

# **MUTHAYAMMAL ENGINEERING COLLEGE,**

**(An Autonomous Institution Affiliated to Anna University, Chennai)**

**Rasipuram – 637 408, Namakkal Dist., TN**

**INTERNAL QUALITY ASSURANCE CELL (MEC – IQAC)**

**ANNUAL QUALITY ASSURANCE REPORT (AQAR)**

**(2016 – 2017)**



**Submitted to**

**National Assessment and Accreditation Council,**

**Bangalore – 560 072, India**



# MUTHAYAMMAL ENGINEERING COLLEGE

(Autonomous)

(Approved by AICTE, New Delhi, Accredited by NAAC & Affiliated to Anna University)

Rasipuram - 637 408. Namakkal Dt., Tamil Nadu.

**Dr. S. NIRMALA, M.E., Ph.D.,**  
**Principal**

Ref: MEC/NAAC/2017/IQAC/AQAR/424.

Date: 12.09.2017

To

The Director,  
National Assessment and Accreditation Council,  
P. O. Box No. 1075,  
Nagarbhavi,  
Bangalore -560 072.

Sir,

Sub: Submission of AQAR of IQAC of Muthayammal Engineering College  
- 2016 - 2017 - Reg.

Ref: Revised Guidelines 2013 NAAC for the creation of the Internal Quality Assurance Cell (IQAC) and submission of Annual Quality Assurance Report (AQAR) in Accredited Institutions.

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As per the revised Guidelines 2013 of National Assessment and Accreditation Council (NAAC) for the creation of the Internal Quality Assurance Cell (IQAC) and submission of Annual Quality Assurance Report (AQAR) in Accredited Institutions, we are pleased to submit the AQAR of IQAC of Muthayammal Engineering College for the Academic Year 2016 - 2017. The AQAR has been duly compiled and reported. Kindly accept the same and do the needful.

Thanking you,



Yours Truly,

*A. Nirmala*  
PRINCIPAL

Tel : 04287 - 220837, 226837 Email : metmec@gmail.com www.muthayammalengg.ac.in

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# The Annual Quality Assurance Report (AQAR) of the IQAC

## Part – A

### I. Details of the Institution

1.1 Name of the Institution

Muthayammal Engineering College

1.2 Address Line 1

Rasipuram

Address Line 2

Namakkal Dist.

City/Town

Rasipuram

State

Tamilnadu

Pin Code

637 408

Institution e-mail address

metmec@gmail.com

Contact Nos.

04287 – 226837, 220837

Name of the Head of the Institution:

Dr.S.Nirmala

Tel. No. with STD Code:

04287 - 226737

Mobile:

8754008537

Name of the IQAC Co-ordinator:

Dr.G.Selvakumar

Mobile:

8754203355

IQAC e-mail address:

mec.iqac@gmail.com

1.3 NAAC Track ID

TNCOGN 23957

1.4 NAAC Executive Committee No. & Date:

EC(SC)/13/A&A/44.1 dated 17.03.2016

1.5 Website address:

[www.muthayammalengg.ac.in](http://www.muthayammalengg.ac.in)

Web-link of the AQAR:

[www.muthayammalengg.ac.in/pdf/AQAR.pdf](http://www.muthayammalengg.ac.in/pdf/AQAR.pdf)

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 <sup>st</sup> Cycle	B	2.52	2016	17.03.2016 to 16.03.2021
2	2 <sup>nd</sup> Cycle	-	-	-	-
3	3 <sup>rd</sup> Cycle	-	-	-	-
4	4 <sup>th</sup> Cycle	-	-	-	-

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

04.06.2016

1.8 AQAR for the year (for example 2010-11)

2016-17

1.9 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*)

- i. AQAR \_\_\_\_\_ Not Applicable \_\_\_\_\_ (DD/MM/YYYY)
- ii. AQAR \_\_\_\_\_ (DD/MM/YYYY)
- iii. AQAR \_\_\_\_\_ (DD/MM/YYYY)
- iv. AQAR \_\_\_\_\_ (DD/MM/YYYY)

1.10 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  AICTE

(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

1.11 Type of Faculty/Programme

Arts  Science  Commerce  Law  PEI (Phys Edu)

TEI (Edu)  Engineering  Health Science  Management

Others (Specify)

.

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

Anna University, Chennai

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

Autonomy by State/Central Govt. / University

UGC / Anna University

University with Potential for Excellence

-

UGC-CPE

-

DST Star Scheme

-

UGC-CE

-

UGC-Special Assistance Programme

-

DST-FIST

-

UGC-Innovative PG programmes

-

Any other (*Specify*)

-

UGC-COP Programmes

-

## **2. IQAC Composition and Activities**

2.1 No. of Teachers

10

2.2 No. of Administrative/Technical staff

01

2.3 No. of students

02

2.4 No. of Management representatives

01

2.5 No. of Alumni

01

2.6 No. of any other stakeholder and  
community representatives

01

2.7 No. of Employers/ Industrialists

01

2.8 No. of other External Experts

01

2.9 Total No. of members

18

2.10 No. of IQAC meetings held

No.

04

2.11 No. of meetings with various stakeholders:

Non-Teaching Staff

02

Alumni

02

Others

02

-

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

Yes

No

If yes, mention the amount

NA

2.13 Seminars and Conferences (only quality related)

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

Total Nos.

06

International

01

National

01

State

02

Institution Level

02

(ii) Themes

- Outcome Based Education
- Power, Freedom and Responsibilities of Autonomous Institution
- Engineering Pedagogy for the 21<sup>st</sup> Century Teachers
- Nuances of Engineering Teaching
- ICT Enabled Teaching Learning Methodologies
- What do NBA and NAAC Expect from Teaching Community?

2.14 Significant Activities and contributions made by IQAC

- Preparations towards Accreditation by NBA for 4 programmes viz. CSE, EEE, ECE and Mechanical Engineering
- Coordinating the NBA Expert Committee Visit
- Coordinating with various statutory and non-statutory bodies of the institute in the transformation from Affiliated Status to the Autonomous Status
- Coordinating with the conduct of Board of Studies meeting
- Coordinating with the conduct of Academic Council Meeting
- Internal and External Academic Audit
- Orientation Programme for the 1<sup>st</sup> year Students
- Coordinating with Continuing Education Cell of the Institute in Organizing Faculty Development Programmes
- Monitoring the Outcome Based Education Process



