GATE	<input type="text" value="1"/>	CAT	<input type="text"/>
IAS/IPS etc	<input type="text"/>	State PSC	<input type="text"/>	UPSC	<input type="text"/>	Others	<input type="text" value="3"/>

5.6 Details of student counselling and career guidance

- ❖ The Placement Cell is continuing its activities to guide the students towards meaningful jobs as the logical corollary to their educational pursuits.
- ❖ It is very gratifying to record that many students get employment after the completion of their studies on their own efforts.
- ❖ Efforts to propagate the idea of the need for training oneself for employment, honing one's skills and acquiring additional skills, especially communication skills, are the key activities of the Career Guidance and Placement Cell. In addition, the following are the initiatives during this academic year.

CAREER GUIDANCE :

- ❖ In this institution arrange the career counseling for all the first year students to begin by understanding the professional profile better by assessing your education, interests, values and personality.
- ❖ Career guidance consists of the services which will be helpful to the people successfully manage their future.
- ❖ Keeping in view the aims and objectives of guidance and counseling programme to develop the knowledge, skills and attitude necessary to:
 - Self understanding

- Development of potentialities
- Development of interest,
- Problem solving, decision making
- Interpersonal relationship
- Setting goals educational, career, personal
- Information seeking

COUNSELING:

- ❖ Counseling focuses on student's growth and adjustment and promotes problem solving and decision making.
- ❖ It is generally provided to individual students as per the requirement. However, sometimes a small group of students having similar concern are provided group counseling.
- ❖ Counsellor will ensure your targets are realistic and will help you to look for jobs that suit your expectations.

The Academic domain focuses on

- ❖ Improving study skills
- ❖ Improving attendance
- ❖ Identifying and addressing barriers to academic learning (such as issues and problem related to attendance, discipline, health, family, peer pressure, language, barriers, learning disabilities, educational gaps, unsafe school environment, lack of interest, anxiety).
- ❖ Motivation to learn
- ❖ Establishing purpose to the learning process

No. of students benefitted

185

5.7 Details of campus placement

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
39	2485	56	87

5.8 Details of gender sensitization programmes

- ❖ In our College Women Empowerment Cell (WEC) organized a awareness programme on “**Women’s Health Issues**” on 31th January 2015.
- ❖ The special invitee **Dr. V. Dhavashree** Obstetrician & Gynaecologist, SKS Hospital (P)Ltd., Salem ,she gave suggestions and tips on women’s health. Our women students and staff members are get more awareness in hers health’s.
- ❖ International Women’s Day was celebrated in a grand manner on 10th March 2015. The special chief guest **Mrs.Vidya.D.Kularani**, Deputy Inspector General of Police, Salem range.
- ❖ **Dr. S. Umamaheswari** was the coordinator of Women Empowerment cell (WEC).

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

State/ University level National level International level
 Zone level

No. of students participated in cultural events

State/ University level National level International level

5.9.2 No. of medals /awards won by students in Sports, Games and other events

Sports: State/ University level National level International level
 Zone level

Cultural: State/ University level National level International level

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution		

Financial support from government		
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5.11 Student organised / initiatives

Fairs	: State/ University level	<input type="text" value="4"/>	National level	<input type="text" value="1"/>	International level	<input type="text" value="0"/>
Exhibition:	State/ University level	<input type="text" value="0"/>	National level	<input type="text" value="4"/>	International level	<input type="text" value="0"/>

5.12 No. of social initiatives undertaken by the students

5.13 Major grievances of students (if any)

1. Students wanted permission to use computer lab after college timings & Saturdays.
2. Students wanted permission to use Digital Library after college timings & Saturdays.
3. Hostel students wanted to change to the menu and timing in the hostel mess.
4. Provide 24 hours water circulation in college as well as hostel.
5. Provide adequate dustbins in college.
6. Inform available medical centre timings to us.
7. Provide projector facility for seminar classes.
8. Provide Library hour to use library daily (i.e library hour to be added in the timetable).

