



## Yearly Status Report - 2018-2019

### Part A

#### Data of the Institution

1. Name of the Institution	AMAL JYOTHI COLLEGE OF ENGINEERING
Name of the head of the Institution	Dr. Z V Lakaparampil
Designation	Principal
Does the Institution function from own campus	Yes
Phone no/Alternate Phone no.	09496094661
Mobile no.	9072661602
Registered Email	office@amaljyothi.ac.in
Alternate Email	principal@amaljyothi.ac.in
Address	Kanjirappally, Koovappally P.O
City/Town	KOTTAYAM
State/UT	Kerala
Pincode	686518

#### 2. Institutional Status

Affiliated / Constituent	Affiliated
Type of Institution	Co-education
Location	Rural
Financial Status	private
Name of the IQAC co-ordinator/Director	Prof. K G Satheesh Kumar
Phone no/Alternate Phone no.	09447368027
Mobile no.	7907502873
Registered Email	iqac@amaljyothi.ac.in
Alternate Email	kgsatheeshkumar@amaljyothi.ac.in

### 3. Website Address

Web-link of the AQAR: (Previous Academic Year)	<a href="https://ajce.in/home/iqac.html">https://ajce.in/home/iqac.html</a>
<b>4. Whether Academic Calendar prepared during the year</b>	Yes
if yes, whether it is uploaded in the institutional website: Weblink :	<a href="http://www.ajce.in">http://www.ajce.in</a>

### 5. Accreditation Details

Cycle	Grade	CGPA	Year of Accreditation	Validity	
				Period From	Period To
1	A	3.02	2016	25-May-2016	24-May-2021

<b>6. Date of Establishment of IQAC</b>	04-Sep-2014
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### 7. Internal Quality Assurance System

Quality initiatives by IQAC during the year for promoting quality culture		
Item /Title of the quality initiative by IQAC	Date & Duration	Number of participants/ beneficiaries
Class duration has been changed from 50 minutes duration to 1 hour duration	01-Jul-2018 12	3500
Daily lab evaluation to	01-Jul-2018	3500

focus the upliftment of weaker students in the class	12	
AES version 3 with provision to map and calculate PEO,PO,CO attainment level calculation for outcome based education framework	01-Jul-2018 12	3500
Remedial class in the hostel under the supervision of faculty has started	01-Jul-2018 12	2500
Promotion to Associate Professor and Professor in all departments	01-Nov-2018 1	18
Library usage survey from out going students	10-Jul-2018 1	700
Automation of assessment and evaluation of all internal exams are automated on the basis of OBE framework with the help of AES	01-Jan-2019 6	3500
MoU signed for GATE coaching with CLAS	01-Jan-2019 12	45
Feedback from all stakeholders collected, analysed and used for improvements	17-Oct-2018 1	3400
Academic Administrative Audit (AAA) conducted and its follow up action	17-Oct-2018 1	3400
Participation in NIRF	01-Jul-2019 12	3500
The interaction with final year B.Tech students for improving their projects by Dean Research	21-Jan-2019 10	3600
The interaction with M.Tech and MCA students for improving their projects by Dean Research	12-Feb-2019 4	356
Interaction with faculty members dept wise for better mentoring of projects and doing research. by Dean research	16-Jan-2019 9	217

**8. Provide the list of Special Status conferred by Central/ State Government-UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.**

Institution/Department/Faculty	Scheme	Funding Agency	Year of award with duration	Amount
Manu Moses Jacob & Tony Varghese /Mechanical	RESPOND	ISRO	2018 1	1480000
DBS/ACeNT	Researcher award	KTU	2018 1	1112200
EEE	SRI	ANERT	2018 1	223000
EEE	SRI	ANERT	2018 1	540000
EEE	CERD	CERD	2018 1	35000
EEE	ANERT	ANERT	2018 1	147000
EEE	OJT	UBA	2018 1	7500
ECE	TDAP	KSCSTE	2018 1	363000
DBS/Dr. Soney C George	DST FIST	DST	2018 1	6000000

**9. Whether composition of IQAC as per latest NAAC guidelines:**

Yes

Upload latest notification of formation of IQAC

[View File](#)

**10. Number of IQAC meetings held during the year :**

4

The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website

Yes

Upload the minutes of meeting and action taken report

[View File](#)

**11. Whether IQAC received funding from any of the funding agency to support its activities during the year?**

No

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

? Fully inhouse built automated system (AES) for monitoring the activities of the college includes Students admission/ recruitment and other information of

staff/finance/academic auditing/ ? Collecting feedbacks from stakeholders and taking necessary actions to enhance the quality of education offered by the institution. ? Digital monitoring of assessment process under OBE framework. ? Evaluation of the outcome attainment process. ? Participation in NIRF