## 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
To create separate menu for MEC-IQAC in the institute website with relevant contents	A separate menu is created in the name of MEC – IQAC and all the relevant contents were posted in the webpage
Plan of action for the academic year 2016 – 2017	College level and department level meetings were conducted and the planned activities were executed
Preparation towards NBA Accreditation Process and NBA Expert Committee Visit	The preparation towards NBA Accreditation Process was completed in time. Also the NBA Expert Committee Visited the institution from 21 <sup>st</sup> to 23 <sup>rd</sup> April, 2017. All the 4 programmes have been provisionally accredited by NBA for 3 years from 2017-18 to 2019-20 vide letter No. F.No. 33-10/2010-NBA dated 09.06.2017
Assessment of COs, POs and PSOs	Assessment of attainment of COs, POs and PSOs were carried out by the Course Committee and the same was monitored by the Department Advisory Committee
Induction Programme for new faculty members	Two Programmes were organized on 23.09.2016 and 24.09.2016: 1. Induction Training Programme on Nuances of Engineering Teaching for the new faculty members 2. Refresher Training Programme on Engineering Pedagogy for 21 <sup>st</sup> Century Teachers for the senior faculty members
Effective implementation and usage of Muthayammal Virtual Learning Centre (MVLC)	The faculty members have uploaded all the course materials and the students are effectively using this facility.
Orientation Programme for the 1 <sup>st</sup> year Students	The orientation programme for the 1 <sup>st</sup> year students for the academic year 2016-2017 was organized on 09.08.2016 and 10.08.2016.
Job Fair partnering with Board of Apprenticeship Training (BOAT) of Government of Tamilnadu	The programme was organized on 03.09.2016 with 44 companies and 1500 students took part in the event and 950 offers have been made.
MSME Business Incubator	Based on the application submitted and presentation made at the office of MSME DC, New Delhi, we have been recognized as

	Business Incubator by MSME vide the letter No.: 3(11)/2016/NMCP/21 <sup>st</sup> Meeting dated 09.08.2016.
Muthayammal Exhibition for Science and Technology (MEST)	MEST was organized on 25.10.2016 and 26.10.2016. More than 16000 school students visited the exhibition. 150 projects by the school students and 250 projects by the students of Muthayammal Engineering Institutions were showcased. Shows such as Air Show, Robotics Show, 3D Show and Magic Show were also organized.
MSME Business Incubator Subcommittee formation	The subcommittee as per the guidelines of MSME is formed and communicated to the office of MSME DC, New Delhi.
Increasing the Internet Bandwidth	The internet bandwidth has been increased to 64 Mbps with effect from December, 2016.

2.15 Whether the AQAR was placed in statutory body Yes  No

Management  Syndicate  Any other body

Provide the details of the action taken

The AQAR was placed before the Management and got approved.

## Part – B

### Criterion – I

#### I. 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	5	-	5	-
PG	7	-	7	-
UG	6	-	6	-
PG Diploma	-	-	-	-
Advanced Diploma	-	-	-	-
Diploma	-	-	-	-
Certificate	-	-	-	-
Others	-	-	-	-
<b>Total</b>	18	-	18	-
Interdisciplinary	-	-	-	-
Innovative	-	-	-	-

##### 1.2 (i) Flexibility of the Curriculum: Choice Based Credit System (CBCS)

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	13
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 Refer Annexure-I for the analysis of the feedback*

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

- College conferred with Autonomous Status from the Academic Year 2016-17 by UGC and Affiliating University.
- The Choice Based Credit System (CBCS) has been introduced for all the Programmes from the Academic Year 2016-17 (Regulation 2016).
- Under CBCS, the students can register for course of their choice.
- It enables fast, normal and slow learners to plan and pace the same in a semester as may be necessary and register for more/average/lesser credits from the prescribed limits based on their learning capacities as observed and alter the pace of learning within the broad framework of academic course and credit requirements.
- Students have the option of choosing courses of their choice from among the various categories of courses.
- Options are given to choose interdisciplinary courses from other Engineering Programmes which will help the student to develop needed skills.
- Slow learners will also benefit by evenly planning for their credit accumulation.

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

No

## Criterion – II

### 2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
240	189	18	33	-

2.2 No. of permanent faculty with Ph.D.

30

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
44	-	3	-	7	-	-	-	54	-

2.4 No. of Guest and Visiting faculty and Temporary faculty

21

-

-

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	16	42	01
Presented papers	21	27	-
Resource Persons	01	12	21

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

- Continuous evaluation process was fortified to enrich the quality of teaching and learning.
- Revision of syllabus as and when required as per current trends.
- Adoption of trending areas of future necessity for updation of syllabus.
- Identification of challenging learners and provision of tutorial classes.
- Use of Muthayammal Virtual Learning Centre (MVLC), Online Performance Assessment for Quality (OPAQ) and smart class room for technology based teaching methods
- Strengthening of Curricular activities (Co/Intra / Inter)
- Conduction of Value added programs
- Replenishing the students through guest lectures
- Organizing of orientation programs for fresh engineering aspirants.

2.7 Total No. of actual teaching days during this academic year

190

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

- Continuous Internal Assessment (CIA) and End Semester Examination (ESE)
- CIA question papers are prepared based on bloom's taxonomy
- The ratio of weightage is 50% CIA and 50% ESE
- The answer scripts are given back to the students after evaluation for their information which provides transparency and accountability to the evaluation process.

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

240	25	5
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2.10 Average percentage of attendance of students

87.79
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2.11 Course/Programme wise distribution of pass percentage :

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
<b>UG PROGRAMS</b>						
BE-CSE	75	-	74.66	-	-	74.66
BE-ECE	181	-	77.90	2.86	-	80.76
BE-EEE	125	0.8	60	26.40	-	87.20
BE-MECH	199	-	61.80	7.53	-	69.33
BE-IT	23	-	78.26	-	-	78.26
BE-CIVIL	109	-	39.44	13.76	-	53.21
<b>PG PROGRAMS</b>						
ME-PED	7	14.28	28.57	-	-	42.85
ME-PSE	5	-	80	-	-	80
ME-VLSI	6	-	83.33	-	-	83.33
ME-CS	5	-	40	-	-	40
ME-CAD/CAM	3	33.33	66.67	-	-	100
ME-CSE	14	-	71.42	-	-	71.42
MBA	39	10.25	71.79	-	-	82.05

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

IQAC Monitors the Teaching & Learning processes through

- External Audit
- Internal Audit
- Class committee meeting, Syllabus completion report, Result analysis report, parents meet, Progress report and question paper analysis
- Orientation Programmes for first year students
- Organizing Seminars and Workshops
- Feedback from all stake holders, implementation of suggestions and action taken report.
- Awareness programmes
- Continuous monitoring of activities by the IQAC cell

2.13 Initiatives undertaken towards faculty development

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	15
UGC – Faculty Improvement Programme	26
HRD programmes	5
Orientation programmes	7
Faculty exchange programme	0
Staff training conducted by the university	30
Staff training conducted by other institutions	86
Summer / Winter schools, Workshops, etc.	23
Others	09

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	115	-	-	-
Technical Staff	21	-	-	-