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision

Education is a continuous process and Mahendra Engineering College will remain in the forefront and will strive to provide quality education coupled with the latest in infrastructure facilities, which will leave a long lasting impression in the minds and hearts of all the students, parents, staff and dignitaries who have been fortunate enough to be associated with it and have passed through the portals of this Temple of Learning

Mission

- To engage its resources towards service and upliftment of the underprivileged rural population
- To provide excellent infrastructure facilities in terms of well equipped Laboratories, well stacked Library etc., that match with similar facilities available in developed urban areas
- To ensure conducive and equal opportunities to all students enabling them to acquire knowledge and skill of international standards
- To motivate academic faculty to meet the ever increasing challenges in the era of liberalization, privatization, globalization and to provide quality education to its students
- To offer all-round education by making it learner centered, provide continuous education to all students with necessary skills and specializations that would match with the needs of the industry sector and of relevance in the global market
- To provide all the necessary inputs to its students to enable them meet the challenges with courage and fortitude and the changing needs of the society
- To transform students who enter this “**Temple of Learning**”, into motivated and, matured professionals, and above all, humane and responsible citizens of our country

6.2 Does the Institution has a management Information System

YES

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development

Curriculum Development

- ✓ Curriculum under Choice Based Credit System enables the Placement Cell to conduct Placement training so as to help students for acquiring the necessary soft skills for employment.
- ✓ The Choice Based Credit System followed at present in the college facilitates a flexible and wide range of selection for students
- ✓ The Communication and Soft Skill Based Elective courses are available to students irrespective of their major subjects.

6.3.2 Teaching and Learning

- Practical representation of subject teaching
- In-basket training methodology for UG & PG students enables them to acquire the expectation needed by the corporate trend,
- Meaningful learning is initiated through guided teaching and guided library assignments, group discussion, seminars, debates, quiz, viva, etc.
- Focusing on research the college initiated research tasks for the students as a part of extra-curricular activity through project work, on-the-spot study, and survey.
- Digital content was uploaded in Digital repository system. Students can download the Digital content.
- Apart from convention teaching methods NPTEL, Video Lectures were put into practice.
- In-Plant training and Industrial visits were arranged.
- Augmented topics for all subjects were taken.
- To improve the practical knowledge of the students, Mahendra underGraduate Innovation Contest were organised.
- Special focus given for Academic week students.

6.3.3 Examination and Evaluation

Semester system with Continuous Internal Assessment (CIA) is followed.

- The Principal and the Heads of Department monitor the performance of the students by making an analysis after every internal test and End semester examination.
- The teachers make an analysis of the performance of students after every internal test and End semester examination in departmental meetings.
- The performance of students is analyzed in Academic Council meeting in December and Governing Body meetings in March.
- In Autonomous , 100 % external question paper setting with more than 10 years experience. Blooms Taxonomy techniques is followed for question paper setting.
- Scrutiny board has been formed to select the best question papers.
- Conducting supplementary examinations for first year all failure subjects, third semester one subject and fourth semester one subject based on the result passing board experts.
- Evaluation is done by more than 5 years experience of external and internal examiners with the ration of 80:20.
- Retest scheme is introduced for better test performance.

6.3.4 Research and Development

- During this academic year 150 research papers were published in National and International Journals.
- 223 papers were presented in National Seminars and Conferences.
- 15 research scholars have obtained their Ph. D. from the research centre of our college.
- 5 Minor projects and 3 Major projects were sanctioned by funding agencies. 50 teachers have participated in Orientation Programmes and Refresher Courses.
- 10 Books/Proceedings have been published.
- Research centre and centre of excellence were established for enhancing the research skill for the students.
- Patent filed in civil department.