**13. Plan of action chalked out by the IQAC in the beginning of the academic year towards Quality Enhancement and outcome achieved by the end of the academic year**

Plan of Action	Achivements/Outcomes
Collect feedback from all stakeholders	Feedbacks collected and corrective measures initiated
Remedial class in the hostel under the supervision of faculty has started	Results improved
Library usage survey from out going students	Rectified the process

**14. Whether AQAR was placed before statutory body ?**

Yes

Name of Statutory Body	Meeting Date
Academic Council	19-Jun-2019

**15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?**

No

**16. Whether institutional data submitted to AISHE:**

Yes

Year of Submission

2019

Date of Submission

28-Feb-2019

**17. Does the Institution have Management Information System ?**

Yes

If yes, give a brief descripton and a list of modules currently operational (maximum 500 words)

AES is in house developed information management system. Academic Enterprise Solutions (AES) has a spectrum of specialized undertakings in the field of Information Technology. In areas of software development, we concentrate on the Open Source as well as Proprietary Technologies. Our prime focus is on the Small Medium Business and Education Segment. We have a dedicated team of professionals and a practice driven system for Software Development on various platforms. In IT training, we focus training programmes in

technologies like PHP, .NET, Java, Android etc. monitor all the aspects of the college functioning. AES is a complete campus administration software that manages all complex task of college automation. Clients - Amal Jyothi College of Engineering and Marian College Kuttikkanam. AES login for staff, students, parents, alumni allows the access to all stake holders of the college. They can send their grievances, suggestions, feedback, payments all the activities can be done through this software login. Admission, class management, staff profile, students profile, academic auditing, timetable, class management, course/program outcome attainment, feedback system, feedback, course diary, mentoring, library, publications, file uploads, biometric log, staff leave, salary, attendance reports are some of the modules in this.

## Part B

### CRITERION I – CURRICULAR ASPECTS

#### 1.1 – Curriculum Planning and Implementation

1.1.1 – Institution has the mechanism for well planned curriculum delivery and documentation. Explain in 500 words

Institution is following the curriculum and syllabus of KTU university. Subject is allocated to faculty well in advance. The curriculum implementation process of the institution starts with an Annual Academic Planning and Calendar for the year, which are strictly followed. Several procedural and practical supports are provided by the institution in the course of curriculum planning and implementation. Preparation of Course Plan, Engagement of Course coordinators, Class teachers and Mentors, appointment of a Controller of Examination, Industry/agency internships, Networking and signing MoUs with international universities and national level non-government organizations, assignment of projects to senior students and engagement of a host of practitioners/experts as Senior Faculty are some of the strategies for effective curriculum implementation at the College. Timetables, course plans and portions covered daily are entered in the Academic Enterprise Solution (AES) software which is developed in-house. The AES monitors the student attendance and progress in teaching and is accessible to all the stakeholders. Several faculty members contribute in the curriculum designing at the University level by being members of different Boards of Study. The lacunae in the University curriculum are identified through a need assessment process and are dealt with by offering add-on courses, training programmes and entrepreneurial and creative engagements. Periodic reviews at the department level ensure the achievement of curriculum objectives.

1.1.2 – Certificate/ Diploma Courses introduced during the academic year

Certificate	Diploma Courses	Dates of Introduction	Duration	Focus on employ ability/entreprene	Skill Development
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urship					
PLE Practical Aspects of Electrical Engg 2018	16/07/2018	100	Employabilit y	Skill development	
Akshaya Urja training program for Technicians	26/09/2018	100	Employabilit y	Skill development	
Digital System Design using VHDL	02/07/2018	100	Employabilit y	Skill development	
PLE Practical Aspects of Electrical Engg 2018	16/07/2018	100	Employabilit y	Skill development	
A Short term course on report writing / Paper writing using Latex Software	04/08/2018	100	Employabilit y	Skill development	
Home energy management	25/01/2019	100	Employabilit y	Skill development	
Workshop on Sustainable Energy Champion 2019	18/03/2019	100	Employabilit y	Skill development	
Workshop on Power control	28/06/2018	100	Employabilit y	Skill development	
Workshop on robotics using Arduino	10/11/2018	100	Employabilit y	Skill development	
Rooftop Solar PV Power Systems	22/03/2019	100	Employabilit y	Employabilit y	
Artificial Intelligence and Machine Learning	12/01/2019	18	Employabilit y	Skill development	
Yamaha Training SchoolASDC Certified	02/08/2018	1	Employabilit y	Yes	

