



# **SELF STUDY REPORT**

**FOR**

**1<sup>st</sup> CYCLE OF ACCREDITATION**

## **MUSALIAR COLLEGE OF ENGINEERING AND TECHNOLOGY**

MUSALIAR COLLEGE OF ENGINEERING AND TECHNOLOGY MUSALIAR  
COLLEGE (PO) PATHANAMTHITTA - 689653

689653

[www.musaliarcollege.in](http://www.musaliarcollege.in)

Submitted To

**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**

**BANGALORE**

**(Draft)**

# 1. EXECUTIVE SUMMARY

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## 1.1 INTRODUCTION

The Musaliar Education Trust, a charitable trust was founded in the year 2001 by a group of well settled educationalists and technocrats having vast experience in the educational and technical fields with an aim to accomplish distinction in Engineering and Technological pursuits. The college started its function in 2002 with under graduate Engineering programs in Mechanical Engineering, Electronics & Communication Engineering and Computer Science Engineering. In 2004, BTech Electrical and Electronics Engineering, BTech Civil Engineering were started. In 2010 Post graduate program in Business Administration, MTech Programs in VLSI & Embedded systems as well as Computer Science & Engineering were added. Master of Computer Application was started in the year 2011.

Thus the college offers five UG and four PG courses approved by AICTE and is affiliated to APJ Abdul Kalam Technological University. The campus is situated in Pathanamthitta district of Kerala State, within the Pathanamthitta Municipal Area. The campus is easily accessible by road (about 10 Minutes drive from the Civil Station, Pathanamthitta and half an hour drive from the nearest railway station, Chengannur and two hour drive from the nearest airport Trivandrum International Airport). Frequent private and KSRTC buses provide cheap and easy accessibility to the campus. In addition, 14 college buses on different routes with subsidized rates are catering to student's needs.

The college focuses on providing an outstanding platform for Technical and Entrepreneurial Training to rural and urban students. The college library has DELNET, Springer & NPTEL facility with a collection of about 19196 volumes of books 5590 titles, 39 Indian and 32 International journals covering all branches of engineering, management, science & humanities. A Digital Library with internet connectivity is also available with round the clock WiFi connectivity.

The college has separate hostels for boys and girls students, situated within the vicinity of the college and houses nearly 300 students.

The institution provides quality education in Engineering & Management sciences to aspiring students with the support of both digital and technical infrastructure ably managed by highly qualified and efficient faculty.

### **Vision**

To develop into a world class pace setter with distinct identity and character to meet the demands of a changing global technological competitive scenario with a societal thrust.

## Mission

- To impart quality Education in Engineering & Management by providing state of the art teaching learning methods
- To foster innovation in Technology and its application for meeting global Challenges
- Inculcate global awareness, communication skills, team building and ethical values.
- To collaborate with industry and R & D organization for developing knowledge and sustainable technologies
- To facilitate Research and Innovation in various fields of Engineering and Management.

## 1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

### Institutional Strength

### Institutional Strength

1. Institution with the State of art Infrastructure.
2. Well experienced and highly dedicated staff members.
3. Conducting Bridge courses & Orientation courses to UG students, and Remedial classes to needy students.
4. Pollution free environment for conducive teaching learning atmosphere.
5. Well disciplined students with readiness to adopt changes.
6. Support and cooperation from management for philanthropic and charitable activities.
7. Well equipped laboratories with sophisticated equipments.
8. State of the art IT enabled library facility
9. Adoption of Advisor-ward system.
10. Recognition and appreciation by Skill Development Centers, ICT Academy, Disaster Management wing of state Government, KSIDC, KSTIL( Kerala State Infrastructure Limited), Motor Vehicles department, Govt. of Kerala, Media Fraternity etc
11. High-profiled and sophisticated communication lab, NPTEL, Skill development facility and start up initiatives to benefit student community
12. Focus on extension activities where students and faculty interact with society.
13. Well equipped and furnished Gymnasium and indoor and outdoor games facility.
14. Consultant for Engineering and Environmental solutions to local self governing bodies and state Government

### Institutional Weakness

### Institutional Weakness

1. Situated in an industrially backward district. Industry interaction is marginal

2. Lack of patents and research in advanced fields.
3. As the syllabus and curriculum are prescribed by affiliating University, the College has no flexibility in making timely changes/amendments to keep with the fast changing trends in the technology / industry. However, to some extent this gap is filled by way of offering the value added courses to suit industry needs.

### **Institutional Opportunity**

### **Institutional Opportunity**

1. Additional PG Programs.
2. Offering skill based programs for local community.
3. Identifying problems in society and providing engineering solution to the same with involvement of faculty, students and R & D organizations.
4. Providing value added courses as per industry needs
5. Generating revenue through sponsored research projects and consultancy works from various funding agency and industry.
6. Training centre for local self governing bodies through Industry Institute interaction.
7. Providing test facility for Government and Non Government agencies

### **Institutional Challenge**

### **Institutional Challenge**

1. Lack of communication skills among the rural background students.
2. Lack of awareness about the technical courses and future possibilities among the rural background students and their parents.
3. Attracting major companies to campus for placement due to remote geographical location from industries.

## **1.3 CRITERIA WISE SUMMARY**

### **Curricular Aspects**

#### **Responsive management**

The institution focus on quality delivery of curriculum designed by the affiliated university. To introduce more diversity in the future, the programmes are headed by respective Heads of Departments. The academic programs are offered in separate academic blocks with class rooms and laboratory facilities incorporated. This helps to have focused approach to teaching learning process. At most importance is given for institute society interaction where student community serves society which improves their professional caliber. Most

importantly, new academic programme and courses are introduced in tune with the emerging national and global trends and also with relevance to the local needs. The curricula of each programme contain syllabi consisting of theory and practical courses including core courses, elective courses, workshop/computer practice, industrial training, seminar presentation, project work, educational visits, etc. The required credits for the award of degrees, classification, duration and contact hours/weeks related to each are described in the regulations.

### **Teaching-learning and Evaluation**

#### **Teaching-learning and Evaluation**

The teaching and learning quality of the institution is attained through the updated curriculum and innovative teaching methods followed by faculty members to fulfill the needs of the students and industries. In the admission procedure, Office of Commissioner of Entrance exams, Government of Kerala has designed, developed and adopted Kerala Engineering Admissions Single Window Counseling process to ensure transparency so that engineering aspirants get admission into Engineering College based on published rank list.

Teaching Learning process is scrutinized by the IQAC (Internal Quality Assurance Cell).

Effective teaching and learning is achieved through participation of students, industry experts, academicians, alumni and parents. Continuous evaluation takes place through students and parents feedback supported by industrial needs. The college follows semester pattern with Semester Based Credit System (SBCS). The institution initiated the outcome based education through the practice of Blooms taxonomy educational objectives and learning outcomes for content delivery and assessment. Program objectives and course objectives are clearly defined and disseminated among the stake holders.

### **Research, Innovations and Extension**

#### **Research, Innovations and Extension**

The Institute focus deeply towards research and allied activities through laboratories equipped with state of the art infrastructure, high speed internet, arrangements of different technical seminars, workshops and training sessions to enhance the knowledge of the students in various recent technologies and emerging fields of research, financial support, sabbatical leave provided by the institute for research and collaborative research work.

The management has extended its support to the faculty members for registering their Ph.D and to carry out their research.

The College also offers incubation facility where students with novel engineering ideas are given support with the help of Government agencies to be entrepreneurs. Separate facility is provided in the campus under Musaliar Startup Zone where incubation of startups by students are entertained.

Expertise in inter-disciplinary areas and available facilities from each department is made available to the students by offering open elective which in turn helps the students to select inter disciplinary project.

## **Infrastructure and Learning Resources**

### **Infrastructure and Learning Resources**

The Institute has infrastructure and learning resources. The Institute provides necessary facilities for laboratories (furniture, fixtures, equipments and good laboratory practices). The institute has facilities for general computer education of students and is augmented from time to time. Infrastructure facilities are being utilized optimally. Additional facilities for sports and extra-curricular activities (gymnasium, auditorium etc.) are also provided.

The library has adequate physical facilities such as reading room, reprography, and internet. Number of books in the Central Library is adequate for students. The library is stocked with adequate number of journals (national and international) and other library resources (i.e. CDs/ cassettes, etc.). Library resources are augmented every year with newer editions and titles. The library operations (issue of books, getting the necessary references, etc) are effective and user-friendly. The library collects feedback from users and incorporates the suggestions for its enhanced functioning. The Institution being a local chapter for NPTEL and is in the process of collecting technical resources worth 15TB copied from IIT Madras. The Institution also has interactive video conferencing facility as part of Skill Development Platform of Government of Kerala which enables students and faculty to attend online interactive courses and webinars.

## **Student Support and Progression**

### **Student Support and Progression**

The quality of the Educational Institution is mainly judged by its students and their excellence. Our Institution has become one of the pioneer institutions and has the credit of placing students at top positions in different sectors both in government and private within the country and abroad. The institute has a Student counseling Cell, Career counseling / Training and placement cell, Anti ragging and Anti sexual harassment committee to guide and address issues faced by students. The helpline number and email ID are displayed across the institution for easy access. The Student Grievance Redressal Committee addresses the grievances of the students and the grievances are aptly dealt by the concerned authority. The institute has active Alumni Association, Student Council and National Service Scheme. Students have won many awards in the regional and state level cultural and academic competitions.

Institution provides guidance to students on various competitive examinations. Training sessions are provided to students which help them to excel in national level competitive exams like GATE, GRE, and TOEFL.

## **Governance, Leadership and Management**

## **Governance, Leadership and Management**

The Administrative and Academic activities of the Institution are managed by the Principal and policy matters are decided by Musaliar Educational Trust. The college has Governing Body for its perspective, policy, financial planning and management, meeting twice or more in a year. Based on the decision made in the Governing Body meeting, the Chairman extends valuable support to the Principal in order to implement the plans and policies of the College.

The academic activities of the Institute are planned by the college council and implemented by Principal and HOD;s. The Council monitors the formulation, programme implementation and evaluation, reforming with special reference to quality and standards of academic and industrial expectations. The College council focuses on comprehensive development and on continuous improvement for steady growth of the college.

## **Institutional Values and Best Practices**

### **Institutional Values and Best Practices**

Institution maintains a clean and green environment within the campus. The Institution ensures the green environment by establishing a separate maintenance department.

The maintenance team takes care of the up-keeping of the environment and ensures to keep the surroundings clean. It maintains the lawn and plantations by employing gardeners and the cleanliness has been maintained by employing sufficient number of sweepers. The maintenance staff members do periodic checks and maintain records for the same. The green audit of the campus and its facilities is a regular event in this Institution. Our Institution takes more interest in maintaining the campus highly eco- friendly and energy conservative. The

campus looks green by planting more trees which ultimately gives a pleasant feeling for the students to learn and for the faculty members to work. Many initiatives are taken by the College to inculcate the eco friendly culture among the student community. The lush green campus provides the facilities such as Rain Water Harvesting, Well Grown Trees and Water Reuse Treatment.

Institution focuses on society interactions by both faculty and students. The same is done through various department associations and through professional societies like NSS, IEEE, UNAI etc. Societal concerns are taken up and engineering solutions for the same is proposed through student involvements and projects.

Institution has brought out an innovative 'Good Morning Test' system to enhance the learning capability of students. This helps to induce a timely study mechanism to student community and also helps to identify slow learning and weak students so that remedial corrective measures could be adopted to enable them catch up with course delivery.

## 2. PROFILE

### 2.1 BASIC INFORMATION

Name and Address of the College	
Name	MUSALIAR COLLEGE OF ENGINEERING AND TECHNOLOGY
Address	MUSALIAR COLLEGE OF ENGINEERING AND TECHNOLOGY MUSALIAR COLLEGE (PO) PATHANAMTHITTA - 689653
City	Pathanamthitta
State	Kerala
Pin	689653
Website	<a href="http://www.musaliarcollege.in">www.musaliarcollege.in</a>

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	AS ABDUL RASHEED	0468-2301703	8078461703	0468-2301702	principal@musaliarcollege.com
IQAC Coordinator	JAYAPRASAD	0468-2261906	9497793971	0468-2301704	jaypees03@gmail.com

Status of the Institution	
Institution Status	Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular



<b>Recognized Minority institution</b>	
If it is a recognized minority institution	Yes <a href="#">Minority.pdf</a>
If Yes, Specify minority status	
Religious	Muslim Minority Institution
Linguistic	
Any Other	

<b>Establishment Details</b>	
Date of establishment of the college	08-08-2002

**University to which the college is affiliated/ or which governs the college (if it is a constituent college)**

State	University name	Document
Kerala	A.P.J. Abdul Kalam Technological University	<a href="#">View Document</a>

**Details of UGC recognition**

Under Section	Date	View Document
2f of UGC		
12B of UGC		

**Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)**

Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day,Month and year(dd-mm-yyyy)	Validity in months	Remarks
AICTE	<a href="#">View Document</a>	10-04-2018	12	Document submitted and awaiting for approval for next year

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

<b>Recognitions</b>	
Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No
Is the College recognized for its performance by any other governmental agency?	No

<b>Location and Area of Campus</b>				
<b>Campus Type</b>	<b>Address</b>	<b>Location*</b>	<b>Campus Area in Acres</b>	<b>Built up Area in sq.mts.</b>
Main campus area	MUSALIAR COLLEGE OF ENGINEERING AND TECHNOLOGY MUSALIAR COLLEGE (PO) PATHANAMTHITTA - 689653	Semi-urban	12	31482