6.3.5 Library, ICT and physical infrastructure / instrumentation

1. Max. No of Books issued to the students through Library book bank scheme (10 copies per student can borrow at a time.).
2. Given Orientation Programme to our students.
3. Celebrating Father of Library Science (Dr.S.R.Ranganathan) function .On that day we are organising School level Quiz and Seminar for school students.
4. Computerised digital library like OPAC, DELNET, NPTEL, etc.
5. Well balanced collection about more than 1 lakh volume books available.
6. Back issues of Question banks also provided for Examination preparations.
7. Up-to-date Well balance collection of non-book materials available.
8. Reprography are providing with nominal cost,
9. User convenient library timing has been provided.
10. Reference referral services can also be provided (Current Awareness services).
11. Daily news update also putting in library notice board about current affairs, College News, etc.
12. Information about new arrivals of books, Journal content pages will send to department mails using LAN connection for their knowledge updating.
13. Bar coding facilities for easy accessing of books.
14. Provided Special library section for MBA & MCA .

1. To assist research scholars well balanced collections of project collection & Thesis in our college.
2. Library is having more than 15 computers for digital library services and scanners.
3. Self development books, English & Tamil fiction books for attracting the learning habits.
4. Conducted book fairs in every year.
5. Inaugurated Readers Club College.
6. Adequate learning infrastructure facility.

6.3.6 Human Resource Management

- The Principal shall assess in the month of April every year the staff requirement for the subsequent academic year.
- The staff requirement lists from all the Heads of department and arrive at the number of faculty members, Lab assistants and administrative staff required with the following guidelines in mind.
- Appointing a Professor to be the Head of every discipline, besides the number of Assistant Professors and Lectures required in accordance with the teacher student ratio prescribed herein.
- The teacher student ratio shall be **1:15** and for this purpose the Professor shall also be included in counting the number of teachers.
- Selection committee for recruitment in each discipline composed of the Principal, HOD, and the Department's Advisors/Experts from the neighboring institutions.
- 360 degree evaluation and feedback has been taken. Based on the result , required training will be given to the faculties.
- Orientation training has been given for fresh faculties for one week
- Every semester, Pedagogy training has been given for less than 3 year faculties
- Team Teaching among the faculties.

6.3.7 Faculty and Staff recruitment

The selection committee shall prepare a job description and job specification for the candidate to be recruited.

The committee shall augment candidature in a ratio of 1:3 for every position to be filled from any or all of the following sources: Advertisements in the Newspapers, Files maintained for storing the unsolicited applications and References.

If the committee deems it fit, may also conduct Walk in Interviews for augmenting the required candidates.

The committee shall short list the candidates in the following processes: Personal interviews and class room demonstrations.

The committee shall finalize the short listed candidates and submit their recommendations along with the personal data sheets of the candidates to the Chairman/ Managing Director who in turn will approve the decisions of the committee on the appointment.

An Offer of appointment shall be released by the Principal through HR.

6.3.8 Industry Interaction / Collaboration

1. Western Connecticut State University, USA
2. University of Rwanda, Rwanda
3. University of Cambridge, UK
4. Larsen& Toubro (L&T) Construction Limited
5. Hewlett-Packard Pro Curve University Initiative
6. Advanced Research Centre for Health, Environment and Space (ARCHES), Italy
7. Eastern Institute for Integrated Learning in Management (EIILM), Kolkata
8. National Institute of Technology (NIT), Hamirpur, Himachal Pradesh
9. Indira Gandhi National Open University (IGNOU), Govt of India
10. Indian Society for Technical Education (ISTE), New Delhi
11. Institution of Engineers(India)
12. Wipro Technologies Limited
13. Oracle Education Partner Network
14. Infosys Technologies Limited
15. Harita Techserv Limited
16. SMAC-TCS, Chennai
17. YBG Kubota Limited
18. Yokogawa India Limited, Bangalore
19. GA Software Technologies Limited, Bangalore
20. Research & Industry Incubation Centre, Dayananda Sagar Institutions, Bangalore
21. National Instruments India Private Limited, Bangalore
22. CADD Centre-United Info Solutions
23. JK Aviation Private Limited
24. VI Micro Systems
25. Graciya Automotives Limited
26. Institute for Language & Skills (ILS), Chennai
27. SRM University as Academic Partner to implement IT related Empowerment for rural school children
28. Coimbatore District Small Industries Association (CODISSIA) and
29. Danfoss, Chennai

6.3.9 Admission of Students

As per Tamilnadu state Govt. Technical Education, Admission rules and regulations, based on Counselling and Management quota.