## Criterion – III

### 3. Research, Consultancy and Extension

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

- Encouraging the staff members to undertake major and minor research projects from external agencies and in-house R&D and also to organize seminars, workshops and conferences.
- Motivating faculty members to publish research papers in journals.
- Informing students about various fellowships available and encouraging them to apply for the same.
- Motivating the students to take part in various project competitions organized by Government and Private agencies and institutions.
- Conducting Conferences, Workshop, Seminars and Guest Lecture on recent developments and opportunities in the technology innovations.
- Motivating the faculty members to pursue Ph.D.
- Providing institutional funds to students project contests.
- Providing accessibility to refer online research journals of major professional bodies and societies.
- Coordinating with the arrangement of guest lectures by the Research experts

#### 3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	-	-	-	4
Outlay in Rs. Lakhs	-	-	-	45,03,735.00

#### 3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	3	-	-	2
Outlay in Rs.	30,000.00	-	-	2,00,000.00

#### 3.4 Details on research publications

	International	National	Others
Peer Review Journals	39	4	-
Non-Peer Review Journals	25	-	-
e-Journals	03	-	-
Conference proceedings	31	-	-



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 organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	-	-	-	-
Minor Projects	1	TNSCST	30,000.00	30,000.00
Interdisciplinary Projects	-	-	-	-
Industry sponsored	-	-	-	-
Projects sponsored by the University/ College	1	College	1,69,000.00	1,69,000.00
Students research projects <i>(other than compulsory by the University)</i>	1	College	1,15,000.00	1,15,000.00
Any other(Specify)	-	-	-	-
Total			3,14,000.00	3,14,000.00

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  CAS  DST-FIST   
DPE  DBT Scheme/funds

3.9 For colleges  
Autonomy  CPE  DBT Star Scheme   
INSPIRE  CE  Any Other (specify)

3.10 Revenue generated through consultancy

3.11 No. of conferences  
organized by the Institution

Level	International	National	State	University	College
Number	2	-	-	-	-
Sponsoring agencies	ICTACT and College	-	-	-	-

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	-
	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
01	01	-	-	-	-	-

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: NCC Unit Not Available

University level	<input type="text" value="-"/>	State level	<input type="text" value="-"/>
National level	<input type="text"/>	International level	<input type="text"/>

3.23 No. of Awards won in NSS:

University level	<input type="text" value="-"/>	State level	<input type="text" value="-"/>
National level	<input type="text" value="-"/>	International level	<input type="text" value="-"/>

3.24 No. of Awards won in NCC:

NCC Unit Not Available

University level	<input type="text"/>	State level	<input type="text"/>
National level	<input type="text"/>	International level	<input type="text"/>

3.25 No. of Extension activities organized

University forum	<input type="text" value="-"/>	College forum	<input type="text" value="-"/>		
NCC	<input type="text" value="-"/>	NSS	<input type="text" value="12"/>	Any other	<input type="text" value="06"/>

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

i. **MEST (Muthayammal Exhibition for Science and Technology)**

To motivate the innovative skills of students studying in government schools, every year we organize Muthayammal Exhibition for Science and Technology (MEST). In the last 3 episodes, more than 1000 projects have been showcased by the school students and more than 25000 students visited the exhibition and get enlightened in the latest developments in the science and technology front. The highlights of the exhibition are Aero Show, Robotics Show, 3D Shows and Planetarium. The management spent to the tune of Rs.40,00,000/- towards MEST.

ii. **Support to Government Schools**

Our management continuously strives to help the higher secondary school students to make them best equipped for professional education. Around 85,000 copies of Course materials and question banks have been prepared and issued to the higher secondary students free of cost in 10 revenue districts of Tamilnadu. The project costs the management, Rs. 15,00,000/-.

We supported various government schools by providing infrastructure such as Computer, Printer, Furniture, RO Plant, etc. to the tune of Rs.10,00,000/-.

**iii. Mi Trix :**

Mi Trix is the motivational and skill development programme conducted by Muthayammal Engineering College for the benefit of Polytechnic College students. Nearly 1,500 students have participated in the programme since 2015.

**iv. Mi Dreams:**

Mi Dream programme has been conducted by Muthayammal Engineering College in association with TamilNadu Department of School Education and ICT Academy of TamilNadu, Students from various Schools have taken an active participation in the programme. Nearly 2,500 students participated in the programme. The college has arranged free bus services for all visitors.

**v. Vetri Nichayam :**

Vetri Nichayam programme has been conducted by muthayammal Engineering college in association with Daily thanthi in every year. Students from various Schools have taken an active attention in the programme. Nearly 2,000 students participated in the programme as well as they conducted many informations from the programme. The college has arranged free bus services for all the visitors.

**vi. BOAT Job Fair :**

Board of Apprenticeship Training, Southern Region, Chennai jointly with Muthayammal Engineering College, Rasipuram organize Job Fair for Engineering Graduates, Diploma Holders in Engineering and +2 Vocational passed candidates. More than 3,500 students across the state attended the Job Fair.

More than 500 Engineering Graduates, 1800 Diploma Holders and 350 Vocational candidates have been given Regular Jobs and Apprenticeship Training. The extremely large crowd kept the fair buzzing and alive from start to end. Free buses have been arranged from Rasipuram for the convenience of the participants.

## Criterion – IV

### 4. Infrastructure and Learning Resources

#### 4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	11.58 Acres	-	-	11.58 Acres
Class rooms	76	-	-	76
Laboratories	50	-	-	50
Seminar Halls	11	-	-	11
No. of important equipments purchased ( 1-0 lakh) during the current year.	-	2	Trust	2
Value of the equipment purchased during the year (Rs. in Lakhs)	-	32.88	Trust	32.88
Others	-	-	-	-

#### 4.2 Computerization of administration and library

Administration : Educational Institutions Automation Software for You (EASY) with Tally Integration

Library : Autolib with OPAC, Bar-Coding Facility, Digital Library, e-journals, e Memberships

#### 4.3 Library services:

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	38716	9009170	125	76600	38841	9085770
Reference Books	6000	2400000	50	20750	6050	2420750
e-Books	1456	11500	1456	11500	2912	23000
Journals	180	249937	188	241431	368	491368
e-Journals	5667	196440	8440	225210	14107	421650
Digital Database	5667	196440	7661	225210	13328	421650
CD & Video	2090	60000	10	300	2100	6300
Others (specify)	-	-	-	-	-	-

#### 4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	915	24	16 Mbps	2	4	1	24	5
Added	60	1	48 Mbps	-	-	-	-	-
Total	975	25	64Mbps	2	4	1	24	5

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

- 100% of the computers are networked
- Internet Bandwidth increased from 16 Mbps to 64 Mbps
- Wi-fi enabled campus
- Online Performance Assessment for Quality (OPAQ) is a web-based assessment software developed by our faculty members to conduct objective type online exams for assessment of students' performance so as to improve the quality
- Muthayammal Virtual Learning Center for Technology, Engineering and Management (MVLC - TEAM) is a MOODLE based e-learning platform which provides materials to students for all subjects. MVLC helps in 24x7 learning.
- Training on Virtual Laboratory, Spoken Tutorials and other IIT Mumbai initiatives
- Expert lectures through Skype
- Member of ICT Academy of Tamilnadu and many programmes on ICT education are being organized through this forum

#### 4.6 Amount spent on maintenance in lakhs :

i) ICT	7.60
ii) Campus Infrastructure and facilities	10.66
iii) Equipments	42.92
iv) Others	209.54
Total :	270.72

## **Criterion – V**

### **5. Student Support and Progression**

#### 5.1 Contribution of IQAC in enhancing awareness about Student Support Services

Students are made to know about the Student Support Services such as:

- Placement Training
- Campus Placement
- Mentoring
- Value Added Courses
- Co-curricular Activities
- Extra Curricular Activities
- Entrepreneurial Initiatives
- Career Development
- New facilities created etc.