## 2.2 ACADEMIC INFORMATION

<b>Details of Programmes Offered by the College (Give Data for Current Academic year)</b>						
<b>Programme Level</b>	<b>Name of Programme/Course</b>	<b>Duration in Months</b>	<b>Entry Qualification</b>	<b>Medium of Instruction</b>	<b>Sanctioned Strength</b>	<b>No.of Students Admitted</b>
UG	BTech,Mechanical Engineering	48	Higher Secondary	English	120	37
UG	BTech,Electrical And Electronics Engineering	48	Higher Secondary	English	30	14
UG	BTech,Electronics And Communication Engineering	48	Higher Secondary	English	30	13
UG	BTech,Computer Science And Engineering	48	Higher Secondary	English	60	29
UG	BTech,Civil Engineering	48	Higher Secondary	English	60	29
PG	Mtech,Electronics And Communication Engineering	24	Btech Electronics and Electrical Engineering	English	18	5
PG	MCA,Computer Science And Engineering	24	BCA BSc Computer Science	English	60	31
PG	Mtech,Computer Science And Engineering	24	Btech Computer Science and Engineering	English	18	6
PG	MBA,Master Of Business Administration	24	Graduation	English	60	59

**Position Details of Faculty & Staff in the College**

<b>Teaching Faculty</b>												
	<b>Professor</b>				<b>Associate Professor</b>				<b>Assistant Professor</b>			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	0				0				0			
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit	0				0				0			
Sanctioned by the Management/Society or Other Authorized Bodies	9				16				69			
Recruited	7	2	0	9	6	10	0	16	35	34	0	69
Yet to Recruit	0				0				0			

<b>Non-Teaching Staff</b>				
	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Total</b>
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				20
Recruited	13	7	0	20
Yet to Recruit				0

<b>Technical Staff</b>				
	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Total</b>
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				0
Recruited	18	8	0	26
Yet to Recruit				0

**Qualification Details of the Teaching Staff**

<b>Permanent Teachers</b>										
<b>Highest Qualification</b>	<b>Professor</b>			<b>Associate Professor</b>			<b>Assistant Professor</b>			<b>Total</b>
	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Male</b>	<b>Female</b>	<b>Others</b>	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	4	1	0	1	0	0	1	0	0	7
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	3	1	0	5	10	0	35	33	0	87

<b>Temporary Teachers</b>										
<b>Highest Qualification</b>	<b>Professor</b>			<b>Associate Professor</b>			<b>Assistant Professor</b>			<b>Total</b>
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

<b>Part Time Teachers</b>										
<b>Highest Qualification</b>	<b>Professor</b>			<b>Associate Professor</b>			<b>Assistant Professor</b>			<b>Total</b>
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

<b>Details of Visting/Guest Faculties</b>					
<b>Number of Visiting/Guest Faculty engaged with the college?</b>	<b>Male</b>		<b>Female</b>		<b>Total</b>
	0	0	0	0	0

**Provide the Following Details of Students Enrolled in the College During the Current Academic Year**

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
PG	Male	53	1	0	0	54
	Female	138	1	0	0	139
	Others	0	0	0	0	0
UG	Male	364	3	124	0	491
	Female	195	3	59	0	257
	Others	0	0	0	0	0

**Provide the Following Details of Students admitted to the College During the last four Academic Years**

Programme		Year 1	Year 2	Year 3	Year 4
SC	Male	0	2	4	3
	Female	2	1	4	2
	Others	0	0	0	0
ST	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
OBC	Male	19	33	33	47
	Female	9	13	16	14
	Others	0	0	0	0
General	Male	27	32	30	38
	Female	8	7	9	16
	Others	0	0	0	0
Others	Male	103	73	260	215
	Female	78	83	136	157
	Others	0	0	0	0
Total		246	244	492	492

### 3. Extended Profile

#### 3.1 Program

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

Response: 768

File Description	Document
Institutional Data in Prescribed Format	<a href="#">View Document</a>

Number of programs offered year-wise for last five years

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

#### 3.2 Students

Number of students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1060	1258	1609	1616	1576

File Description	Document
Institutional Data in Prescribed Format	<a href="#">View Document</a>

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

2017-18	2016-17	2015-16	2014-15	2013-14
72	72	72	77	77

File Description	Document
Institutional data in prescribed format	<a href="#">View Document</a>

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

2017-18	2016-17	2015-16	2014-15	2013-14
426	430	475	470	456



File Description	Document
Institutional Data in Prescribed Format	<a href="#">View Document</a>

### 3.3 Teachers

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

2017-18	2016-17	2015-16	2014-15	2013-14
94	90	106	111	105

File Description	Document
Institutional Data in Prescribed Format	<a href="#">View Document</a>

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

2017-18	2016-17	2015-16	2014-15	2013-14
90	90	99	111	105

File Description	Document
Institutional data in prescribed format	<a href="#">View Document</a>

### 3.4 Institution

#### Total number of classrooms and seminar halls

**Response: 32**

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

2017-18	2016-17	2015-16	2014-15	2013-14
234.9	259.8	353.7	289.2	398.3

#### Number of computers

**Response: 361**

## 4. Quality Indicator Framework(QIF)

### Criterion 1 - Curricular Aspects

#### 1.1 Curricular Planning and Implementation

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

##### Response:

Institute inculcates unique and transparent practice for effective delivery of curriculum as stated below:

##### Activities before commencement of semester:

1. Institute practices allocating courses for next semester at end of current semester based on expertise and choice of Teacher
2. Orientation / Induction / peer team discussion is carried out on subject matter
3. Teachers prepare lesson plan and unit-wise lecture notes according to curriculum of APJ Abdul Kalam Technological University (KTU), Kerala
4. Academic calendar of semester is prepared, in-line with schedule of KTU and communicated to students and teachers well in advance. According to academic calendar prepared by IQAC, respective departments prepare their activity plans and time-tables.
5. All teachers prepare course files according to defined framework, which includes:
  - Academic calendar
  - Class & personal time tables
  - Syllabus, course objectives, outcomes & list of books
  - Teaching plan/Lesson plan
  - Subject notes and e-contents
  - University's previous examination question papers & model solutions
  - Unit-wise question bank (subjective/objective)
  - Assignments
  - Attendance statements
  - In-semester Examination (Series Test) and model examination question papers with answer keys along with sample answer sheets ( best, average and mediocre)
  - Remedial classes records
  - Internal Continuous Assessment (ICA)

Internal Quality Assurance Cell (IQAC) assesses the course files of teachers and suggests necessary corrections, if required. Readiness of classrooms and laboratories are ensured for effective delivery of curriculum

##### Activities during the semester:

1. Institute conducts induction program for newly admitted students to understand the academic culture of the institute, curriculum, University examination pattern and code of conduct
2. Theory and Practical sessions commence according to time table and teaching plan

3. Mentor-mentee meetings are conducted at regular intervals.
4. Review of student's attendance is taken at the end of every month and displayed on the notice board and the same is communicated to the parents.
5. The review of syllabus coverage is taken regularly in a semester and extra lectures are arranged, if required.
6. Online student's feedback of teaching is taken twice in a semester and corrective actions are initiated accordingly
7. Series Test (Internal assessment test) is conducted twice in the semester. Question papers for the same are thoroughly scrutinized through internal quality Assurance cells of respective departments to ensure that the questions are as per the standards of outcome based approach.
8. The results of Series Test are analyzed and communicated to the students and parents.
9. Remedial classes / retests are conducted for weaker students / slow learners
10. PTA meeting is conducted twice in a semester for the communication of student's progress and to take academic feedback from parents.
11. Continuous Assessment (CA) is conducted throughout the semester

#### Activities at end of the semester:

1. Model exams and revision of important topics with focus on University exams are conducted.
  2. Final continuous assessment marks are notified to students and submitted to Kerala Technological University.
- Outcomes of the semester activities are analyzed and corrective actions are suggested for the next semester.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

**Response:** 28

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

2017-18	2016-17	2015-16	2014-15	2013-14
5	5	10	6	2

File Description	Document
Minutes of relevant Academic Council/BOS meetings	<a href="#">View Document</a>
Details of the certificate/Diploma programs	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

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

**Response:** 121.54

1.1.3.1 Number of teachers participating in various bodies of the Institution, such as BoS and Academic Council year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
44	53	20	6	0

File Description	Document
Details of participation of teachers in various bodies	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 1.2 Academic Flexibility

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

**Response:** 62.76

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

Response: 482

File Description	Document
Minutes of relevant Academic Council/BOS meetings.	<a href="#">View Document</a>
Details of the new courses introduced	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented****Response:** 100

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

Response: 10

File Description	Document
Name of the programs in which CBCS is implemented	<a href="#">View Document</a>
Minutes of relevant Academic Council/BOS meetings.	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**1.2.3 Average percentage of students enrolled in subject related Certificate/ Diploma programs/Add-on programs as against the total number of students during the last five years****Response:** 35.55

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

2017-18	2016-17	2015-16	2014-15	2013-14
177	618	897	543	356

File Description	Document
Details of the students enrolled in Subjects related to certificate/Diploma/Add-on programs	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

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

Response

The institution is adopting APJ Abdul Kalam Technological University curriculum. Also the institution creates awareness among the students by organizing different programs in which the resource persons are invited to deliver lectures on cross cutting issues. The cross cutting issues like gender, environment education, human sustainability values and professional environment ethics are included into the curriculum by organizing seminars, workshops, discussions for the following issues:

### **Gender**

Equal opportunities are given to both the genders in terms of admissions, employment, training programmes, sports activities etc., and so gender issues do not arise. International women's day is celebrated, Gender Sensitization Discussions, debates and guest talks are organized in the issues related to gender sensitization. Faculty and students have delivered talks on Role of a citizen for women empowerment, opportunities provided by Government to encourage women in science and technology. Girls and boys have actively participated in various co-curricular activities such as paper presentations, organization of paper contests, group discussions and technical quiz programmes. Both boys and girls are made members of various clubs associated with academic, co-curricular and extracurricular activities. Institution supports women faculty and students and encourages them to participate in events focusing on women empowerment and promoting leadership qualities in women.

### **Human Values and Sustainability**

The curriculum includes courses on professional ethics, and human rights. Special lectures are also arranged to create awareness on these. As per Kerala Technological University norms an Anti- Ragging Committee has been constituted to handle the issues pertaining to ragging. In addition, undertaking from the parents and students are taken during the admission process which is related to the anti-ragging act and making the campus ragging free. Value based education and lessons on sustainability are imparted to students by professional counselors periodically.

### **Professional and Environment Ethics**

As per University norms Students have courses on Environmental Science and Engineering. Students are also encouraged to participate in activities that are primarily focused in protecting the environment. Awareness programmes are also initiated by Eco club and NSS which extensively carry out activities for environmental protection and ecological preservation issues.

Various courses offered by the College as per University curriculum that address environment and sustainability are

- CE 010702 Environmental Engineering
- CE 010 706L04 Environmental Impact Assessment
- CE010 803 Environmental Engineering II
- CE010 805G02 Environmental Pollution Control Techniques
- EE 010 606L06 Renewable energy Sources
- BE 103 Introduction to Sustainable Engineering
- CE371 Environment and Pollution
- EE367 New and Renewable Energy Systems

- CE405 Environmental Engineering- I
- CE469 Environmental Impact Assessment
- CE402 Environmental Engineering- II

Course details that address Human values and Professional ethics are

- EN010 302 Economics and Communication Skills
- EN010 402(ME) Principles of Management
- EC010 805G06 – Professional Ethics
- EN010 502(ME) Principles of Management
- HS200 Business Economics
- HS210 Life Skills
- HS300 Principles of Management
- ME373 Human Relations Management
- Research Methodology

File Description	Document
Any Additional Information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

**Response:** 10

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

Response: 10

File Description	Document
Details of the value-added courses imparting transferable and life skills	<a href="#">View Document</a>
Brochure or any other document relating to value added courses.	<a href="#">View Document</a>

**1.3.3 Percentage of students undertaking field projects / internships**

**Response:** 39.53

1.3.3.1 Number of students undertaking field projects or internships

Response: 419

File Description	Document
List of students enrolled	<a href="#">View Document</a>
Institutional data in prescribed format	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 1.4 Feedback System

<p><b>1.4.1 Structured feedback received from 1) Students, 2)Teachers, 3)Employers, 4)Alumni and 5)Parents for design and review of syllabus-Semester wise/ year-wise</b></p> <p><b>A.Any 4 of the above</b></p> <p><b>B.Any 3 of the above</b></p> <p><b>C. Any 2 of the above</b></p> <p><b>D. Any 1 of the above</b></p> <p><b>Response: C. Any 2 of the above</b></p>	
File Description	Document
Any additional information	<a href="#">View Document</a>
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management	<a href="#">View Document</a>
URL for stakeholder feedback report	<a href="#">View Document</a>

<p><b>1.4.2 Feedback processes of the institution may be classified as follows:</b></p> <p><b>A. Feedback collected, analysed and action taken and feedback available on website</b></p> <p><b>B. Feedback collected, analysed and action has been taken</b></p> <p><b>C. Feedback collected and analysed</b></p> <p><b>D. Feedback collected</b></p> <p><b>Response: C. Feedback collected and analysed</b></p>	
File Description	Document
Any additional information	<a href="#">View Document</a>
URL for feedback report	<a href="#">View Document</a>



NAAC

## Criterion 2 - Teaching-learning and Evaluation

### 2.1 Student Enrollment and Profile

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

**Response:** 0.23

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

2017-18	2016-17	2015-16	2014-15	2013-14
2	4	2	3	5

#### File Description

#### Document

List of students (other states and countries)

[View Document](#)

Institutional data in prescribed format

[View Document](#)

Any additional information

[View Document](#)

#### 2.1.2 Average Enrollment percentage (Average of last five years)

**Response:** 64.77

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

2017-18	2016-17	2015-16	2014-15	2013-14
218	249	501	503	400

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

2017-18	2016-17	2015-16	2014-15	2013-14
516	516	576	654	576

#### File Description

#### Document

Institutional data in prescribed format

[View Document](#)

Any additional information

[View Document](#)

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

**Response:** 64.39

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

2017-18	2016-17	2015-16	2014-15	2013-14
30	49	49	56	55

#### File Description

#### Document

Institutional data in prescribed format

[View Document](#)

Any additional information

[View Document](#)

## 2.2 Catering to Student Diversity

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

**Response:**

The performance of students in class tests and participation in activities such as class room discussions, class room seminars, class committee meetings etc., reflect his/her learning capabilities. The institution follows a streamlined evaluation system that helps categorize students based on their ability to learn. Learning ability of students are assessed by advisors based on internal evaluation and class tests that are carried out at regular intervals right from the start of academic program. Advanced learners are identified and constantly motivated to strive towards higher goals. Such students are encouraged to take a step further. Teachers ensure that such students are:

- Given challenging assignments that increase their intellectual capacity.
- Attending guidance classes for competitive examinations like GATE, CAT etc. arranged by the institution.
- Making use of NPTEL programmes and MOOC courses.
- Involved in research projects to inculcate research orientation and practical awareness.
- Participating in group discussions, technical quizzes and science exhibitions to help enhance analytical thinking and problem solving abilities and to gain firsthand experience in modelling and design.
- Publishing/presenting their work in reputed Journals/Conferences collaboratively and participating in national and international symposiums.
- Attend in-plant training to gain experience in solving real world engineering problem.