6.4 Welfare schemes for	Teaching	3
	Non teaching	3
	Students	20

6.5 Total corpus fund generated

6.6 Whether annual financial audit has been done

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	ISO	Yes	IQAC
Administrative	Yes	ISO	Yes	IQAC

6.8 Does the University /Autonomous College declares result within 30 days?

For UG Programmes Yes No

For PG Programmes Yes No

6.9 What efforts are made by the University / Autonomous College for Examination Reforms?

- To enhance the student in-depth knowledge, inculcated objective questions in the question paper.
- The questions based on the Bloom's Taxonomy.
- The Office of the Controller of Examination has done computerization of the entire examination system. On-line registration of examination forms and uploading the semester examination results are carried out as per schedule mentioned in the College Calendar.

- The mark statements, hall tickets, processing of examination application forms, allocation of register numbers and seating arrangement have been computerized.
- Feedback received from Anna University nominee, Subject experts, Alumni, Present students, Industrial experts for enriching syllabus and curriculum.

6.10 What efforts are made by the University to promote autonomy in the affiliated /constituent colleges?

- The experts(Academic & Administrative) are involved in the Autonomous activities during the conduction of BoS(Board Of Study) meeting, academic council , Governing council and examination process.
- The university provides all the necessary support to the college.

6.11 Activities and support from the Alumni Association,

- **MASS – Mahendra Alumni Scholarship Scheme**, through this, alumnus will help the junior in the form of scholarship. It was organized on 10.10.2014. Through this 11 students were benefited – Rs. 20.000 as cash.
- **MAILS - Mahendra Alumni Interactive Lecture Series** –Guest lecture to the students through our alumnus under this forum, 2 Lecture per semester in each department . Totally 15 lectures were organized during the academic year 2014- 2015.
- Alumni of college supporting for skill development activities and also for placement activities.

6.12 Activities and Support from the Parent – Teacher Association

- Paren
t-Teacher Meetings help to communicate to parents the areas their children are excelling in and the academic progress their children have made. Keeping this goal in mind, parent – teacher meeting will be organised during the course period.

6.13 Development programs for support staff

- Orientation Programs were conducted.
- Training – In house training by faculties
- Providing chance to upgrade qualification
- Training at industries

6.14 Initiatives taken by the institution to make the campus eco- friendly.

- Eco-friendliness in the campus is the policy of the college. Lawns and gardens are college maintained with utmost care
- Use of plastic materials is prohibited in the college. Paper covers used.
- ISO 14001:2004 certification received for Green environment and food safety.
- Sapling of more trees inside the campus.
- Solid waste and liquid has been segregated.

Criterion – VII

7. Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

The Institution has developed many Innovative Methodologies to improve the student's knowledge in various fields. Such as

7.1.1.INDUSTRIAL CO-TEACHING (ICOT)

Industrial Co-Teaching Courses are designed to facilitate the transfer of knowledge to the students by educating them with the support of industries. The content of the courses are derived in consultation with the industry experts. In general, the courses have three modules and the interested students can register one module per semester. The important aspect of the ICoT courses is to ensure that the advanced learning is happening in the area of interest which is offered by their department and other departments.

7.1.2. INTER DEPARTMENT LECTURE (InDeL)

The Inter Department Lecture Series is planned to create an interactive and dynamic interdisciplinary learning environment among various disciplines of Students. Integration of different subjects across various disciplines is expected to create a customized application in the domains of Students. In this regard InDel is expected to provide ample opportunities for interaction to enhance the knowledge.

7.1.3. Mahendra Under Graduate Innovation Contest (MAGIC)

Mahendra Under Graduate Innovation Contest is to identify the students with innovative ideas and provide them the financial support to implement the project. Mahendra educational trust motivates the students to participate in the event and exhibit their talent to win the seed money to implement the project.