Through the following forums which are reviewed and monitored by IQAC

- Placement and Training Cell
- Entrepreneurship Development Cell
- Career Guidance Cell
- Various Clubs / Societies / Technical Associations

#### 5.2 Efforts made by the institution for tracking the progression

- Monitoring of course delivery and syllabus completion is done through class committee meetings, feedbacks and regular academic audits.
- Effective delivery in analytical subjects is ensured by conducting tutorial classes as per time table.
- The parents are informed about the performance of their ward, including university examination results, by sending progress report, after every continuous assessment tests
- Regular parent's meet and student's performance monitoring also done to track the progress
- Course Committee and Department Advisory Committee are involved in the assessment of attainment of Course Outcomes (COs), Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) to track the progression in the Outcome Based Education Process.

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
2572	173	-	-

(b) No. of students outside the state

122

(c) No. of international students

-

Men	No	%	Women	No	%
	1943	70.78%		802	29.22%

Last Year (2015-16)						This Year (2016-17)					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
123	357	23	2233	-	2736	129	333	21	2261	01	2745

Demand ratio: Students are admitted by Anna University Single Window Counselling / Consortium

Dropout %: 2.11%

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

Coaching for the following examinations were provided:  
GATE, GRE, TOEFL, CAT, MAT, TANCET, CMAT, UPSC

No. of students beneficiaries

825

5.5 No. of students qualified in these examinations

NET	-	SET/SLET	-	GATE	03	CAT	-
IAS/IPS etc	-	State PSC	-	UPSC	-	Others	39

5.6 Details of student counselling and career guidance

Mentoring System:

Mentoring for students is the most important factor that determines the success of students' education. All the faculty members are involved in mentoring the students. 15 to 25 students are assigned to a mentor for the individual counseling. The students are counseled by their mentor at least thrice in a semester to



identify and analyze the student's problems both in academic and personal. The problems identified were discussed with the students and suitable remedial measures are provided. The students who are specialized in any particular area namely sports or other activities are identified and they are motivated to develop their hidden talents.

- The students are counseled on the basis of their performance in the academic. Records will be maintained properly and submitted to the HOD. HOD, in turn forward to the Principal periodically.
- The poor performers in academic [Special Attention Group (SAG)] are instructed to attend the special coaching classes after the college hours.
- Motivational programmes are provided to the students to enable them to improve the quality of education.
- Counselors instruct the students to comprehend the program curriculum. They also help their students make a Full-course Study Plan that activates the students' active learning. Counselors for each group should know thoroughly the capability and circumstances of each student to provide appropriate guidance.
- The importance of practical knowledge in engineering and problem solving capability is provided to the students.
- Students are guided towards the placement activities and motivated to attend the placement training programmes.
- Mentor will guide for higher education and suggest them to prepare for exams such as GATE, CAT, IELTS, TOFEL, GRE etc.

#### Placement and Training Cell and Career Guidance Cell:

The Placement Cell of the Muthayammal Engineering College is taking care of students Career Guidance. It organizes many programmes exclusively for Career Guidance. The aim of the Placement Cell is to find "Right Job for the Right candidate". We are moving towards the target of "EXCELLENCE IN CAREER GUIDANCE AND 100% PLACEMENT".

The Placement Cell arranges exclusive training programs like Aptitude Training, Group discussions, Soft Skill trainings, etc. The Placement Cell also invites Human Resource Managers from different industries to conduct training programs for the students. Necessary training programmes have been arranged by the Placement Cell to enhance soft skills and technical skills which includes experts from industry as trainers and outsourcing aptitude trainers.

The Training and Placement Cell includes senior faculty members from each department as its Coordinator for its successful existence. The Cell interacts with reputed organizations all over the country for arranging campus interviews for the placement of final year students. It takes efforts to send most of the students for in-plant training to enhance their technical ability and exposes them to the

practical world. Various activities are carried out to make them more employable and provide inputs to the students to take up competitive examinations.

No. of students benefitted

#### 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
27	587	386	78

#### 5.8 Details of gender sensitization programmes

The duly constituted Women Empowerment Cell, NSS and Grievances Redressal Cell of the institute organize gender sensitization programmes such as:

- Women Entrepreneurship Development
- Financial Freedom for Women
- Personal Hygiene
- International Women's Day
- Health Awareness
- Motivational Programmes

#### 5.9 Students Activities

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

State/ University level  National level  International 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

Cultural: State/ University level  National level  International level

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution	1123	1,32,51,950.00
Financial support from government	2592	6,16,01,380.00
Financial support from other sources	-	-
Number of students who received International/ National recognitions	6	75,000.00

5.11 Student organised / initiatives

Fairs : State/ University level  National level  International level

Exhibition: State/ University level  National level  International level

5.12 No. of social initiatives undertaken by the students

5.13 Major grievances of students (if any) redressed:

- On all Saturdays, special programmes are being organized to motivate and develop skill sets among the students
- Muthayammal Virtual Learning Centre (MVLC), an e-Learning platform was developed to promote 24X7 learning
- Special Mess was started for the students from Andhra Pradesh.

## **Criterion – VI**

### **6. Governance, Leadership and Management**

6.1 State the Vision and Mission of the institution

#### **VISION**

To be a Centre of Excellence in Engineering, Technology and Management on par with International Standards.

#### **MISSION**

- To prepare the students with high professional skills and ethical values
- To impart knowledge through best practices
- To instill a spirit of innovation through Training, Research and Development
- To undertake continuous assessment and remedial measures
- To achieve academic excellence through intellectual, emotional and social stimulation

#### **MOTTO**

Rural upliftment through Technical Education.

6.2 Does the Institution has a management Information System

Yes, the institute has a Management Information System

- Admission process
- Students profile
- Faculty Profile
- Student's attendance report
- Designing and Monitoring the Teaching – Learning Process
- Outcome Based Education
- Syllabus coverage report
- Continuous academic audit report
- Examination and Evaluation process

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

#### 6.3.1 Curriculum Development

The curriculum and syllabi related suggestions received from faculty's members, Industry Experts, Alumni and students and forming as input to Curriculum Development Cell and then to the Board of Studies (BoS). The BoS is the basic decision making body regarding curriculum and evaluation process. The Academic Council is the body to which all recommendations by the BoS are sent for discussion and approval.