## For Slow Learners

Slow learners are identified based on the academic performance in the Good Morning tests, internal tests and examinations conducted by the University.

- Tutorial classes are conducted in every subject to improve their grasping abilities, academic performance and involvement in class activities. All topics are taught again based on the student's needs and requirements. Remedial classes are arranged after the college hours to help these students to clear their backlogs without any difficulty.
- Counselling sessions are arranged at regular intervals to assess the root cause of poor learning abilities of slow learners. Confidence building measures are adopted by the faculty advisors in consultation with student counsellors. Periodic assessment is done to assess the improvements.
- Follow up tests are conducted at the beginning of every academic year / semester. Based on the result of these tests, bridge courses are conducted in the respective domain for the next one week.

Personality Development Programs are also conducted to motivate these students and inspire them to work harder. The above measures help build the confidence level of these students. Thus the Institution takes extra attention to slow learners and enable them to be at par with their counterparts.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

**2.2.2 Student - Full time teacher ratio**

**Response:** 11.28

File Description	Document
Any additional information	<a href="#">View Document</a>

**2.2.3 Percentage of differently abled students (Divyangjan) on rolls**

**Response:** 0.09

**2.2.3.1 Number of differently abled students on rolls**

**Response:** 1

File Description	Document
List of students(differently abled)	<a href="#">View Document</a>
Institutional data in prescribed format	<a href="#">View Document</a>
Any other document submitted by the Institution to a Government agency giving this information	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 2.3 Teaching- Learning Process

### 2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

#### Response:

College arranges several experiential and participative learning activities to broaden the scope of education imparted to the valuable students

#### Experiential Learning:

The students are taught to practically test the concepts that they learnt in the classroom. This enhances their practical knowledge as well as tests the concepts acquired by them. The Faculty and Qualified Technical Staff help the students to conduct experiments

Several industry visits are planned to provide the students with hands on experience of the field and to update them with the current technology. Through these visits, students understand the practicality and implementation of the concepts studied by them.

Students are also encouraged for internship during academic semesters. This allows them to gain firsthand experience of the environment in which they further want to pursue their career. This also allows them to be updated in their respective domains.

#### Participative Learning:-

In the labs, students are divided into groups and an interactive learning process is encouraged. Further, more student-centric learning strategies such as peer instruction, flip class learning, online discussion forums and group quizzes are also practiced in the institute.

Student projects provide best opportunities for collaborative as well as independent learning. The individual contribution, leadership skills and team efforts are evaluated during project evaluations. To support independent and collaborative learning, institute conducts technical competitions, professional body activities, paper presentations, innovative design competitions etc. Students are also encouraged to participate in such competitions organized by other reputed institutes. In order to make the teaching-

learning process more student-centric, Pedagogical trainings are provided to the faculty members regularly, within and outside the institute.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

**Response:** 39.36

#### 2.3.2.1 Number of teachers using ICT

Response: 37

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

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

**Response:** 17.1

#### 2.3.3.1 Number of mentors

Response: 62

File Description	Document
Any additional information	<a href="#">View Document</a>

### 2.3.4 Innovation and creativity in teaching-learning

**Response:**

- The institute has ICT enabled class rooms and smart class rooms with Wi-Fi and internet facility are used for teaching purpose.
- Faculties prepare PPT's for their subject topics and relevant video's, NPTEL lectures about current scenario and latest trends etc. are discussed and displayed during the course time to enhance the student knowledge. College has a NPTEL local chapter 15TB of course contents from IIT

Madras is being procured

- Students are encouraged to take seminars in their subjects and recent trends in industries. Students are also encouraged to participate and present the papers in various workshops, conferences and symposium to attain more knowledge in recent trends.
- Faculty members prepare lesson plan for their subjects during the beginning of the course with topics specified where tutorials, experimental learning etc are needed.
- Faculty members are encouraged to publish more papers in reputed journals, which help them to keep themselves updated.
- Faculty members are also encouraged to participate in FDP to know the latest development in their respective subjects so that the knowledge acquisition gained from the program will be transferred to the students.
- The staff members conduct group discussion, quiz programs and tutorial to ensure interactive teaching learning.
- Since we follow outcome based education in our college, we invite Experts, speakers and Entrepreneurs from reputed institutions and industries to share their innovations and knowledge. We even go the extra mile in providing hands on workshops in current technologies. Experts from the relevant field of Engineering are invited to give hands on workshops in various design and simulation tools like MATLAB, LABVIEW, Xilinx, CAD etc.

Industrial visits are organized every year for Industrial Exposure. Feedback is collected after every industrial visit. highlighting the knowledge gained out of the real world exposure in a report form.

File Description	Document
Any additional information	<a href="#">View Document</a>

## 2.4 Teacher Profile and Quality

<b>2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years</b>	
<b>Response:</b> 102.3	
File Description	Document
Year wise full time teachers and sanctioned posts for 5 years	<a href="#">View Document</a>
List of the faculty members authenticated by the Head of HEI	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

<b>2.4.2 Average percentage of full time teachers with Ph.D. during the last five years</b>	
<b>Response:</b> 4.52	
2.4.2.1 Number of full time teachers with Ph.D. year-wise during the last five years	

2017-18	2016-17	2015-16	2014-15	2013-14
8	6	3	3	2

File Description	Document
List of number of full time teachers with PhD and number of full time teachers for 5 years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 2.4.3 Teaching experience per full time teacher in number of years

**Response:** 9.32

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

Response: 876

File Description	Document
Any additional information	<a href="#">View Document</a>

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

**Response:** 21.74

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

2017-18	2016-17	2015-16	2014-15	2013-14
9	3	5	3	2

File Description	Document
Institutional data in prescribed format	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

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



**Response:** 5.97

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

2017-18	2016-17	2015-16	2014-15	2013-14
8	6	5	5	5

File Description	Document
List of full time teachers from other state and state from which qualifying degree was obtained	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**2.5 Evaluation Process and Reforms****2.5.1 Reforms in Continuous Internal Evaluation(CIE) system at the institutional level****Response:**

- *Continuous Evaluation based on two series tests and 2 to 3 assignments*
- *Series exam of 2 hr duration. Question papers as per university pattern scrutinized by IQAC*
- *Internal marks and assignment marks are available in college portal.*

Continuous Evaluation process done effectively helps the faculty to monitor the progress of a student during his course of study. Midterm corrective steps taken based on the feedback received will help to put the student back on track. Thus the entire process of Continuous evaluation is organised well.

Internal Quality Assurance Cell (IQAC), prepares the Academic calendar where schedule of various internal assessments tools are mentioned viz internal exams, assignment submission etc. The same is communicated to the students and faculty and published in college portal for reference. Question papers set for the internal exams are scrutinized by department QAC to ensure that the questions set by respective faculty fall in accordance with the university pattern and follows the Blooms taxonomy. Once the exams are over key for the same is circulated among students to help them have a self assessment for their performance in written exams. Answer scripts on completion of valuation are returned to students to ensure transparency for the whole process.

Parents meeting meeting of poor performing students are held immediately after each internal exam where cause of poor performance is analysed and corrective measures are planned in consultation with parents. This ensures the participation of all primary stake holders in making the teaching learning process effective and efficient. Remedial classes are arranged for poorly performing students which helps them to catch up with pace of teaching.

Internal assessment marks are entered in college portal and is visible to both students and parents. Students attendance in regular classes play an important role in making the learning process effective.

College portal has facility to inform parents of absentees through sms.

For Laboratory sessions, Continuous evaluation takes place when the experiments are done by the students. Assessment is done based on their performance and Viva voce related to the experiment performed. 70% weightage is given for continuous evaluation while end semester exam carries 30% weightage. Continuous evaluation marks with predefined rubrics are entered in the course diary of respective faculty and analyzed.

The entire evaluation process is carried by the faculty and mentors/advisors under the supervision of IQAC. Students are finally prepared to face the final assessment by the University through written examination

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

#### Response:

The Institution is affiliated to APJ Abdul Kalam Technological University and the process of Continuous evaluation process is carried out as per University guidelines. The rubrics for continuous evaluation is conveyed to all stakeholders at the time of admission so that they are aware of the mechanism.

Internal evaluation of courses included two series exams and a minimum of two assignments. Schedule of exams are planned and published before the start of academic sessions through academic calendar. IQAC monitors the evaluation process including the standard of question papers set for internal assessment with the help of respective Department Quality assurance cell (DQAC)..

Internal marks after each evaluation process are communicated to the students and entered to college web portal. The same can be viewed by students and parents through the login ID's provided. PTA meetings are held twice every semester where parents are given hard copies of student's internal assessment marks. This helps to make the process transparent and in case of any grievances students can approach the grievance redressal committee.

Continuous assessment of laboratory sessions is carried out at the time when experiments are carried out. Evaluation is done based on the completion of experiment and viva voce answered. 70% marks are awarded for continuous evaluation while remaining 30% goes for end semester examination. Continuous evaluation marks based on predefined rubrics are entered in the course diary of respective faculty immediately after the completion of lab sessions which is verified by the Head of Department.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

#### Response:

The Institution has a student's grievance redressal committee where students can raise their concerns related to internal and external exams. The committee is headed by a senior faculty and has specified guidelines for functioning.

If a student is unable to write an internal exam, he/she may approach the grievance committee which will recommend for retest on verifying the genuineness based on supporting documents submitted. Similarly students can raise concerns if the marks awarded by the faculty for internal examinations are not as per their expectations. The concerns raised will be analyzed and corrective measures suggested in consultation with concerned department heads and Principal.

Feedback from students and faculty are taken for each of the university exams conducted. Anomalies in question papers are noted and are communicated to University. Anomalies may be of different forms like questions asked outside prescribed syllabus, questions not adhering to the pattern specified by University, typographical errors etc. Student's requests and concerns regarding the same is forwarded to the University.

If a student secure less marks in University Exams than expected, provision for revaluation of the concerned paper is provided by the University. Provision also exists where Xerox copies of the answer sheets are made available to the students on request and any discrepancies in valuation noticed can be represented on payment of a nominal fee.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

#### Response:

College adheres to the academic calendar followed by the APJ Abdul Kalam Technological University. Based on the calendar provided by KTU, the college prepares an academic schedule. The schedule is prepared by IQAC in consultation with Principal, Dean and Heads of Departments well in advance before the commencement of the semester.

The calendar provides details on the semester class work schedule, internal assessment test schedule, model examination schedule, commencement of end semester practical and theory examinations, various events to be conducted, number of working days and list of holidays. After preparing the academic calendar, it is circulated to all staff before the commencement of classes so as to plan their academic activities in tune with the schedule of academic calendar.

Apart from that each and every faculty member prepare the course file for their respective subjects allotted to him/her well in advance. This course file consists of student name list, time table, syllabus, lesson plan, model question bank with answers, tutorial questions, previous year University exam question papers, The logbook consists of Syllabus, Timetable, department, Curriculum gap identification, coverage of beyond the syllabus, detailed student attendance, record of class work, internal assessment mark entries, etc. Lesson plan is prepared by the faculty members for their allotted subjects before the commencement of classes. It consists of detailed schedule requirement of time to finish each and every topic in the syllabus which helps faculty handle class effectively. Lesson plans are verified and approved by DQAC before the execution.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

## 2.6 Student Performance and Learning Outcomes

**2.6.1 Program outcomes, program specific outcomes and course outcomes for all programs offered by the Institution are stated and displayed on website and communicated to teachers and students**

**Response:**

- *The nine programs at present offering have separate program outcomes and program specific outcomes.*
- *Depending on the total courses in each pgm. Separate course outcomes are defined by DQAC and approved by IQAC*
- *Each PO, PSO and CO,s are evaluated by set of direct and indirect evaluation tools.*
- *The attainment of PO,PSO and CO are monitored by DQAC and IQAC against a predefined target value.*

**CO-PO mapping, CO evaluation, PO, PSO evaluation.**

The institution strives to become the most preferred destination for holistic education to meet the industry demands. The vision and mission of the institution emphasize the development of technocrats with discipline and integrity.