Electrical System Design and MEP course by Sigmos (S8 students)	01/02/2019	120	Employability	Skill development
Electrical System Design and MEP course by Sigmos (S6 students)	01/02/2019	120	focus on employability/ entrepreneurship	Skill development
Akshaya Urja training program for Technicians	26/09/2018	100	Employability	Skill development
Digital System Design using VHDL	02/07/2018	100	Employability	Skill development
Training program of Solar PV Systems	23/10/2018	100	Employability	Skill development
Skill Development programme on Ceiling fan Maintenance Kulirma	25/01/2019	100	Employability	Skill development

## 1.2 – Academic Flexibility

### 1.2.1 – New programmes/courses introduced during the academic year

Programme/Course	Dates of Introduction
<b>BTech</b>	<b>01/01/2019</b>

### 1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective course system implemented at the affiliated Colleges (if applicable) during the academic year.

Name of programmes adopting CBCS	Date of implementation of CBCS/Elective Course System
<b>Mtech</b>	<b>01/07/2018</b>
<b>BTech</b>	<b>01/07/2018</b>

### 1.2.3 – Students enrolled in Certificate/ Diploma Courses introduced during the year

	Certificate	Diploma Course
Number of Students	<b>206</b>	<b>0</b>

## 1.3 – Curriculum Enrichment

### 1.3.1 – Value-added courses imparting transferable and life skills offered during the year

Value Added Courses	Date of Introduction	Number of Students Enrolled
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Heavy vehicles technology training AUE	01/06/2018	24
Two wheeler Technology TrainingAUE	05/06/2018	18
Electrical System Design	04/07/2018	17
Digital System Design using VHDL	03/08/2018	43
A Short term course on report writing / Paper writing using Latex Software	04/08/2018	34
Design Workshop	06/04/2019	40
Workshop on robotics using Arduino	10/11/2018	12
Workshop on Power control	28/09/2018	44
English Language course	01/08/2018	800

### 1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	No. of students enrolled for Field Projects / Internships
<b>BTech</b>	<b>179</b>

## 1.4 – Feedback System

### 1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	Yes
Employers	Yes
Alumni	Yes
Parents	Yes

### 1.4.2 – How the feedback obtained is being analyzed and utilized for overall development of the institution? (maximum 500 words)

Feedback Obtained
<p>a. A, The knowledge obtained from the students participating in the Internships is used to refine and improve the content of the value added courses conducted by the Department. b. The practical aspect of the internships at various industries is used to supplement the course delivery activities. c. Student feedbacks are considered with proper care and listed out the areas need bit more attention. According to the feedback, the lab facility utilization is which was restricted for academic activities was opened for all students for their extra knowledge acquisition and all the facilities available at the department is now accessible for students without any restriction. The availability of curriculum project guides for students increased based on the feed back provided by them.</p>

## CRITERION II – TEACHING- LEARNING AND EVALUATION

### 2.1 – Student Enrolment and Profile

#### 2.1.1 – Demand Ratio during the year

Name of the Programme	Number of seats available	Number of Application received	Students Enrolled

<b>BTech</b>	<b>780</b>	<b>1500</b>	<b>636</b>
<b>Mtech</b>	<b>150</b>	<b>60</b>	<b>56</b>
<b>MCA</b>	<b>180</b>	<b>200</b>	<b>134</b>

## 2.2 – Catering to Student Diversity

### 2.2.1 – Student - Full time teacher ratio (current year data)

Year	Number of students enrolled in the institution (UG)	Number of students enrolled in the institution (PG)	Number of fulltime teachers available in the institution teaching only UG courses	Number of fulltime teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
<b>2018</b>	<b>671</b>	<b>190</b>	<b>250</b>	<b>22</b>	<b>250</b>

## 2.3 – Teaching - Learning Process

### 2.3.1 – Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc. (current year data)

Number of Teachers on Roll	Number of teachers using ICT (LMS, e-Resources)	ICT Tools and resources available	Number of ICT enabled Classrooms	Number of smart classrooms	E-resources and techniques used
<b>247</b>	<b>100</b>	<b>134</b>	<b>152</b>	<b>85</b>	<b>3778</b>