#### 6.3.2 Teaching and Learning

- Established **Muthayammal Virtual Learning Centre for Technology, Engineering and Management (MVLC-TEAM)** to promote 24 X 7 learning habit among our students.
- This is established in Modular Object-Oriented Dynamic Learning Environment (MOODLE) platform.
- Comprehensive e-learning materials have been developed by our faculty members for all the subjects which comprise of Syllabus, Lesson Plan, Course Materials, Power Point Presentations, Question Bank, Model Question Papers, Previous year University Question Papers, Free e-books, Video Lectures, and list of relevant web addresses. These details are posted in MOODLE web portal.
- Digital Class Rooms with Audio / Visual facilities and Wi-Fi Connectivity.
- Active users of the following initiatives of IIT Bombay and MHRD of Government of India
  - Virtual Classroom
  - Virtual Labs
  - Spoken Tutorial
  - A-View
  - Project ekalavya
  - FOSSEE (Free and Open Source Software for Education)
  - Oscar – Animations Repository for Mechanical Engineering
- Active users of NPTEL Video Lectures
- Active users of the following e-learning web portals
  - Khan Academy
  - Course Era
  - MIT Open Courseware

- edX online courses
- TED Ed Lessons
- Shodhganga – Repository of Ph.D. Thesis
- Hot Potatoes software
- Mind Map Software
- Google Forms
- Youtube Education Channel
- Interaction with national and international experts through Skype and Team Viewer platforms
- More emphasis on Tutorial classes to make our students sound in problem solving skills.
- State of the art computer based language laboratory to improve the communication skills of the students.
- More focus on contents beyond curriculum.
- Course Files and Lab Manuals for Effective Instructions
- Entrepreneurship Awareness and Development Programmes
- Mentoring and Counselling Practices

### 6.3.3 Examination and Evaluation

- CIA test dates and End Semester Practical and Theory Examination schedule are provided in the academic calendar.
- The students are informed of the above through their Class Advisors, Exam Coordinators, Class Committee Meetings and also through circulars.
- The complete evaluation procedure and the Rules and Regulations for various programmes are printed in Academic Calendar and distributed to the students.
- Any Change/amendments made in the regulations are conveyed to the students through Class Advisors.
- The academic and evaluation processes are also explained to the parents during the Parents meeting.

#### 6.3.4 Research and Development

Five Departments of our institution viz. EEE, ECE, CSE, Mechanical and MBA have been recognized as Research Centres by Anna University, Chennai. The Institution has well established Research Centres to carry out Innovative Research in advanced fields of Engineering, Technology and Management. Around 450 Research papers have been published by our faculty members so far in refereed International and National Journals. Also our faculty members have presented their research findings in more than 350 national and international conferences. Around 1000 Technical papers have been presented in various Conferences and Symposiums by our students. We have established research laboratories in all PG departments and industry sponsored laboratories such as Texas Instruments (Ti) Innovations Lab, In22 Incubation lab, Wipro Mission 10X Lab etc.

#### 6.3.5 Library, ICT and physical infrastructure / instrumentation

##### ICT Enabled Teaching-Learning Methodologies:

To promote ICT Enabled Teaching-Learning Methodologies, the following initiatives were taken:

- 6 Digital Class Rooms were established
- The internet bandwidth has been increased from 16 Mbps to 64 Mbps
- The entire campus is made Wi-fi enabled
- All the computer systems are networked

##### Library:

The library is connected to the intranet backbone to facilitate distributed online public access of catalogs and e-Journals. The library has Membership with British Council Library, ACM, IEEE, DELNET and American Library and Information Centre. The library also has an exclusive digital library and Audio-Video rooms.

##### Research Labs:

The departments are equipped with industry supported Research Labs such as Texas Instruments Lab, Wipro Mission 10X Lab, EMC2 Lab, CAD Lab etc. to inculcate research culture.

##### Entrepreneurship Development:

- **Muthayammal Incubation Centre** was established which is sponsored by Ministry

of Small and Medium Enterprises (MSME), Govt. of India to support young entrepreneurs under the scheme “Support For Entrepreneurial And Managerial Development of SMEs Through Incubators”

#### 6.3.6 Human Resource Management

The college delegates the plan of the academic activities every year as per hierarchy of organization. The major decisions for the function of the Institution and objective of the Institution will be taken in the Governing Council meetings.

In the decentralized governance system, Principal is empowered to take decision for all academic activities inside the Institution. Department heads are authorized to take decision in the department level. The necessary support is provided by the Management of the Trust.

The College promotes a culture of participative management. The college has practice of listening to voices from the students and faculty members through proper channel. There will be class committee meeting for all classes headed by the class committee chair person who convenes the meeting as scheduled. It is the platform for the students to notify their needs in academic and non academic parts. Minutes of class committee meeting will be sent to the Head of the Institution.

Department meeting will be conducted by the HODs in order to address the grievances and in turn will be passed to the top management. Moreover all departments have Complaints and Redressal committee to heed to the issues of the students and to solve. Every fortnight there will be HOD meeting with Principal, minutes will be recorded and sent to the management.

The Institute has devised the HR Policies and Procedures towards Recruitment, Orientation, Faculty Training, Promotion etc., and published the same in the name of Employee Hand Book. The Employee Hand Book is given to all the new faculty members when they join the institution. Also during the In-house Induction Training Programme, the new faculty members are appraised about the HR Policies. Rules and Regulations of College and Hostel are also defined clearly and are hosted in the website. Every year, Orientation Programme is being organized for the 1st year students and the students are clearly educated about these rules and regulations.



### 6.3.7 Faculty and Staff recruitment

- The faculty and staff recruitments are done as and when required to meet the norms prescribed by AICTE and Anna University, Chennai
- Newspaper advertisements are given about the posts vacant and department in which the posts are vacant
- The applications received are shortlisted and the candidates selected after the initial screening process are invited to appear for the test / interview
- The duly constituted staff selection committee conducts the interview and forward the recommendations to the Principal and management to issue appointment orders

### 6.3.8 Industry Interaction / Collaboration

Better interaction between Technical institutions and industry is the need of the hour. This will have great bearing on the Engineering Curriculum, exposure of industrial atmosphere to engineering students and subsequent placement of young graduating engineers in industries across the country.

We have established understanding with many core and IT industries to provide in-house technical training, implant training, project guidance, industrial visit, internships, placement etc. in the students' perspective. Training, Research Projects, Consultancy and Testing are few areas pertaining to faculty members.