Each department has its own vision and mission statements which are mapped to the vision of the

institution. The vision and mission of the institution are given in the prospectus, information booklets issued, college website and displayed at the entrance of every department building. The Vision Mission statements for each department are displayed in staff rooms and laboratories of respective departments.

Effectiveness of teaching-learning process can be measured through learning outcomes which in turn are measured through the achievement of Programme Outcomes (PO) and course outcomes (CO).

Course Outcomes (CO) are specified for all subjects including laboratory and elective courses offered in the curriculum. Course Committee meetings are held in departments where the course outcomes and objectives are discussed in detail. Planning of Course delivery is carried out with Course objectives and course outcomes in focus. Course Committee is comprised of faculty teaching that particular course and experts within the department.

Students are educated about course outcomes by respective faculty before the commencement of class sessions for the subject. Every department has well defined Programme Educational Objectives (PEOs) which are assessed through Alumni survey carried out.

File Description	Document
COs for all courses (exemplars from Glossary)	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

#### Response:

Course Outcomes specified for each course is evaluated by the Institution to assess the level of attainment. Course Outcomes attainment is evaluated using direct and indirect tools. Direct tools include internal assessment exams, assignments and end semester University examination. Indirect tools primarily used are Course exit survey.

Course exit survey is carried out at the end of successful completion of each course. The survey involves questions that assess the level of attainment of Course outcomes specified in the curriculum. The survey also includes feedback from students on the course contents delivered for the specific subject

Program Outcomes and program specific outcomes are evaluated based on direct and indirect assessment tools. The direct tools include internal evaluation, University results and rubrics. The indirect tool for evaluating program outcome is a graduate survey conducted on completion of VIIIth semester. The questionnaire includes questions to assess the student's feedback on attainment of program outcomes and program specific outcomes.

Program Educational objectives are assessed based on Alumni survey conducted. The questionnaires for the various indirect tools of assessment are prepared under the guidance and supervision of IQAC.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

### 2.6.3 Average pass percentage of Students

**Response:** 69.77

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

Response: 300

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

Response: 430

File Description	Document
Institutional data in prescribed format	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

**Response:**

## Criterion 3 - Research, Innovations and Extension

### 3.1 Resource Mobilization for Research

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

**Response:** 0

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

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

**File Description**

**Document**

List of project and grant details

[View Document](#)

**3.1.2 Percentage of teachers recognised as research guides at present**

**Response:** 2.13

3.1.2.1 Number of teachers recognised as research guides

Response: 2

**File Description**

**Document**

Any additional information

[View Document](#)

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

**Response:** 0

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

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

### 3.2 Innovation Ecosystem

**3.2.1 Institution has created an ecosystem for innovations including incubation centre and other**

## **initiatives for creation and transfer of knowledge**

### **Response:**

The Institution has created an ecosystem for innovation by establishing The Innovation and Entrepreneurship Development Centre (IEDC) and Musaliar Startup Zone for the creation and transfer of knowledge.

Musaliar start up Zone at Musaliar College of Engineering and Technology is primarily pursued with the following objectives:

1. To acquire new scientific and Engineering knowledge.
2. To design novel methodologies in all the fields of Engineering and Technology.
3. To use existing tools and techniques to expedite problem solving with special emphasis on rural and socially relevant issues.

Student groups with innovative engineering ideas are given encouragement on completion of their project works done as part of the academic curriculum, by providing space and support to be an entrepreneur. This will help students to practice the engineering ideas for the betterment of the society he/she belongs to. Emphasis is given for technical solutions and ideas that have a humanitarian aspect.

Students in lower semesters are given exposure in their relevant start-ups by providing in house internships. Musaliar Solar Lantern Unit in the Electrical Engineering, Root 5 Solutions & Cybros in computer science and Engineering, Spark 7 Innovations in Electronics Engineering, MICASA in Civil Engineering, MET Production centre in Mechanical Engineering are few start-up initiatives at Musaliar Start up Zone.

Besides start-up zone, the institution has Innovation and Entrepreneurship Development Centre (IEDC). The IEDC is an initiative by National Science and Technology Entrepreneurship Development Board (NSTEDB) funded by the Department of Science and Technology, New Delhi was launched in the year 2015

IEDC offers financial support every year to promote novel ideas and develop innovative products within the student community and teaching fraternity. From the year of establishment the cell is consistently conducting the Entrepreneurship Awareness Camp (EAC), Faculty Development Programme and Technology based Entrepreneurship Development Programme (TEDP) funded by Entrepreneurship



Development Institute of India (EDI)	
<b>File Description</b>	<b>Document</b>
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

**Response: 5**

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

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

<b>File Description</b>	<b>Document</b>
Report of the event	<a href="#">View Document</a>
List of workshops/seminars during the last 5 years	<a href="#">View Document</a>

### 3.3 Research Publications and Awards

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

**Response: Yes**

<b>File Description</b>	<b>Document</b>
Institutional data in prescribed format	<a href="#">View Document</a>

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

**Response: Yes**

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

**Response: 1**

## 3.3.3.1 How many Ph.Ds awarded within last five years

Response: 2

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

Response: 2

File Description	Document
URL to the research page on HEI web site	<a href="#">View Document</a>
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	<a href="#">View Document</a>

**3.3.4 Number of research papers per teacher in the Journals notified on UGC website during the last five years****Response:** 1.02

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

2017-18	2016-17	2015-16	2014-15	2013-14
16	21	20	24	22

File Description	Document
List of research papers by title, author, department, name and year of publication	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years****Response:** 0.34

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

2017-18	2016-17	2015-16	2014-15	2013-14
4	7	6	5	12

File Description	Document
List books and chapters in edited volumes / books published	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 3.4 Extension Activities

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

##### Response:

The College is well networked with its neighborhood community and promotes constant interaction to ensure student participation and involvement in social issues. The college lends all support and encouragement to students and is evident from the various projects and programs that different student bodies undertook during each academic year to make them better citizens. These activities enable students to identify the issues and problems faced in the locality and initiate activities as a solution to societal needs. The extension activities of the college are through NSS, UNAI chapter and Department Associations.

The NSS cell of Musaliar College of Engineering and Technology is very active in planning and carrying out Socio centric programs aimed at the benefit of society. College is located in a socially backward area of Pathanamthitta district. Many parts of the district share boundaries with Ranni reserve forest.

NSS unit identifies government schools that have minimal resources at remote locations and take initiatives in maintenance and development of basic infrastructural facilities. Maintenance of basic support facilities in public health centers and taluk hospitals in the district was carried out through the program “Punarjani”. Awareness programs were conducted in the locality on various socially relevant issues. A survey on water scarcity is regularly taken in Malayalappuzha panchayath where the college is located and people are given guidelines on scientific methods of rainwater harvesting. Cleaning of public places like bus stands, panchayath offices, government hospitals, public health centers, etc. are carried out under swach bharath abhiyan and Kerala suchitwa mission. Blood donation camps are conducted at regular intervals in association with Indian Medical Association.

UNAI (United Nations academic Impact) Aspire chapter of Musaliar College of Engineering and Technology organizes various programs and events in the campus and the neighborhood which actively supports the principles of United Nations namely

1. Human Rights
2. Education opportunity for all
3. Higher education opportunity for all

4. Capacity building in higher education
5. Global Citizenship
6. Peace and conflict resolution
7. Addressing Poverty
8. Sustainability and
9. Intercultural dialogue.

Various days of importance like environment day, Engineers day, ozone day, Teachers day, etc are celebrated in the campus giving awareness to student community about the relevance of observance. UNAI Chapter has taken initiative to conduct a cancer awareness program where there was active participation from panchayath and local self-help groups in the locality.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

**Response:** 20

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

2017-18	2016-17	2015-16	2014-15	2013-14
6	5	5	2	2

File Description	Document
Number of awards for extension activities in last 5 years	<a href="#">View Document</a>
e-copy of the award letters	<a href="#">View Document</a>

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

**Response:** 102

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

five years

2017-18	2016-17	2015-16	2014-15	2013-14
19	18	20	25	20

File Description	Document
Reports of the event organized	<a href="#">View Document</a>
Number of extension and outreach programs conducted with industry,community etc for the last five years	<a href="#">View Document</a>

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

**Response:** 0.24

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

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

File Description	Document
Report of the event	<a href="#">View Document</a>
Average percentage of students participating in extension activities with Govt or NGO etc	<a href="#">View Document</a>

## 3.5 Collaboration

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

**Response:** 109

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

2017-18	2016-17	2015-16	2014-15	2013-14
43	31	17	3	15

File Description	Document
Number of Collaborative activities for research, faculty etc	<a href="#">View Document</a>
Copies of collaboration	<a href="#">View Document</a>

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

**Response:** 9

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

2017-18	2016-17	2015-16	2014-15	2013-14
4	1	2	0	2

File Description	Document
e-copies of the MoUs with institution/ industry/ corporate house	<a href="#">View Document</a>
Details of functional MoUs with institutions of national, international importance, other universities etc during the last five years	<a href="#">View Document</a>

## Criterion 4 - Infrastructure and Learning Resources

### 4.1 Physical Facilities

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

**Response:**

The institute regularly updates the physical infrastructure to meet AICTE / APJ Abdul kalam Technological University requirements. In Overall, the college has.34 classrooms/Tutorial Rooms with a total area of 8891 sq. ft. 31 spacious laboratories with a total area of 23737 Sq.ft for all the five UG and four PG programme.

Each department functions in a separate block. The department block comprises of Class rooms, laboratories and seminar halls catering to the academic needs of student community of respective streams of engineering. Laboratories with state of the art equipments are established in the institution for the conduct regular practical classes. The Institute has improved the teaching-learning process with contemporary aids and has created a technology enabled laboratory with state of the art facility to facilitate interactive classes and video conferencing. The college also has a facility for video content development. The ICT enabled seminar Halls are used to conduct the special programmes like seminars, workshops, symposiums etc.

The institution has internet facility with 60 Mbps speed from two service providers. The institution is equipped with modern computing facilities and LAN/Wi-Fi connection. Students have access to these systems both to meet the academic requirements and also to pursue their research interest / project.

Central Libray has collection of books catering to requirements of engineering and managemnt education. Online journals include delnet and springer which help student ciommunity to enhance their knowledge base.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

**Response:**

The College encourages the students to take part in sports, outdoor and indoor games.The College maintains a fully fledged sports activity center that provides necessary facilities for the conduct of sports and games.

A spacious playground is available in our campus in which daily practice is given for theoutdoor games.

such as Badminton, Throw Ball, Cricket, Kabaddi, Foot ball, Volley Ball, Athletic events etc. Students are trained in indoor games such as Table Tennis, Badminton, Chess, and Carom.

As the cultural activities are the integral part of college life, the students are permitted to participate in various cultural activities inside and outside the campus. It provides personal growth by learning skills, to meet new people and to pass on the cultural traditions. The Institute has various hobby clubs like debate club, photography club, music club and micro projects club where student members are motivated to participate in various completions there by providing facility to student community to exhibit and nurture their skills. Students show their hidden talent by participating in the above clubs. Students actively participate in cultural activities during the annual day function organized by the Institute every year. College also has a professional musical band which performs at various occasions.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

**Response:** 68.75

##### 4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 22

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	<a href="#">View Document</a>
Link for additional information which is optional	<a href="#">View Document</a>

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

**Response:** 42.73

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

2017-18	2016-17	2015-16	2014-15	2013-14
53.65	75.25	183.8	131.1	257.1



File Description	Document
Details of budget allocation, excluding salary during the last five years	<a href="#">View Document</a>
Audited utilization statements	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 4.2 Library as a Learning Resource

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

Response:

Sl no	Name of ILMS Software	Nature of automation (Partial/Full)	Version of ILMs Software	Year of Automation
1	GRANDHA SOFT	FULL	2	2011
2	GRANDHA SOFT	PARTIAL	Grandha@2.0	2015

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

Response:

Sl no	Name of Book/Manuscript	Name of Publisher	Name of author	No. of Copies	Year of Publishing
1	Ready reference encyclopaedia	Encyclopaedia Britannica Pvt ltd	Britanica	10	2004
2	Funk & Wagnalls New Encyclopaedia	Oxford	Bram Leon (Ed.	21	2006
3	21 st century Dictionary	Robinson	Allied	1	2003

			Chambers			
4	Dictionary of computing & communications	Tata Mc-Graw hill	TMH	1	2010	
5	Dorland pocket Medical Dictionary	Dorland	oxford and IBH publications	1	1982	
6	Illustrated oxford Dictionary Revised and updated	Oxford	Oxford university	2	2007	
7	Oxford advanced learners (oxford) Dictionary	Oxford University	Oxford university	1	2002	
8	Ques computer and internet Dictionary	Printice Hall of India	Pfaffenberger, Bryan	2	2001	
9	The international dictionary of artificial intelligence	william Raynor	PHI	3	2001	
10	Ultimate visual Dictionary 21st Century Suppliment	Dorling kindersley	Ali,Moi et al.	4	2008	
11	Oxford Advanced Leaners Dictionary	Oxford University	Oxford	1	2010	
12	The Winners Manual (2 Series)	Dorling kindersley	Heller,Robert et al.	1	2008	
13	The Winners Manual	Dorling kindersley	Ali,Moi et al.	1	2008	
14	The International Dictionary of Marketing	Kogan Page	Ydin,Daniel	2	2006	
15	European Business Customs and Manners	Macmillan	Bosrock, M M	1	2006	

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

#### 4.2.3 Does the institution have the following:

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

A. Any 4 of the above

B. Any 3 of the above

**C. Any 2 of the above**

**D. Any 1 of the above**

**Response:** B. Any 3 of the above

File Description	Document
Details of subscriptions like e-journals,e-ShodhSindhu,Shodhganga Membership etc	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

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

**Response:** 6.16

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

2017-18	2016-17	2015-16	2014-15	2013-14
9.91516	7.52371	10.49941	1.74502	1.10316

File Description	Document
Details of annual expenditure for purchase of books and journals during the last five years	<a href="#">View Document</a>
Audited statements of accounts	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

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

**Response:** Yes

File Description	Document
Any additional information	<a href="#">View Document</a>

#### 4.2.6 Percentage per day usage of library by teachers and students

**Response:** 4.51

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

Response: 52

File Description	Document
Any additional information	<a href="#">View Document</a>

## 4.3 IT Infrastructure

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

#### Response:

#### Computer Systems and Software

Computers are updated with higher configuration as required for the curriculum and advanced Learning. Dot matrix printers are replaced with laser printers in all computer laboratories. Scanners cum printer are used in all departments. Updated Licensed software are procured and installed.