7.1.4. MAHENDRA ALUMNI LECTURE SERIES (MAILS)

Through MAILS the alumni working in various concern are invited to deliver a session through which their valuable knowledge , experience and hardship they faced are shared with the junior students. It is one of the opportunity to get internship and inplant training in their firm.

When the current scenario in the market and the expectation from the industry are shared by their own seniors (Alumni), it get good impact among the students.

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year.

Academic calendar is to be prepared for every semester before commencement of semester. It indicates the activity to be carried out in the entire semester.

7.3 Give two Best Practices of the Institution (please see the format in the NAAC Self-study Manuals)

7.3.1. Faculty Deeper Learning Programme (FDLP)

Major focus of Faculty Deeper Learning Programme (FDLP) is to understand and upgrade the subject knowledge. Makes a platform for the faculty members to master the core content to teach and learn further. Develop a strong foundation in the subjects. Provide opportunities to share the intellectual ideas and concepts.

7.3.2 Teachers' Acclaimed Seminar for Knowledge Sharing (TASKS) is in practice

The ultimate intention is to encourage the faculty members to share the knowledge other than the academic in a common forum through which the faculty confident level also gets developed. It is like a seminar for teachers by teachers.

In addition to the above programmes, the institution is also conducting other value added courses to the students such as

1. Lab view Academy Training
2. L&T Form work Training
3. Personality Development Programme for second and third year students
4. Know How Training.
5. KNOCK Training
6. CATIA
7. Competency Development Programme for first and Second year students
8. WIPRO Mission 10X
9. TVS-Harita Training
10. MSME- Product Development Center

**Provide the details in annexure (annexure need to be numbered as i, ii,iii)*

7.4 Contribution to environmental awareness / protection

The college has taken initiative steps to keep the college campus environment friendly.

7.4.1. Energy conservation

The transparent window facilitates the maximum utilization of natural light source in all the rooms. The traditional lighting systems are replaced with CFL & LED lighting system. Students, Faculty and Staff members are always ensure the electrical equipment “Switched off” when not in use. Encouraging the staff members and students to use staircases whenever it possible to minimize the use of elevator. Solar energy used in the parking areas and other areas.

7.4.2. Use of renewable energy

Solar energy used in the parking areas and other areas. The college has bio-methanation reactor to minimize the LPG usage. **Having the proposal of erecting wind mill at our campus, as part of student project.**

7.4.3. Water harvesting

The college has adequate facilities to collect the rain water to increase the ground water level.

7.4.4. Efforts for carbon neutrality

The college has made adequate arrangements for the parking of vehicles. Emission test certificates are mandatory for the vehicles in the campus. Cigarettes and tobacco products are strictly banned within 100 meters of the campus. Majority of the students are utilizing the college transportation facilities to minimize the individual transportation.

7.4.5. Plantation

The college organizes NSS camp periodically to inculcate the values of plantation among the students, faculties and public. **Our Institution is part of the “Green Kalam Project” and to create green campus, saplings have been planted.**

7.4.6. Effluent treatment and recycling plant

A well-equipped sewage water treatment plant was installed to treat waste water from the Institution.

7.5 Whether environmental audit was conducted?

The students, faculty and staff members are encouraged by the NSS unit to keep the campus always green by planting more trees. Though there is no formal green audit system, the entire building of the institution is designed by the architect in considering the maximum utilization of natural resources such as Light and Air and very well ventilated.

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)**Faculty Academic Contributions towards Excellence (FACE) & Credit Target (FACT)**

To enhance the Research & Development and other promotional activities, our faculty members have been given with the target for the semester based on their experience which includes journal publications, International conference , Industry collaboration and so on. Like self assessment, at the end of the semester, faculty contribution will be assessed based on their achieved credit which motivates them to attain more in future.

(Dr. C.DHAVAMANI)

Coordinator of IQAC

(Dr.M.MADHESWARAN)

Chairperson of IQAC & Principal