We have collaborations with NASSCOM, ICTACT, Texas Instruments, TCS, Wipro, Oracle, EMC<sup>2</sup>, Pentagram, CISCO, RedHat Linux, Autodesk, Paypal, Jasmine Infotech, Roots etc. Some of the programems organized are:

- NASSCOM: We are one of the 6 Engineering Colleges in India to be the member of NASSCOM and we are actively involved in all the endeavors of NASSCOM.
- ICTACT: We are active member of ICT Academy of Tamilnadu and provide hands-on training to our faculty and students. We bagged the ICTACT Academic Partner Excellence Award for three consecutive years (2011,. 2012 & 2013),
- Oracle Workforce Development Program (Oracle WDP): Under this program students will get oracle training & certifications which will help students in acquiring better skill sets for their career in the IT sector.

- Wipro Mission 10X Technology Learning Centre: Mission 10X chose to enhance the Graduate Engineering Attributes Viz., Deeper Learning, Communication Skills and Team Work in students to achieve this. Students and Faculty members have been trained in-house and in the Mysore campus of Wipro.
- EMC<sup>2</sup>: This initiative is to train the students and pursue research in Big Data and Cloud computing.
- Texas Instruments Innovations Lab: Texas Instruments has sponsored the following laboratories for our students to do research and get trained.
  - Analog System Design Lab
  - Embedded System Design Lab

#### 6.3.9 Admission of Students

Admission of students as per the norms of AICTE, Anna University and Government of Tamilnadu.

#### 6.4 Welfare schemes for

Teaching	Group Insurance, Free Bus, Free Accommodation at Hostel, Medical Care
Non teaching	PF, Group Insurance, Free Bus, Medical Care
Students	Scholarships from the Management, Government Scholarships, Group Insurance, Medical Care

6.5 Total corpus fund generated

-

6.6 Whether annual financial audit has been done

Yes

No

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

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic		University Nominees		Dean / HoD
Administrative		Auditors		Principal / Manager

6.8 Does the University/ Autonomous College declares results 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?

The affiliating University helps the College by nominating representatives on various bodies like, Board of Studies, Academic Council and Results Passing Board through the Director- Academic Courses and Controller of Examinations of Anna University Chennai. Thorough the Nominees of Anna University, we have implemented the Choice Based Credit System (CBCS) from the Academic Year 2016-17 onwards. Availability of adequate level of Human resource and infrastructure are monitored by University. The inspection team for starting a new course and also for the extension of affiliation carries out a detailed inspection on all these. The reports provide meaningful inputs for meeting the desirable level of facilities.

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

The university nominates members for Board of Studies, Academic Council and Governing Council

6.11 Activities and support from the Alumni Association

The institute has a registered Alumni Association. Alumni Meets are organized periodically through this association. The Alumni are invited to interact with the existing students quite frequently. The Alumni are members of the Board of Studies, Academic Council and IQAC and they share their experience on industry expectations that help in restructuring the curriculum and Teaching-Learning Process. Alumni also render their support by providing hands-on training to the students.

#### 6.12 Activities and support from the Parent – Teacher Association

Parents as one of the stakeholders play a vital role in various committees. Feedback is obtained from parents on Teaching-Learning Process, Students Performance, Outcome based Education etc. which provide necessary ideas and suggestions for the improvement of the system. Parents are invited for a departmental level meeting to know more about their expectations and suitable actions are taken based on those inputs.

#### 6.13 Development programmes for support staff

- Hands-on training on modern equipments and technologies
- Training on First-Aid and Fire Fighting Equipments
- Training on Basic Computer Office Tools
- Provision for Qualification upgradation
- In-house Staff Development Programmes
- Programmes to improve the communication skills

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

- Green Audit
- Energy Audit
- Tree Plantations
- Solar Energy Installations
- Awareness Programmes on Environmental Protection, Global Warming etc.
- Rain Water Harvesting
- Reducing the use of paper (online feedback forms)
- e-waste disposal

## 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.

- Muthayammal Virtual Learning Centre (MVLC), an e-Learning platform was developed to promote 24X7 learning
- Online Performance Assessment for Quality (OPAQ), a web-based assessment software developed by our faculty members to conduct objective type online exams for assessment of students' performance so as to improve the quality
- Practicing Outcome Based Education
- Ministry of Small and Medium Enterprises (MSME), Government of India sponsored Business Incubator
- Muthayammal Exhibition for Science and Technology (MEST)
- Autonomous status to the institution
- Introduction of Choice Based Credit System
- NBA Accreditation for 4 programmes

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

The detailed Action Taken Report (ATR) based on the plan of action is presented in Part – A, S.No.2.15

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

Best Practice – 1: Muthayammal Virtual Learning Centre (MVLC)

Best Practice – 2: Group of Elite and Meritorious Students (GEMS)

For details, please refer Annexure – II and Annexure - III

7.4 Contribution to environmental awareness / protection

- Green Audit
- Energy Audit
- Tree Plantations
- Solar Energy Installations

- Awareness Programmes on Environmental Protection, Global Warming etc.
  - Rain Water Harvesting
  - Reducing the use of paper (online feedback forms)
- e-waste disposal

7.5 Whether environmental audit was conducted? Yes  No

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)

## SWOC ANALYSIS

### **STRENGTHS:**

- Conferred with Autonomous Status by UGC from the Academic Year 2016-17.
- Accredited by NAAC from the academic year 2015-16.
- 04 programmes have been Accredited by National Board of Accreditation (NBA), New Delhi.
- 04 UG programmes and 02 PG programmes have been granted Permanent Affiliation Status by Anna University, Chennai, Tamilnadu.
- 05 academic departments have been recognized as Research Centres by Anna University, Chennai, Tamilnadu.
- Has been recognized under section 2(f) of the UGC Act 1956.
- Has been recognized as Business Incubator by Ministry of Small and Medium Enterprises, Government of India.
- Accredited by Tata Consultancy Services.
- Accredited by Wipro Technologies.
- State of the art Infrastructure.
- Excellent Library Resources with Membership in British Council Library, ACM, IEEE, DELNET and American Library and Information Centre.
- Established Muthayammal Virtual Learning Centre for Technology, Engineering and Management (MVLC-TEAM) to provide 24 X 7 learning environment to our students and Faculty Members. Self e-Learning Materials have been developed by our own faculty members.
- Focus on content beyond curriculum by all possible means.

- Excellent academic record and consistently placed in the Top 50 positions in the Anna University Results.
- Well qualified, experienced and dedicated faculty force.
- Established strong Industry connections and have MoUs with TCS, Wipro, Oracle, EMC<sup>2</sup>, Pentagram, CISCO, RedHat Linux, Autodesk, Paypal, Jasmine Infotech, Roots etc.
- Research Laboratory established by Texas Instruments and Wipro Mission 10X.
- Research grants and seminar grants received from AICTE, DST, TNSCST, Anna University and other funding agencies to the tune of Rs.1 Crore.
- An exclusive EDC Cell sponsored by AICTE to the tune of Rs.14 lakhs.
- 100% placement in MBA and more than 70% placement in Engineering streams.