#### Campus Networking

An extensive fiber optic network inside the campus is established replacing copper medium. The present campus network backbone is laid up to 1.5 kms using manageable switches. There are nearly 350 nos. of computers connected to this network. Campus networking with fiber has several distinct advantages over non-fiber applications such as:

- (a) Networks can be extended longer distances,
- (b) Larger amounts of data can be sent due to increased bandwidth
- (c) No environmental disturbances
- (d) Immunity to EMI/RFI, lightning strikes.

#### Internet Bandwidth:

The college campus is provided with Internet facility by improving the bandwidth from 30 Mbps to 152 Mbps.

Name of the Internet Provider : BSNL Available Bandwidth : 60 MBPS Internet facility extended to all laboratories, departments, faculty rooms and other units. Exclusive firewall (Cyber-Rom) is implemented and restrictions are imposed in web access to students and staff. Internet connectivity is available to faculty, staff, Students and guests by providing exclusive login credentials.

#### Wi-Fi Zones

Both wireless LAN and fixed network outlets have been installed at different areas in campus including

central library, conference halls, canteens, and hostel to provide internet connectivity to mobile systems.

File Description	Document
Link for Additional Information	<a href="#">View Document</a>

#### 4.3.2 Student - Computer ratio

**Response:** 2.94

#### 4.3.3 Available bandwidth of internet connection in the Institution (Lease line)

**>=50 MBPS**

**35-50 MBPS**

**20-35 MBPS**

**5-20 MBPS**

**Response:** 35-50 MBPS

File Description	Document
Any additional information	<a href="#">View Document</a>

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

**Response:** Yes

File Description	Document
Facilities for e-content development such as Media Centre, Recording facility,LCS	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 4.4 Maintenance of Campus Infrastructure

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

**Response:** 9.24

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

2017-18	2016-17	2015-16	2014-15	2013-14
3.69584	66.5945	16.01021	33.70500	11.24715

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	<a href="#">View Document</a>
Audited statements of accounts.	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

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

**Response:**

**Procedure for Utilization and Maintenance of facilities (Physical, Academic and Support)**

**Class Rooms/Laboratory**

The physical facilities like Laboratories, Classrooms, Library and Sports Complex are made available for all the students admitted to the college. Utilization of the classrooms is facilitated to the students and it is also made available to the other governmental / non-governmental organizations for conducting the exams in the summer/ Winter Vacations / Leave time. Classrooms and laboratories are maintained by House Keeping under the supervision of Non-teaching Staff / Estate Supervisors. The masonry and plumbing works are done with local skilled persons and the expenditure is incurred from Maintenance. Lab equipments are serviced by manufacturers and service personnel during summer / winter vacations. Stock register is also maintained regularly.

**Computers**

The college has an adequate number of the computers with high speed internet connections and the software's are distributed in different locales like office, laboratories, library and departments. Computers are maintained by internal Staffs. Each laboratory has an assistant, who ensures for the proper use of the computers and hazardous equipments are handled with care by them.

**Library**

The working hours of the library is from 8.30 a.m to 6.00 p.m on all working days and from 8.30 a.m to 4.00 p.m. on holidays. Maintenance activities is made by the college management periodically to keeping library clean. The activities like fumigation, preservation of books from insects, dusting and shelving of

reading materials promptly on regular basis by the housekeeping /Library Staff.

### **Training Classes**

Special Training is provided by experts for competitive examination such as GRE, TOEFL, GATE and Placement Training to students for competitive exam as well to motivate them for debates/ group discussion for placement.

### **Sports Complex/ Activities**

Excellent infrastructure is provided for sports with Synthetic/ outdoor/ indoor Courts and 400-meter running track. Through best practices, the students outshines in the field of sports. The play field are properly maintained by the markers throughout the year. The play field equipment like post, umpirestand, score boards are also maintained regularly. The college uses some labourers for daily wages to keep the play field clean and good condition during the tournaments and sports day celebrations. The Physical Education Department control the play equipment like ball, bat, net etc., provided to the students and to collect it back safely and register them in the Equipment movement register

### **Power Supply and Electrical Maintenance**

Power supply is maintained by our regular staffs through proper system and electricity is maintained by electricity board/ captive gensets for 24hours. A Kirloskar-Make power generator (125-KVA) and Ashok Leyland – Make Power Generator (82 KVA) is installed in the campus to handle the occasional power shut down, is under AMC for maintenance.

### **Garden Maintenance**

Tree plantation and garden maintenance are done by the gardener appointed by the institute. NSS, NCC, YRC maintain certain areas of the college clean and for planting of trees, certain areas are allotted for each departments to maintain the trees and campus clean and green.

File Description	Document
Link for Additional Information	<a href="#">View Document</a>

## Criterion 5 - Student Support and Progression

### 5.1 Student Support

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

**Response:** 16.32

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

2017-18	2016-17	2015-16	2014-15	2013-14
176	155	195	368	280

File Description	Document
Upload self attested letter with the list of students sanctioned scholarships	<a href="#">View Document</a>
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

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

**Response:** 3.48

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

2017-18	2016-17	2015-16	2014-15	2013-14
40	22	44	48	97

File Description	Document
Any additional information	<a href="#">View Document</a>

#### 5.1.3 Number of capability enhancement and development schemes –



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

A. 7 or more of the above

B. Any 6 of the above

C. Any 5 of the above

D. Any 4 of the above

**Response:** A. 7 or more of the above

File Description	Document
Details of capability enhancement and development schemes	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
Link to Institutional website	<a href="#">View Document</a>

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

**Response:** 22.7

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

2017-18	2016-17	2015-16	2014-15	2013-14
344	305	353	290	267

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**5.1.5 Average percentage of students benefited by Vocational Education and Training (VET) during the last five years****Response:** 12.46

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

2017-18	2016-17	2015-16	2014-15	2013-14
159	179	153	197	179

**File Description****Document**

Details of the students benefited by VET

[View Document](#)

Any additional information

[View Document](#)**5.1.6 The institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases****Response:** Yes**File Description****Document**

Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee

[View Document](#)

Details of student grievances including sexual harassment and ragging cases

[View Document](#)

Any additional information

[View Document](#)**5.2 Student Progression****5.2.1 Average percentage of placement of outgoing students during the last five years****Response:** 20.39

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

2017-18	2016-17	2015-16	2014-15	2013-14
158	90	94	66	46

File Description	Document
Self attested list of students placed	<a href="#">View Document</a>
Details of student placement during the last five years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

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

**Response:** 12.21

5.2.2.1 Number of outgoing students progressing to higher education

Response: 52

File Description	Document
Upload supporting data for student/alumni	<a href="#">View Document</a>
Details of student progression to higher education	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

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

**Response:** 19.18

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

2017-18	2016-17	2015-16	2014-15	2013-14
1	6	5	7	10

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

2017-18	2016-17	2015-16	2014-15	2013-14
21	26	31	29	36

File Description	Document
Upload supporting data for the same	<a href="#">View Document</a>
Number of students qualifying in state/ national/ international level examinations during the last five years	<a href="#">View Document</a>

### 5.3 Student Participation and Activities

#### 5.3.1 Number of awards/medals for outstanding performance in sports/cultural activities at national / international level (award for a team event should be counted as one) during the last five years.

**Response:** 269

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

2017-18	2016-17	2015-16	2014-15	2013-14
84	96	34	23	32

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at national/international level during the last five years	<a href="#">View Document</a>
e-copies of award letters and certificates	<a href="#">View Document</a>

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

**Response:**

Institution always promotes inclusiveness to ensure social justice and better stake holder relationships. College elects a student council every year as per directions from the University. Selection of council members is done in a democratic way by holding elections after obtaining nominations from interested candidates. Election process is fare with specific rules and regulations for candidature and the election process. A class representative and a lady representative are elected from each class towards the college council. A faculty is entrusted with the charge of helping and guiding students in council activities.

Student council is actively involved in bringing all issues that affect students, academic and non academic to discussion table with the college council. Matters that need to be represented to University or governing bodies are also raised by the council. This gives a participatory role for students in academic and

administrative activities of the institution.

Class Committee constituted has active student participation. Committee meetings are held at regular intervals and they are adequate platforms where issues and difficulties faced by student community are sorted out.

Various technical programs organized in the college have student participation in various committees help to develop leadership and volunteer skills. College conducts techno cultural fest every year where technical activities and cultural activities are carried out for two to three days. Final year students take up the initiative in organizing the event with the active involvement of all students. Event also focuses on participation of student community from other colleges. The entire process is under the guidance and monitoring of experienced staff.

Various associations in the college ie IEEE student branch, NSS, UNAI chapter etc organizes events and programs within the campus and in the locality. All these bodies are functioning with the active involvement of student groups from various streams of Engineering and academic year. This helps to create a cohesive environment where students feel a sense of belongingness and togetherness.

Department associations play a major role in developing leadership and organizational skills among students by incepting them into various committees.

The Institution has membership in IEEE and DELNET. Students Chapter of professional bodies like ISTE, IEEE, IE,CSI function in college to enable overall professional development of students.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

**Response:** 3.6

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

2017-18	2016-17	2015-16	2014-15	2013-14
4	5	4	3	2

File Description	Document
Report of the event	<a href="#">View Document</a>
Number of sports and cultural activities / competitions organised per year	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 5.4 Alumni Engagement

### 5.4.1 The Alumni Association/Chapters (registered and functional) contributes significantly to the development of the institution through financial and non financial means during the last five years

#### Response:

The College has a registered Alumni Association. Alumni are an important stake holder which actively contributes to the development of an Institution. Association was formed in the year 2014. Annual Alumni meet will be held every year. Alumni suggestions play a vital role in overall development of the Institution. Alumni are invited to college to interact with students to give them an insight to the real world situation that exists in corporate world. Alumni in various field of engineering also give technical sessions on the latest developments that happen in their relevant field of Engineering.

Alumni play a vital role in giving career guidance and in finding placements for final year students. Alumni Association takes active role in helping students in carrying out their final year project work. They also help departments in finding industries for existing students to undergo in plant training, field training and Industrial visits.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

? 5 Lakhs

4 Lakhs - 5 Lakhs

3 Lakhs - 4 Lakhs

1 Lakh - 3 Lakhs

**Response:** ? 5 Lakhs

File Description	Document
Alumni association audited statements	<a href="#">View Document</a>

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

**Response:** 13

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

2017-18	2016-17	2015-16	2014-15	2013-14
4	3	1	2	3

File Description	Document
Number of Alumni Association / Chapters meetings conducted during the last five years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
Report of the event	<a href="#">View Document</a>

## Criterion 6 - Governance, Leadership and Management

### 6.1 Institutional Vision and Leadership

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

##### Response:

##### Vision & Mission.

The vision and mission of Musaliar College of Engineering was formulated by a group of eminent personalities from the field of education and industry and culture so as to groom and mould young students from the schools to responsible engineers with professional excellence, ethics and commitment to the social needs.

##### Vision

To develop into a world class pace setter with distinct identity and character to meet the demands of a changing global technological competitive scenario.

##### Mission

- To impart quality Education in Engineering & Management by providing state of the art teaching learning methods
- To foster innovation in Technology and its application for meeting global Challenges
- Inculcate global awareness, communication skills, team building and ethical values.
- To collaborate with industry and R & D organization for developing knowledge and sustainable technologies
- To facilitate Research and Innovation in various fields of Engineering and Management

##### Nature of Governance:

The Governing Body which consists of the Chairman, Trust members, experts from industry, education etc and Principal is the apex body for formulating the policies and perspective plans keeping the vision of the institution as the ultimate goal. This apex body draws out draft yearly plan/targets and circulates to College Council –IQAC-Departments. After deliberating views of Departments, IQAC, PTA Executive Committee and College Council (consists of Principal, Deans, HoDs and first year Coordinator), the yearly plan/target with suggestions, if any, gets presented to the Governing Board for finalization. The finalized yearly plain is ssued for implementation. The Departments then draws out the action plan and IQAC monitors the implementation. Progress in implementation is regularly discussed at College Council meetings as well as PTA meetings and the Management is appraised on the progress.

Modernization of the existing facilities, expansion of infrastructure of laboratories, library resources, class rooms, seminar halls and sporting facilities are the usual criteria in the annual plan of the institution. The



academic plan (semester wise) is prepared by the Dean (Academics) and issued after approval of the College Academic Council. The scheduling of industrial visits, conferences, workshops, seminars, FDPs, association activities, club activities, sports tournaments, recruitment and functions are finalized by College Council after discussions with team conveners and student representatives

The head of the institution takes decisions in the academic activities in tune with the regulation of the affiliating Universities. Academic Council, PTA, Departments and various other committees conducts the meeting regularly. Faculty meetings with the HOD play a pivotal role in formulation of curricular and non-curricular activities and the points/suggestions of the faculty meetings are deliberated at College Academic Council meetings before approval. Principal's subsequent meetings with the top management and with the Governing Body ensures that all the information and suggestions reach from bottom to top and from top to bottom travel in a smooth fashion.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

### 6.1.2 The institution practices decentralization and participative management

#### Response:

#### Institution Functioning.

The institution functions with the method of decentralized governance system. Participative Management principles are practiced in the institution at all levels to nurture leadership qualities in faculty, staff and students. Various professional clubs are function in the campus. The Faculty In-charge of the professional body/clubs along with the nominated students has the freedom in planning and organizing various activities.

As far the Department functioning is concerned, the HoD has been bestowed with the authority of deciding the activities and delegating the responsibilities to the staff members. The department decides on timetable, subject allocation, purchase and maintenance of equipment and consumables, organizing conferences, symposia, guest lectures and workshops and recommends necessary industrial visits, internships and Memorandum of Understandings with other agencies. The institution is functioning effectively with the culture of participative management which enables the faculty and students to give their opinion and suggestions for improvement. All the academic activities are decentralized and decisions are taken based on discussion and deliberations in the class committee meetings, department meetings and faculty meetings. Participative management provides extensive scope for having collaboration among the

departments and ensures the quality of planning and implementation of all the activities in the institution uniformly and as a team.

Conduct of College Technical Fest is a classic example for participative management. A Chief Coordinator for Technical Fest is nominated by the Academic Council. The Chief Coordinator selects a group of Faculties and students draw out a plan for conducting the College Technical Fest. Various programs for the Technical Fest are chalked out and committees for each program are formed with Faculties and students. The respective committee for each program then works out detailed plan including finance requirements. The Chief Coordinators along with other coordinators prepares a budget for the Tech Fest and present to the College Council for approval. After approval of the budget, the sub-committees have the freedom of judicial spending of the allotted fund to them. Thus the faculties and students are directly exposed to Planning, Organizing, reserve management, leading a group, budgeting event management, etc.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

## 6.2 Strategy Development and Deployment

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

#### Response:

#### Strategic Plan.

With the intension of providing ample avenues, enhancing the infrastructure facilities by means of construction of new blocks, class rooms, laboratories, auditoriums, and library facilities have been in the agenda of the continuous improvement process.

It was a perspective plan to make separate campus for the Management Department. This was aimed to expand the department with other post graduate courses and to expand the department to an Institution – ‘Musaliar Institute of Management’. First phase of the plan was achieved in a record time of 2 years. Details are as below:-

- The Post Graduate course in Business Administration was introduced in the MCET campus in 2010. The approval obtained from MG University for one batch of 60 students. A portion of Electrical and Electronics Block was used for class rooms, faculty rooms and seminar halls. Thus the course began in MCET 2010 with an intake of 60 students. The need for an entirely different atmosphere for the PG students was felt and the management has initiated actions for setting up new separate campus for the PG course.

- Necessary land for the infrastructure was purchased near to the MCET campus and land development work was carried out. The approach road with ample width and terrain development was completed in 2011. After a series of talks with subject experts and visits to other institutions, the building plan was finalized for about 2800 m<sup>2</sup> plinth area. Necessary total budget allocation of Rs.200 lakh was made for the year 2011-12, 2012-13 and 2013-14. The finalized plan was approved by Pathanamthitta Municipality.
- The proposal envisaged intake of 2 batch of 60 students each every year. Accordingly 4 nos. lecture halls about 1000 ft.<sup>2</sup> and necessary tutorial rooms, faculty rooms, HoD room, Directors room, office, exclusive library, Cafeteria, Reception, etc. were included. A Seminar hall, computer lab, gallery room, Board room, Guest room, etc. were also included in the plan. Necessary wash rooms and sewage drains are also incorporated.
- Based on the approved plan, quantity assessment was worked out and quotation for item-wise rates was invited. The builders list was tabulated and the most experienced and economic bidder M/s Techno Construction, Changanassery was selected to execute the work. The major bottleneck was lack of leveled area for stacking materials for erecting plants & Machineries. To overcome this, necessary yard was developed .
- The building was completed in Dec 2016 with necessary parking space, garden, with all the envisaged facilities for students, parents, staff, etc. In addition a rain water harvesting tank of 1 lakh liter capacity was also provided in the campus and the course was shifted to the new campus on in 2016.

File Description	Document
Link for Additional Information	<a href="#">View Document</a>
Strategic Plan and deployment documents on the website	<a href="#">View Document</a>

### **6.2.2 Organizational structure of the institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism**

**Response:**

**Organogram of the Institution.**

1. The Governing Body is the apex body of the institution and monitors the implementation of institutional strategic plan. The Governing Body reviews the progress of various strategic plan implementations and takes corrective measures wherever required. The top management, Principal, Deans, HoDs, teaching & non-teaching staff, students and stake holders work as a team to reinforce the culture of excellence.
2. The institution is headed by the Principal. As a part of decentralization, Deans and HoDs are appointed. The Principal exercise the functional and administrative control through the Deans and HoDs. Heads of the departments take the responsibility of all administrative and academic activities of the department. They are authorised to take decisions as per the needs of the situations in exigencies and get them ratified by the Head of the Institution subsequently at a later stage. The Principal, HODs and Team leads are in communication always so as to keep abreast the progress of each activity.
3. Well crafted organizational structure is in place for the smooth functioning of the Institution. A hand book is available for the staff describing the duties/responsibilities, services rules, procedures, recruitment, promotional policies, grievance redressal mechanism etc. Recruitment of teaching, non teaching and office administration staff is planned at the end of every academic year as per the requirements of the next academic year. Advertisements in leading news papers and social media are followed to get better qualified personnel. Initially the appointments are on probation and confirmed on satisfactory performance. Staff appraisal system is in existence for performance appraisal. The grievance redressal mechanism helps to address the expectations of the staff.

File Description	Document
Link for Additional Information	<a href="#">View Document</a>

### 6.2.3 Implementation of e-governance in areas of operation

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

- A. All 5 of the above
- B. Any 4 of the above
- C. Any 3 of the above
- D. Any 2 of the above

**Response:** D. Any 2 of the above

File Description	Document
Screen shots of user interfaces	<a href="#">View Document</a>
Details of implementation of e-governance in areas of operation Planning and Development, Administration etc	<a href="#">View Document</a>

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

##### Response:

Institution has various committees that comprises of faculty and students. Class committee, course committee, Grievance redressal committee, Antiragging Committee etc are some of them that function through out the academic sessions. The members are elected for a specified period, meetings are held as per the scheduled plan and the minutes recorded. Action taken for issues suggested is clearly recorded in minutes.

In spite of the Various statutory committees, committees are temporarily constituted for certain functions/activities and cease to exist after that. Few of the activities successfully executed based on the minutes of the meeting are as below:-

1. Inauguration of BTech program of 2018-2022 batch. Inauguration of BTech program was organized properly by following the minutes of the meeting held for planning. The minutes are as below:-
2. Alumni Meet 2018.
3. Women's Day Celebration

File Description	Document
Link for Additional Information	<a href="#">View Document</a>

### 6.3 Faculty Empowerment Strategies

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

##### Response:

Various welfare measures are instituted for non-teaching and teaching staff. Following are the welfare measures:-

1. Provident Fund for the non-teaching staff.
2. ESI benefits for the non-teaching staff.

3. All teaching staff on completion of 5 years continuous service are given a monthly allowance of Rs.2000
4. Family get-together for all staff members once in a year (Ifthar/Onam/Xmas) for better interaction with family members of staff.
5. Festival advances to employees.
6. Interest free loan to all staff.
7. Financial aid to deserving cases.
8. Preference for admission to the wards of staff at MCET and sister institutions.
9. Fee concession for the children of staff at MCET and sister institutions.
10. Monetary incentive for staff for outstanding contributions.
11. Duty leaves to all staff for attending self development programs.
12. Vehicle facilities for staff attending self-knowledge enrichment program.
13. Reimbursement of registration fee for faculties attending selected programs.
14. Institution has constituted a Welfare Committee to take care of welfare measures of staff.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

**Response:** 0.83

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

2017-18	2016-17	2015-16	2014-15	2013-14
3	0	1	0	0

File Description	Document
Details of teachers provided with financial support to attend conferences, workshops etc during the last five years	<a href="#">View Document</a>

### 6.3.3 Average number of professional development / administrative training programs organized by the institution for teaching and non teaching staff during the last five years

**Response:** 2.2

6.3.3.1 Total number of professional development / administrative training programs organized by the

Institution for teaching and non teaching staff year-wise during the last five years

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

File Description	Document
Details of professional development / administrative training programs organized by the Institution for teaching and non teaching staff	<a href="#">View Document</a>

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

**Response:** 12.32

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

2017-18	2016-17	2015-16	2014-15	2013-14
25	13	12	6	4

File Description	Document
Details of teachers attending professional development programs during the last five years	<a href="#">View Document</a>

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

**Response:**

The institution has a Performance Appraisal System in which the performance of every staff is assessed yearly and a feed back is given to the appraise as well as the Management. Staff with outstanding performance is rewarded and low performers are cautioned for improvement. Self assessment system is followed in which the staff assess own performance and the supervisors (Faculty in-charge for non-teaching staff and HOD for teaching staff) to verify. In case any difference in the self appraisal, the Supervisor has to mention it clearly. Finally the Supervisor has to assess the appraise in professional as well as personal qualities and to write a pen picture. The Principal peruses the assessment and gives the feed back to the concerned staff. Performance Appraisal records will be considered for:-

1. Appreciation by management at appropriate form.

- 2.Retention.
- 3.Assigning tasks.
- 4.Promotions.
- 5.Sponsorship career advancement courses.

Low performers may be given an opportunity to improve as per discretion of the management.

File Description	Document
Any additional information	<a href="#">View Document</a>

## 6.4 Financial Management and Resource Mobilization

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

**Response:**

#### **Internal and External Audit.**

The institution conducts internal and external auditors regularly.

1.Internal Audit is performed by officials deputed from Trust office periodically and the reports are obtained before conduct of the external audit which is normally done concurrently. Internal audit is limited to verifying the daily transactions and supporting documents. Month end accounts are verified with the physical holding of cash as well as the bank statements. Guidelines are in existence for internal audit. During the course of Internal Audit, all required steps are taken to regularize the accounts and to obtain confirmations for the credit balances, to collect documentary evidences wherever inadequate in respect of payments, compliances of TDS and Statutory Formalities and Reconciliation of Unit wise balances with the Control Accounts and Bank Reconciliations. The copy of the Internal audit report covering all matters related to maintenance of accounts is preserved.

2. External Audit is done by the Statutory Auditors. Qualified and registered Chartered Accounts are engaged for external audit of the institution. Staff of external audit agency is available for concurrent auditing and advising our accounting procedure. External Statutory Audit is conducted by the auditors and the final audit report with audit findings are submitted to the Management. The consolidation of the findings of the Institutions with Trust office has been completed till 2017-18 and the annual returns have been submitted to Income tax Authorities, Registrar of Societies and to the other relevant authorities concerned. No audit objectives are pending with the institution. Presently M/s JRS Associates, Kollam is the external auditor for the institution.



File Description	Document
Link for Additional Information	<a href="#">View Document</a>

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

**Response:** 2.8

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

2017-18	2016-17	2015-16	2014-15	2013-14
0.5	0.44	1.23	0.44	0.19

File Description	Document
Details of Funds / Grants received from non-government bodies during the last five years	<a href="#">View Document</a>
Annual statements of accounts	<a href="#">View Document</a>

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

**Response:**

##### Sources for funding

The main sources for funding institutional requirements are:-

1. Tuition fee collected from students.
2. Interest from Fixed Deposits.
3. Consultancy works.
4. Funded programs.

Registration to higher semesters is done only after clearing the financial dues including the advance payment of semester fee. Surplus funds are invested to get maximum benefits. Continuous efforts are made to get more consultancy works and funded programs. In addition, revenue is generated by renting out resources like Computer Labs and other facilities to external agencies for conduct of examinations, seminars, functions etc.

**Optimal utilisation of resources.**

The institution has an annual budgeting system. Requirement from various departments and sections are obtained by 31 December of every year. The Governing Body analysis the requirements and prepares a budget and present to the Managing Committee. After approval of the institutional budget, the departmental allocations are made. Budget review meetings are conducted regularly to monitor the fund utilization and resource planning. Care is taken to avoid any deficits. Fund utilization is strictly based on the requirements to avoid dead investments

File Description	Document
Link for Additional Information	<a href="#">View Document</a>

**6.5 Internal Quality Assurance System****6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes****Response:****Quality Assurance System.**

The institution has originally had Academic Monitoring and Review System taking care of the Academic and Administrative system of the Institution. Subsequently an Internal Quality Assurance Cell (IQAC) was formed merging Academic Monitoring and Review System, under the chairmanship of Principal, coordinated by the Dean (Academics & Administration) with a member from each Departments/sections for ensuring the quality of activities. The IQAC has representation from all stakeholders, namely, the students, Parents, teachers, Alumni and Society. Many improvement measures for Teaching-Learning Process such as Regular academic reviews, quality of internal tests and assignments by formulating quality question papers, monitoring the Advisory System, getting students feed back twice in a semester, organizing extra/remedial classes, providing tuition classes for needy students, organizing PTA meetings and giving feedback on their wards, carrying out result analysis in detail to find out grey areas and take remedial measures, monitoring of infrastructure repairs and workmanship are taken in both academic and administrative areas. The Internal Quality Assurance Cell (IQAC) of the institute has been trying to develop a system for to improve the academic and administrative performance of the institution and to promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices. Following are two examples:-

- (a) Quality Assurance of questions for Internal tests and model examination.