**WEAKNESS:**

- Relations with International Institutions and Industries need to be strengthened.
- Consultancy activities need to be improved in spite of having necessary infrastructure.
- Lack of Patents.
- Majority of students are first graduates and from rural areas and hence lack of communication skills is a matter of concern.

**OPPORTUNITIES:**

- We have strong orientation towards Research and received Research Project and Seminar Grants from funding agencies such as AICTE, DST, TNSCST, Anna University etc. to the tune of Rs. 1 Crore. Still we feel that we haven't received grants as we expected. Hence the NAAC accreditation will be of great boon in this regard.
- The Autonomous Status will pave way for establishing relations with foreign Universities and Industries. At least for the time being, the internet technology offers a helping hand to us to establish online interaction with experts in universities such as NTU, Singapore and Taylor's University, Malaysia.
- Our students will be taking part in the programs organized by NTU, Singapore.
- The fresh relations with Micro Small and Medium Enterprises (MSME)

Development Institute, Chennai, Ministry of MSME, Government of India will really motivate our students to convert their projects into products so as to establish start-up companies. This may also lead to filing of Patents.

- We have applied for Remote Centre of IIT Bombay. If approved, it will be of great help to both the student and faculty community to listen to the lectures of eminent IIT professors in various engineering streams.
- The relations with industries will be strengthened further to establish Research Laboratories in all the Departments.

**CHALLENGES:**

- Sustained Academic Performance due to poor quality of students and lack of motivation among them in the recent years due to admission policies of Government.
- Mushroom growth in the number of Engineering Colleges in the state.
- Sustained Placement Record due to increase in the number of graduates, the recession in IT industries and lack of opportunities in core industries.
- Raising the Academic Standards of the Students to global level to compete in the global market.
- Tough going in terms of developing Employability Skills of the Students due to lack of seriousness among them.
- Exposing the Faculty Members to Industry environment due to lack of motivation among Faculty members and lack of support from industries.



#### 8. Plans of institution for next year

- To submit the projects of incubatees of **Muthayammal Incubation Centre** to MSME, Govt. of India for getting funds under the scheme "Support For Entrepreneurial And Managerial Development Of SMEs Through Incubators"
- To apply for **Atal Incubation Centre** to establish new incubation centre at our institute that would nurture innovative start-up businesses in their pursuit to become scalable and sustainable enterprises
- To bring innovations into the Choice Based Credit System (CBCS)
- To organize an International Conference on Engineering, Technology and Management
- To conduct more programmes to promote Entrepreneurial Attitude among students
- To organize Muthayammal Exhibition for Science and Technology (MEST)
- To promote Research and Development and to file patents

Name **Dr.G.SELVAKUMAR**



Signature of the Coordinator, IQAC

Name **Dr.S.NIRMALA**



Signature of the Chairperson, IQAC

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## Annexure – I

### **Feedback Analysis and Reward/Corrective Measures Taken**

#### **I. Methodology for Analysis of Feedback on Teaching Learning Process:**

Feedback Analysis system is effective in our campus. We were collecting the feedback from the students on Teaching - Learning Process. All the students in each class are instructed to participate in the evaluation system.

- The feedback is collected periodically from Students twice in each semester
- The name of the student who has submitted the feedback is given optional.
- Faculty appraisal is done by the HOD and Principal with the help of the feedback forms collected from students.
- The feedback form mainly focuses on various skills of the faculty members as mentioned below:

The Feedback Consist of 7 Metrics

1. Level of Preparedness (Subject Knowledge and Adequate preparation)
2. Class room delivery (Teaching Methodology, Discussion of Subject in the Classroom)
3. Presentation (Clarity of Lecture, Effective Board work, Use of training aids, Examples)
4. Completion of Syllabus (Coverage of portions, knowledge inputs outside the syllabus)
5. Involvement in internal assessment (Whether casual or involved with corrective remarks)
6. Intellectual Stature (Commands respect of students by intellectual and maturity level & motivation)
7. Integrity (Honesty, impartial fairness)

All the 7 metrics are evaluated for 100 marks

- The collected feedback is analyzed based on the average marks awarded by the students.
- The faculty who secures less than 75 marks is counselled by the department HOD's. Then the faculty member is advised to understand the areas where he/she is strong or weak and directed properly to correct his/her mistakes with the help of the feedback given by the students.

#### **Record of Corrective Measures Taken:**

#### **System of Reward:**

The performance of the faculty members are evaluated based on the feedback given by the students. Performance rating of faculty is one of the factors in evaluating his/her annual performance. Based on his/her annual Performance annual increments are released.

**Corrective Measures:**

According to the performance of the faculty members, corrective and remedial Measures are taken and proper suggestions are given for their improvement accordingly

- The faculty member is asked to take classes in their area of interest
- The HOD/Senior faculty will assess the classes of the concerned teachers and the mode of improvement in teaching will be suggested.
- The faculty member showing poor performance is directed to attend the faculty development programmes to enhance their knowledge.
- If the appraisal is exceptionally good, the faculty members are rewarded with promotions and increments
- Faculty members are suggested to refer more books so that they can deliver the content properly to the students.

**II. FEEDBACK ON FACILITIES****A. Collection of Feedback, Analysis & Corrective Action:**

- Feedback on facilities such as library, internet, drinking water, stationery, canteen, transport, Rest room facility were collected from students and analyzed.
- If any discrepancy is observed in the facilities then it is brought to the knowledge of the management for immediate attention.
- The problem will be resolved as early as possible.

**Analysis and Corrective Measures:**

The students are happy about the facilities provided by the college and rated them as excellent and good. A fraction of the students felt that the facilities provided are satisfactory. Few students expressed that some more opportunities need to be provided to participate in sports and games. Hence it was decided to conduct the Annual Sports Meet of the institution every year.

Also, few students opened that the menu in the canteen should be exhausted and more snacks, beverages should be improved further. Hence after through review, the management has decided to change the contractor.

The following facilities are made available based on the students's request.

1. Multi gym for boys and girls
2. ATM facility
3. Internet facility in boys and girls hostel
4. Separate menu for the students from Andhra Pradesh
5. Wi-Fi
6. Smart Classrooms
7. Muthayammal Virtual Learning Centre (MVLC)
8. Usage of Laptop in the Hostel.

## Annexure - II

### **BEST PRACTICE - 1**

#### **1. Title of the practice**

**Muthayammal Virtual Learning Center for Technology, Engineering and Management (MVLC-TEAM) in MOODLE Platform**

#### **2. Goal**

Subject sources/materials should be accessible by the students 24 X 7 online as well as offline.

#### **3. Context**

The college provides materials to students for all subjects through intranet and internet in MOODLE platform. This practice makes the student to get motivated to excel in their academic even in the absence of faculty members.

#### **4. The Practice**

The Institution encourages all the Heads of the departments to collect the materials from the faculty members before start of the semester. Once the quality is ensured by a team, it is made available to the students on the MEC-Virtual learning platform. The contents are mentioned below:

Contents for Theory Subjects

1. Syllabus
2. Lesson Plan
3. Course Material for all 5 units(MS Word or PDF format)
4. PPT for all 5 units
5. Question Bank
6. Model Question Papers
7. Previous year Anna University Question Papers
8. Content Beyond Syllabus
9. Multiple Choice Questions
10. Relevant Video Lectures(NPTEL or other resources)

11. Relevant e-books
12. Relevant Website Details
13. Technical & HR Questions
14. GATE Questions
15. List of Experts
16. Value Added Courses(If any)
17. Schedule of Expert Lectures in A-View and Virtual Classrooms – initiatives of IIT Bombay
18. Relevant Webinars

#### Content for Practical Subjects

1. Syllabus
2. Lesson Plan
3. Lab Manual(MS Word or PDF format)
4. Viva-voce questions
5. Virtual Lab
6. Relevant Video Lectures(NPTEL or other resources)
7. Relevant e-books
8. Relevant Website Details
9. Content Beyond Syllabus
10. List of Projects that can be done pertaining to the lab

The complete collection of all DVDs from all the departments is stacked in the department library as well as in the central library.

#### **5. Evidence of Success**

Since the environment is conducive for the students to learn anytime from anywhere, this practice has improved the academic performance of the students. Because if this, the Institution has been consistently ranked within first 50 positions among 550+

Engineering Colleges affiliated to Anna University, Chennai based on the academic performance.

Our students, so far, have secured around 133 University Ranks including 4 Gold Medals from Anna University.

#### **6. Problem Encountered and Resources Required**

As most of the students are from rural background, accessibility to computer resources is still a challenge as their parents could not afford to buy Laptops / Personal Computers. One-way this problem is overcome due to the initiative of the Government of Tamil Nadu which has issued free laptops to all the higher secondary students for the past two academic years. We also provide central computer centre which has digital repository of all the contents stored in server for the students to access.

#### **7. Other Innovative Teaching Learning Methodologies**

In addition to the above, we also encourage and implement the following ICT enabled Teaching Learning Methodologies.

- Active users of the following initiatives of IIT Bombay and MHRD of Government of India
  - ✓ Virtual Classroom
  - ✓ Virtual Labs
  - ✓ Spoken Tutorial
  - ✓ A-View
  - ✓ Project ekalavya
  - ✓ FOSSEE (Free and Open Source Software for Education)
  - ✓ OSCAR Animation for Mechanical Engineering
- State of the art computer based language laboratory to improve the communication skills of the students.
- Digital Class Rooms with Audio / Visual facilities and Wi-Fi Connectivity.
- More focus on contents beyond curriculum.
- Course Files and Lab Manuals for Effective Instructions
- Applied for Remote Centre of IIT Bombay
- Active users of NPTEL Video Lectures
- Active users of the following e-learning web portals
  - Khan Academy

- Course Era
- MIT Open Courseware
- edX online courses
- TED Ed Lessons
- Shodhganga – Repository of Ph.D. Thesis
- Hot Potatoes software
- Mind Map Software
- Google Forms
- Youtube Education Channel
- Interaction with national and international experts through Skype and Team Viewer platforms
- Entrepreneurship Awareness and Development Programmes
- Mentoring and Counseling Practices

## Annexure - III

### **BEST PRACTICE - 2**

#### **1. Title of the Practice**

##### **Group of Elite and meritorious Students Club (GEMS club)**

#### **2. Goal**

Group of Elite and Meritorious Student' club is a platform for the students to find and nurture the real potential. The approach reflects not only the educational needs – but a commitment to life-long learning, the ability to work in multidisciplinary settings with integration of innovation and learning, and an appreciation of creativity and novelty in every activity. It sets podium for inventors, researchers, and industry veterans, all focused on training the next generation to work smart and dream big.

#### **3. The Context**

As it is a big step to bridge the academia to industry, the context here is to give insights about the industrial intelligence. The students will have a chance to know about the present contemporary computation. By conducting many inter/intra discipline activities, awareness to new technologies and current job markets are exposed to the students. Moreover, the skills needed for niche hiring are practiced here.

#### **4. The Practice**

The practices are multi folded such as regular meetings, group discussions; paper presentations, etc are some to name. Students with different interests come here with quests and there are always answers from the expertise irrelevant of domains and professions. For example, the various government jobs after BE are discussed elaborately. The steps to be taken to pursue higher studies in abroad and to avail scholarship are also highlighted among the students. The week students are given much attention to improve their communication skills and boost their confidence. Good preparation of CV, motivating for mini projects, clearing online certification courses, etc are given priority to the students.



## 5. Evidence of Success

The students have shown much interest to participate in GEMS club activities. News letter has been launched that depicts all the activities and achievements of students. Since the news letter comprise of events of all the engineering departments, accolades pour from various faculties which really encourages participant as well as the committee. The following list shows some of the success stories.

- Our student S.Ashok kumar of Electrical Engineering won gold medal in “National Design and Research Forum” at 45<sup>th</sup> All India Student Design Awards-2014.
- Mr.J.Srinivasan and Mr. R. Sanjeev Kumar got a grant of Rs.15,000/- from IEEE Madras Section for their project titled “Automated Real-time Crack Detection in Railway Track Using Time Domain Reflectometer (TDR)”
- 6 Students of III Year Mechanical Engineering have participated in a robotics workshop of “ROBO-ZEST’14” at Muthayammal Engg College held from 17th to 18th January 2014.
- S.Prasanth, M.Tamilarasan, P.Sivasakthi, D.Srimanikandan, N.Thirumurugan of final Year ECE Students were shortlisted for the project titled, “Sufficient/ Insufficient balance information by using Dot Matrix Display in ATMs” in the Ti Innovation Challenge India Design Contest 2015.
- D.Srimanikandan, S.Prasanth, P.Sivasakthi and M.Tamilarasan of final year ECE students have participated in the project contest titled Engineering Students Innovation Challenge-2014 (ESIC 2014) organized by International Society for Scientific Research and Development and won Best project award for their project “Train Bulwark System for Railway Safety”.
- D.Srimanikandan, G. Palanisamy, N.Thirumurugan of final Year ECE Students have won I prize in MEST during 14th & 15th October 2014 for the project, “Current Sensing Robot for Safety in Industrial Field”.
- R.Saran, S.Sathishkumar, S.Sibiraj, Mechanical Engineering Students have won third place in the Car Design Contest organized by “Society of Automotive Engineers (SAE)”, India.

- A team of 6 students from the Department of EEE have won National Level Second place with a cash award of Rs.75,000/- from Ministry of Railways in the Grand Finale of the Smart India Hackathon 2017 organized by Government of India on 2<sup>nd</sup> and 3<sup>rd</sup> March, 2017 for their project titled “Smart Waste Container”.

## **6. Problem Encountered and Resources Required**

Time is the only constraint here and we are trying to optimize efficiently and more plans are yet to come.