The IQAC focuses on the continuous improvement of the examination system for the students. There is a centralized examination cell to conduct the unit tests and the model examination (Unit test for a period of 2 hours and with 50 marks and the model examination for a period of 3 hours with 100 marks). The staff handling the subjects prepares question paper for their subjects and hands over the same to the Department Quality Assurance Cell (DQAC). The DQAC after verification forwards to Internal Quality Assurance Cell (IQAC).

Thus there is two stage verification system to ensure that the questions prepared for internal tests and model examinations are of quality and the students are better prepared to face the university examinations. Further, after the university examinations an analysis is carried out and it is generally observed that more than 80% question of the university examinations are from the internal/model examination questions of the college.

#### 1. Good Morning Tests:

Students have a tendency to study just before the examinations and most of them were not able to recollect/follow the subjects as they have not referred/revised the subjects in between. In order to inculcate a habit of concurrent learning, 'Good Moring Test' was introduced. In this, a test of 1 hr is covered for each subject in a week and the syllabus for the test is the preceding one week's coverage. It helped in:-

1. Motivating students into a regular learning habit.
2. Continuous and concurrent learning of the subjects.
3. Morning Test systems helped for better preparation for the final examination.
4. Achieving better results.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

#### Response:

#### **IQAC Functioning.**

The IQAC insists on periodical review of academic activities by the Academic Council. Two of such reviews carried out are described in the succeeding paragraphs:-

1. Syllabus Coverage Plan. A syllabus coverage plan is made well before the commencement of classes based on the academic calendar. However, at times there will be delays in syllabus coverage due to unforeseen reasons like declaration of holidays, hartals, National calamities, etc. The HoDs carries out a weekly review and reallocates hours, if required (a case of functional independency). Further, monthly reviews are carried out by the Academic Council and additional working days are organized with flexible time table so as to cover up the lagging subjects. The second and third

Saturdays, which otherwise observed as holidays, are used for make-up classes by the institution.

2. Remedial / Tuition Classes: Student's performance is continuously assessed through the morning tests as well as series tests. After the first series test, performance of a class is analysed and grouped as:-

1. Students do not require additional coaching for pass but need higher level exercises for better ranking.
2. Students need additional help.
3. Students need extensive help.

Tuition classes are organized after normal working hours and on holidays for category 2 & 3. This helped in improving the knowledge of the students and thereby the result status. Higher level exercises are given to category 1 for better achievements.

File Description	Document
Link for Additional Information	<a href="#">View Document</a>

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

**Response:** 4.4

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

2017-18	2016-17	2015-16	2014-15	2013-14
5	7	5	2	3

File Description	Document
Number of quality initiatives by IQAC per year for promoting quality culture	<a href="#">View Document</a>

### 6.5.4 Quality assurance initiatives of the institution include:

1. Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements
2. Academic Administrative Audit (AAA) and initiation of follow up action
3. Participation in NIRF

**4.ISO Certification****5.NBA or any other quality audit****A. Any 4 of the above****B. Any 3 of the above****C. Any 2 of the above****D. Any 1 of the above****Response:** C. Any 2 of the above

<b>File Description</b>	<b>Document</b>
e-copies of the accreditations and certifications	<a href="#">View Document</a>
Details of Quality assurance initiatives of the institution	<a href="#">View Document</a>

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

The institution has progressed well in last five years in infrastructure improvement, Academic activities, Outreach programs. There is a constant endeavor by the management to make progress year after year and the following activities showcases the same.

1. Infrastructure improvements.

1. MBA Building and its furnishing.
2. Standby Power Supply (DG Set).
3. New Canteen.
4. Additional tutorial rooms.
5. Activation of Water supply system
6. Startup complex
7. Renovation of auditorium.
8. Renovation of games facilities.

9. Projection system for class rooms.
10. Replacement old computing system.
11. Renovation of office.
12. Additional Board room.
13. New Placement Cell.
14. Fire staircase for main block.
15. Rainwater harvesting at MBA block
16. Maintenance shed for college bus.
17. Biogas plant for Ladies hostel.

1. Academic improvements.

1. Ensuring academic preparations before start of a semester.
2. Ensuring load balancing for teaching faculty.
3. Introducing 'Good Morning Test'
4. Improving mentoring system.
5. Structured remedial/tuition classes.
6. Expert lectures.
7. Validation of internal test questions by IQAC.
8. Regular monitoring and review of academic activities.
9. 'Feedback Report' system on university examinations.
10. Regular Academic audits.
11. Outcome Based Educational approach
12. In campus and off campus placement provided to students.

1. Outreach/Social activities.

1. Sand Auditing.
2. House estimation projects by CE
3. Implementation of Solar Lantern unit by EEE
4. Consultancy activities carried out for local self governing bodies.
5. Initiating professional bodies.

1. Entrepreneurship promotions.

NAAC

- 1.Startup ventures.
- 2.IEDC initiatives.

## Criterion 7 - Institutional Values and Best Practices

### 7.1 Institutional Values and Social Responsibilities

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

**Response:** 33

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

2017-18	2016-17	2015-16	2014-15	2013-14
6	8	7	6	6

File Description	Document
Report of the event	<a href="#">View Document</a>
List of gender equity promotion programs organized by the institution	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

#### 7.1.2

##### 1. Institution shows gender sensitivity in providing facilities such as:

1. Safety and Security
2. Counselling
3. Common Room

**Response:**

##### Safety and Security

Gender sensitivity ensures that women and men enjoy the same status and have an equal opportunity to exercise their human rights and realize their full potential, especially young women. To promote the gender sensitivity, Women's club is open to female faculty, professional staff and girl students. Several programmes under gender sensitization were conducted on various topics such as Personal hygiene and Women's day which create awareness and aims at changing behavior of students by enabling their comfort in the study spot, work place and also ensuring professional growth. Girl students participating in sports and cultural or any co-curricular activity outside the college are being accompanied by lady staff members. There is a separate hostel for female students monitored by lady staff. Girl students feel comfortable with the freedom in the hostel. Providing transport facilities for all inmates of the ladies hostel in case of outing etc.



**Counseling:**

College provides mentoring and counseling system to the students. College has taken a special care to create social, physical and psychological environment and awareness. A faculty is assigned as mentor for 20 students in each department. Every faculty member will be mentoring the students from different aspects and motivates the students to handle the situations. Counseling is provided to the students to be more confident, mentally strong and matured enough to handle situations affecting their educational and vocational life. Counseling is not about giving advice, but can help the faculty to understand the difficulties of students. Faculty can help students to make decisions and changes that may work better. In addition, a professional counselor counsels the students to sort out any difficulties faced by them. Class mentors identify students who need specific counseling and motivation and guide them to professional counselor. Counselor motivates and counsels the students for better academic performances with good behavior.

**Common Room:**

Separate common room is available for both boys and girls students. Napkin wending machines are provided to upkeep the health and hygiene of girls. If the students suffer by health issues, college has the medical facility inside the campus

File Description	Document
Any additional information	<a href="#">View Document</a>

**7.1.3 Alternate Energy initiatives such as:****1. Percentage of annual power requirement of the Institution met by the renewable energy sources**

**Response:** 0

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

7.1.3.2 Total annual power requirement (in KWH)

Response: 95301

File Description	Document
Details of power requirement of the Institution met by renewable energy sources	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

**7.1.4 Percentage of annual lighting power requirements met through LED bulbs**

**Response:** 20.54

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

Response: 108.48

7.1.4.2 Annual lighting power requirement (in KWH)

Response: 528.24

File Description	Document
Details of lighting power requirements met through LED bulbs	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 7.1.5 Waste Management steps including:

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

**Response:**

#### *Waste Management Initiatives*

We focus on the Green Campus Model and Waste Management is helping our college to achieve a higher level of environmental performance. Our dedicated team sustainability experts works to enhance our campus's current green efforts and encourage everyone on campus to think differently about the materials they use.

**1. Solid waste management** – A biogas plant is made in the campus and another one in the hostel. Recycling efforts are improved and organic recycling services are ensured. Additionally, students, faculty, and staff are properly educated on proper waste management practices. Also the green waste generated on campus, which includes grass clippings, leaf litter, and other landscaping related refuse are also being dumped into the plant. Implementation of this biogas waste management approach minimizes the waste and provides economic benefits, through best suitable method for managing the waste.

**2. Liquid waste management** - A systematic administration of activities that provide for the proper handling, treatment and disposal of liquid waste/wastewater is being practiced in the campus. The liquid waste is being directly used for the campus greenery.

**E-waste management** – All the electronic waste generated in the campus are stored and the recyclable products among them are recycled. Rechargeable batteries a prime source of campus e-waste, as they power most portable electronics like cellphones, laptops, digital cameras, camcorders and PDAs are kept separate. Every year the electronic wastes from each department are collected and kept safe without being thrown in the campus.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

### 7.1.6 Rain water harvesting structures and utilization in the campus

#### Response:

Rain water harvesting.

Good water source is the basic need for any development. Right at the beginning of constructional activities, the Management realized the lack of ample ground water in the campus. The long vision of the authorities paved the way for establishing the institute at such an area where water resources are meager. The authorities have worked out a masterplan for collecting the rain water which will suffice the need of water for the institution. Accordingly, the buildings were designed to optimize the roof area for maximizing rainwater collection from roof top.

The requirement of large roof area for rain water harvesting was really challenging due to the available terrain with construction of necessary storage tanks and filtrations process etc.. It is highly remarkable that we have achieved 100% successful rain water harvesting system before the concept was wide spread. The system includes drainage pipes from the roof top to the underground collection tank.

The rain water from almost all buildings is lead to the UG Storage tank. There are 2 Nos. RCC storage tanks (1 with 6 lakh litres and the other with 4 lakh capacity) with total 1-lakhs litres capacity. In addition a one lakh capacity tank in the MM Campus is also provided. The water is filter treated and water stored in 2 Nos. tanks having 5 lakh & 1 lakh litres capacity each. Thus we are having about 16 lakh litres rain water storage capacity. This will suffice for 40 working days usage in the non-rain period. The rain water harvesting system is enough to meet the need of institution for 10 months in a year. The system is working successfully in the campus for the last 12 years and we had secured the “Palathully peruvellam” award sponsored by Malayala Manorama Publication.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

### 7.1.7 Green Practices

- **Students, staff using**
  - a) **Bicycles**
  - b) **Public Transport**
  - c) **Pedestrian friendly roads**
- **Plastic-free campus**

- **Paperless office**
- **Green landscaping with trees and plants**

**Response:**

The college is a beautiful serene campus full of greenery which improves the aesthetics, reduces global warming and green house effects. College is located in the fragile ecological zone of western Ghats. The management has taken minimal effort to distract the terrain of the location. Trees are effective cleansers and remove pollutants from air and soil. College is very proud of this green and pollution-free atmosphere which is conducive for good educational ambience.

Since inception the college has provided transport for faculty and students. This has greatly reduced the usage of private vehicles by students and lowered the carbon footprint of our campus as a whole.

Plastic covers and bags are completely banned inside the campus. Instruction boards are displayed in various blocks instructing students/staff not to use plastic covers. To create awareness among the students about use of plastic materials and to make college as a plastic free campus, International plastic free day (3rd March) is celebrated. The college is phasing out the use of plastic cups and plastic plates in the cafeteria by using the paper plates and Stainless Steel plates.

Our college faculty members and students use only e-mails and whatsApp for circulars and for other communications, thus reducing time and expenses for academic and other processes. The Principal has created WhatsApp group which includes all Head of departments. In turn, HODs created WhatsApp group with their staff members. Any urgent message or information is passed on to others only through Whatsapp. Placement officer and placement coordinators of all departments have Whats App groups & group mail-ids of students and information is passed through them.

<b>File Description</b>	<b>Document</b>
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

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

**Response:** 0.22

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

2017-18	2016-17	2015-16	2014-15	2013-14
0.5	0.6	0.4	1.2	0.5

File Description	Document
Details of expenditure on green initiatives and waste management during the last five years	<a href="#">View Document</a>

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

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

A. 7 and more of the above

B. At least 6 of the above

C. At least 4 of the above

D. At least 2 of the above

**Response:** C. At least 4 of the above

File Description	Document
Resources available in the institution for Divyangjan	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
link to photos and videos of facilities for Divyangjan	<a href="#">View Document</a>

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

**Response:** 62

7.1.10.1 Number of specific initiatives to address locational advantages and disadvantages year-wise

during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
19	11	11	13	8

File Description	Document
Number of Specific initiatives to address locational advantages and disadvantages	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

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

**Response:** 62

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

2017-18	2016-17	2015-16	2014-15	2013-14
19	11	11	13	8

File Description	Document
Report of the event	<a href="#">View Document</a>

#### 7.1.12

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

**Response:** Yes

File Description	Document
Any additional information	<a href="#">View Document</a>
URL to Handbook on code of conduct for students and teachers , manuals and brochures on human values and professional ethics	<a href="#">View Document</a>

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

<b>Response: Yes</b>	
<b>File Description</b>	<b>Document</b>
Any additional information	<a href="#">View Document</a>
Provide URL of website that displays core values	<a href="#">View Document</a>

<b>7.1.14 The institution plans and organizes appropriate activities to increase consciousness about national identities and symbols; Fundamental Duties and Rights of Indian citizens and other constitutional obligations</b>	
<b>Response: Yes</b>	
<b>File Description</b>	<b>Document</b>
Details of activities organized to increase consciousness about national identities and symbols	<a href="#">View Document</a>

<b>7.1.15 The institution offers a course on Human Values and professional ethics</b>	
<b>Response: Yes</b>	
<b>File Description</b>	<b>Document</b>
Any additional information	<a href="#">View Document</a>
Provide link to Courses on Human Values and professional ethics on Institutional website	<a href="#">View Document</a>

<b>7.1.16 The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions</b>	
<b>Response: Yes</b>	
<b>File Description</b>	<b>Document</b>
Provide URL of supporting documents to prove institution functions as per professional code	<a href="#">View Document</a>

<b>7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years</b>	
<b>Response: 31</b>	
7.1.17.1 Number of activities conducted for promotion of universal values (Truth, Righteous conduct,	

Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
6	6	6	8	5

File Description	Document
List of activities conducted for promotion of universal values	<a href="#">View Document</a>

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

#### Response:

Our country is a land of multi-ethnicity where people of different languages and cultures live together with peace and harmony. India is worldwide known for its cultural diversity and colorful festivals. The College gives priority to the national festivals and birth/death anniversaries of the great Indian personalities. The Institution encourage students and staff to actively participate in the various events as part of the festival celebration.

Every year institution celebrate the following Indian national festivals

#### 1. Onam

Onam is the national festival of Kerala. Department of Higher Education of our state declares one week holiday for Onam. Prior to the start of the holidays a working day is set aside for the celebration. The celebration starts with address by Principal and sending out the Onam message and greetings to staff and students. Various cultural programs befitting and depicting the cultural heritage of Onam is organized in the campus.

#### 1. Teacher's day

On this day we honor our beloved teachers who for their selfless effort towards shaping the carriers of their students and elevating the education system of India as a whole. Teacher's day is organized by department associations and by various student bodies like NSS.

#### 1. Engineer's day

The Engineering Community is celebrating Engineers Day on 15 September every year as a remarkable tribute to the greatest Indian Engineer Bharat Ratna Mokshagundam Visvesvaraya (popularly known as Sir MV). "Role of Engineers in a developing India" is the theme of Engineers Day. Efforts are made each year



to inculcate among students the value of Engineers towards society.

#### 1. Gandhi Jayanthi:

Gandhi Jayanthi is celebrated every year to mark the birth anniversary of Mohandas Karamchand Gandhi, Father of Our Nation. Student volunteers from NSS and department associations carry out cleaning of public places in the locality.

#### 1. National Integration Day

National Integration Day is celebrated every year to mark the birth anniversary of Late Prime Minister Indira Gandhi. National Integration pledge is taken in all the classes by students and staff.

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

#### **Response:**

#### **Transparency in Academic, Finance and Administration**

##### **Academic**

Academic activities of the Institution is under the guidance and scrutiny of Academic Council and IQAC (Internal Quality Assurance Cell).

All decisions pertaining to academic decisions in the college are taken by Academic council and the minutes recorded. Important communications are communicated via notices circulated in departments. With an emphasis on paperless communication, official whatsapp and email groups are formed and academic deliberations are communicated effectively.

Academic audit is done regularly to assess the teaching learning process carried out in the institution. Feedback from faculty and staff are taken at periodic intervals and corrective measures are adopted.

##### **Organogram**

1. The college follows a clear hierarchal system and well crafted organisation structure is in place at all offices. Charter duties are issued for all categories of staff.

##### **HR Management**

2. College follows the system for recruitments, training, deployment, carrier planning, leave, wages etc. A handbook is prepared covering all the details of HR Management as a ready reference. There exists a well defined system for addressing sexual harassment, redress of grievances etc.

##### **Welfare Measures**

3. A lot of welfare measures are available to the staff of MCET. Some of the welfare measures are listed below:-

1.Provident Fund for the non-teaching staff.

1.ESI benefits for the non-teaching staff.

1.All non-teaching staff on completion of 5 years of continuous service is given a monthly allowance of Rs.1500 and on completion of 10 years of service Rs.2000.

1.Family get-together for all staff members once in a year (Ifthar/Onam/Xmas) for better interaction with family members of staff.

1.Festival advances to employees.

1.Interest free loan to all staff.

### **Accounting System**

1.Source of income. Musaliar College of Engineering and Technology is a self financing institution under Musaliar Education Trust, a charitable organization. The income to the college is mainly from the Tuition Fee collected from students. Fee can be remitted by cash, Demand Draft or through bank. Other income sources like consultancy, rent, facility utilization etc. are very meager.

1.Payments. MCET follows government guidelines for the payments. Salary and other payments are through bank transfers or through cheques as per the guidelines.

1.Accounting Software. Tally is used for accounting system and the software is regularly updated. Accountants are trained for handling the system.

1.Concurrent auditing is carried by Chartered Accountants engaged by Musaliar Education Trust. Internal audit is limited to verifying the daily transactions and supporting documents. Month end

accounts are verified with the physical holding of cash as well as the bank statements. Qualified and registered Chartered Accounts are engaged for audit of the institution. Staff of external audit agency is available for concurrent auditing and advising on our accounting procedure. All accounts till 2017-18 are audited and reports as well as records submitted to Income Tax department. No audit objectives are pending with the institution. Presently M/s JRS Associates, Kollam is the external auditor for the institution.

File Description	Document
Any additional information	<a href="#">View Document</a>

## 7.2 Best Practices

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

#### Response:

#### Best Practices

1. Good Morning Test.

#### Introduction

1. Learning is a lifelong process and the learning style differs from person to person. A structured curriculum is normally linked with time in terms of completion of the prescribed syllabus, assessments and declaration of the outcomes. Hence it demands a structured learning.

1. It was observed that while some students are systematic in the learning activities majority are not, especially when the 'just in time' concept is advocated at most of the areas. Students are a bit over confident that they can prepare for examinations at last minute. But the fact remains or proved that it is a false notion at least in the engineering education scenario. The "Good Morning Test", which could address the above issues, was thus introduced.

1. Generally each theory course has 3 or 4 hrs in a week, as per the approved curriculum. The "Good Morning Test" can contribute positively to inculcate concurrent learning habits in students.

#### Objectives

1. The objectives of good morning test are:-

1. Inculcate the habit of concurrent learning in students.
2. Improve the results.
3. Reduce the burden of total syllabus study on students on the eve of examinations to revisions.
4. Groom the students to a systematic learning process.
5. Give maximum writing practice to students for each type of questions.

### **Execution**

1. Coverage. The Syllabus for the 'Good Morning Test' would be the syllabus covered during the previous one week (normally 3 to 4 hrs of coverage). The following guidelines are to be followed for conduct of "Good Morning Test": -

1. One examination only should be conducted in a day from Monday to Friday. Subjects like life skills Design and Engineering etc need not be considered for test.

1. Test is to be conducted during the first period for duration of one hour as far as possible. Minor adjustments in time table be resorted, if necessitates.

1. Separate examination book be used for writing the Good Morning Test. No loose for 'Good Morning Test' sheet be permitted.

1. A detailed debrief be given to students while returning the answer books after valuation. This has the following advantages:-

1. The Students get an idea of what was expected and what they wrote against each question and thus they themselves could gauge their performance.
2. A reference document for the university examination preparations.

1.

### **Assessment**

1. Performance of 'Good Morning Test' to be documented and analyzed for identifying students who need remedial/Tuition classes or advanced learning exercises.

## Conclusion

1. 'Good morning test' are to be conducted with due importance and seriousness as the same caters for:-

1. Students to develop a systematic continuous learning habit.

1. Continuous close monitoring of students academic performance and helps in taking timely corrective measures wherever required.

1. Getting enough practice for writing examinations in terms of time and content.

1. Readymade question bank with answers for university exam preparation.

1. MCET Green Drive.

## Objective:

Musaliar College of Engineering and Technology was established in the year 2002 in Pathanamthitta District. The location where the college is situated is ecologically fragile zone. Management realized the importance of a clean green campus that could bring a holistic environment for effective teaching learning process and started planting flora and fauna once the civil construction work was over. At most care was taken in construction activities not to alter the terrain where the college is situated.

## Context

Recreating the canopy in a barren land was initiated. As the land was scarce in natural water resources, steps were taken to construct large water storage tanks through which watering of newly planted saplings could be effectively done. Efforts were made to identify and plant different species of trees best suited to the soil. This was done in consultation with the Kerala Forest Department. Species of Fauna that could provide extensive canopy were identified to be planted in select locations.

## Practice

Apart from regular up keeping of the vegetation in campus, it was decided to educate the stake holders about the same. Name plates were installed indicating the local name and biological name of plant species. Over fifty different species of trees and plants could be effectively grown in the campus providing a conducive environment for teaching learning process. The canopy also reduces the carbon footprint in the region.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

## 7.3 Institutional Distinctiveness

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

#### Response:

As we are an affiliated institution, we are strictly following the university syllabus as per KTU and lacks the privilege to upgrade the syllabus. University syllabus takes periodic time for updation which reflects in the lack of latest technological advancement being included in the curriculum. The consequence is that every year the graduates passing out stands academically outstanding but lacks practical knowledge and technical expertise. The Musaliar Management identified this shortfall and understood the need for imparting additional technical skill to the students to mould them as the engineers needed by the society and to cater the updated needs of the changing world.

As an initiative for this, the college management and faculties took keen interest in developing skill development centers and training activities to the students. Number of technically related certified training programs are organized for students. Along with it, skill enhancement workshops by experts and other seminars are also arranged for students focusing on topics outside the curriculum.

#### Musaliar Start up Zone

The next stepping stone was made by the setting up of Musaliar Start up zone. The idea of Musaliar Start up zone is one of the farsighted activities by the institution with an objective to motivate and transform the engineering students from job seekers to innovators. Start up culture was established years before by the college which supports with infrastructure facilities, and finance the students as well as the Alumni for starting ventures at the startup zone. The MUSALIAR START UP ZONE was inaugurated by Hon. Minister of Industries and Sports, Kerala, Shri. A. C. Moideen.

All the engineering branches have training initiatives as startups. The Department of Mechanical Engineering runs a production centre consisting of Stallion made CNC machine to train the students and to undertake contract works from industries and public sector organizations like ISRO, KAMCO etc. The R & D work of developing and testing '**COIR REINFORCED ALUMINIUM LAMINATE EPOXY**' was supported by the 'Central Coir Research Institute, Defence Research & Development Organisation

(DRDO) and material testing division of Indian Space Research Organisation (ISRO). The Department of Electrical and Electronics Engineering and Innovation & Entrepreneurship development Centre (IEDC) in association with **KSIDC** owes a project to manufacture solar emergency lamps. The department of Computer Science & Engineering have several software companies running as startups.

Six companies are already functioning in the startup zone which includes ‘Musaliar Solar Lamps’, a solar lamp project funded by KSIDC and Root5 Solutions- a company registered in Technopark, others include Cybrose Solutions, MICASA, MET Productions, Spark 7 Solutions. Under the guidance of faculties, students are given in house internships in these startups.

Also Research & Development is fully supported by the management and financial advances and loan are given for genuine R&D projects. MOU with various companies have been signed to have strong industry-institute interaction.

With the advent of Outcome Based Education in 2016, significant importance was being given for internships and field trainings and there has been an evident increase in the number of students opting for internships.

### **Musaliar Skill Development Center (MSDC)**

In the year 2017, Musaliar Skill Development Center(MSDC) was set up. It aims to promote skill development to students in the field of technical education that helps to enhance their employability skills by catalyzing creation of quality professionals.

MSDC has been entrusted the responsibility to train youth with the objective for enhancing their employment/ self-employment opportunities. Special skill development programs are planned and implemented under MSDC with an aim to bring out the qualified and skilled candidates and has successfully completed the following initiatives during the academic year 2017-2018:

1. ASAP training to both the students inside the campus and nearby locality.
2. On the job training to VHSE students

### **SDPK (Skill Development Platform Kerala)**

As a part of the second phase expansion of MSDC, MCET is partnering with KSITIL (KERALASTATE IT INFRASTRUCTURE LTD) for the SDPK (SKILL DEVELOPMENT PLATFORMKERALA) project, where a sophisticated laboratory with state of the art equipments are installed to pursue online skill development courses with a view to upgrade and build on their skill sets and enhance employability. It aims to elevate their skills to global standards for employment in India and abroad.

<b>File Description</b>	<b>Document</b>
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

## 5. CONCLUSION

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### **Additional Information :**

MCET is partnering with KSITIL (KERALASTATE IT INFRASTRUCTURE LTD) for the SDPK (SKILL DEVELOPMENT PLATFORMKERALA) project, where a sophisticated laboratory with state of the art equipments are installed to pursue online skill development courses with a view to upgrade and build on their skill sets and enhance employability.

### **Concluding Remarks :**

Musaliar College of Engineering and Technology, being an institution in the remote terrains of Pathanamthitta district strives hard to enhance quality education to the youth. Institution takes keen interest in selecting well enhanced faculties and trainers as they are the pivot tool who moulds the students. Understanding the growing needs of technically qualified engineering graduates, MCET focuses on skill development centers and training activities to the students. Musaliar Skill Development Center(MSDC) is the evident initiative set up by MCET and has been entrusted the responsibility to train youth with the objective for enhancing their employment/ self-employment opportunities. Special skill development programs are planned and implemented under MSDC with an aim to bring out the qualified and skilled candidates. In house trainings and internships are arranged for the students in the campus and from outside. Also, the college organizes 'On Job Training for VHSE students to widen their technical knowledge. With an aim to enhance the employability of students in multinational companies and to cater excellent career, the Musaliar Career and Placement Unit has initiated steps in arranging training sessions by experts and industry interaction by the students.