### 2.3.2 – Students mentoring system available in the institution? Give details. (maximum 500 words)

An effective mentoring system is available in the college with a dedicated hour per week is meant for mentoring the students. The Academic management software (AES 3) is used for keeping all the required mentoring data of the students from first year to final year and all databases will be up to date. The mentor will be the first contact person for the students in all manner in the institution. The mentor mentee relationship is also very healthy in the institution. There are Eight fulltime professional counsellors in the College. In addition, each faculty member is entrusted with 20 students to keep track of their progress and performance. Students may contact their respective staff mentor for guidance on issues affecting them. They take responsibility for their development, learning, and professional growth. Initiate and communicate expectations regarding the mentoring relationship. They motivated and feel empowered to plan and manage the direction of their professional life.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
<b>671</b>	<b>247</b>	<b>1 : 20</b>

## 2.4 – Teacher Profile and Quality

### 2.4.1 – Number of full time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
<b>247</b>	<b>247</b>	<b>0</b>	<b>31</b>	<b>28</b>

### 2.4.2 – Honours and recognition received by teachers (received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the year )

Year of Award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
<b>2019</b>	<b>George Sebastian</b>	<b>Assistant Professor</b>	<b>KSCSTE Funded Project</b>
<b>2019</b>	<b>Tony Varghese</b>	<b>Assistant Professor</b>	<b>KSCSTE Funded</b>

			Project
2019	Abi Varghese	Assistant Professor	KSCSTE Funded Project
2019	George Sebastian	Assistant Professor	First prize in Paper Presentation
2019	Dr.Soney C George (state level)	Dean	KTU Researcher of the year award 2019
2019	Mr. Anish Benny	Assistant Professor	KETCON 2019 Best Paper Award
2018	Ms.Sreekala P	Assistant Professor	ICPES 18 Best Paper Award Kalashalingam University
2018	Mr.Syam Gopi	Associate Professor	ACM Senior Member
2019	Dr. Soney C George	Dean	AICTEUKIERI Leadership Training programm
2019	Dr.Soney C George	Dean	AICTE Travel Grant Award

## 2.5 – Evaluation Process and Reforms

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

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-end examination	Date of declaration of results of semester-end/ year- end examination
BTech	BTC	S8/S6/S4/S2	14/05/2019	30/07/2019
Mtech	MTC	S4/S2	14/05/2019	30/07/2019
MCA	MCA	S6/S4/S2	14/05/2019	30/07/2019

2.5.2 – Reforms initiated on Continuous Internal Evaluation(CIE) system at the institutional level (250 words)

Some of the reforms that have been initiated: a. The B. Tech program is affiliated to APJ Kalam Technological Univ., Trivandrum. The internal marks have a component of 50 marks. The students in the top bracket are encouraged to do better by way of enrolling for the B. Tech (Hons.) program. Likewise, those in the bottom bracket are motivated to obtain a pass grade. This is being achieved by conducting a series of tests on a weekly basis to replace and supplement the prescribed internal exams. Constant course content exposure is expected to improve their retention and thus to enhance their internal marks and further n the university exams. b. The continuous evaluation scheme (used in the Academic Enterprise SoftwareAES) keeps tabs on the internal marks of the students after the completion of each series examination and assignment. This reporting system contributes to an effective internal evaluation. c. Continuous Evaluation of students is done by individual subject teachers to ensure the minimum score gain for qualifying the criteria for writing university examination. Weak students are identified and initiated proper care to make them enough confident to face examination by repeated evaluation which will also ensures minimum internal assessment score.

2.5.3 – Academic calendar prepared and adhered for conduct of Examination and other related matters (250 words)

Department Academic Calendar is formed in compliance with the university

academic calendar and the activities related to department are charted on the same. Strict adherence to the calendar is mandated to the faculty. The department uses the essential APJ KTU academic calendar for planning and monitoring purposes. Several parameters such as • Class / Course Committee meetings • Conduct of Series tests / Assignments are drawn from the calendar. In addition, other unlisted parameters such as • Dept. exam Cell activities • PTA meetings • Industrial visits • Dept. meetings • Research forum meetings • Invited talks • Release of the Dept. Newsletter Eclectic • Student mentoring are detailed in the Dept. Academic calendar

## 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 in website of the institution (to provide the weblink)

<https://ajce.in/home/index.html>

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
15 BTECH	BTech	634	546	86.12

## 2.7 – Student Satisfaction Survey

2.7.1 – Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

<https://www.ajce.in>

## CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

### 3.1 – Resource Mobilization for Research

3.1.1 – Research funds sanctioned and received from various agencies, industry and other organisations

Nature of the Project	Duration	Name of the funding agency	Total grant sanctioned	Amount received during the year
Projects sponsored by the University	1	Amal Jyothi College of Engineering	0.12	0.12
Students Research Projects (Other than compulsory by the University)	1	I2U, AJCE	0.38	0.38
Students Research Projects (Other than compulsory by the University)	1	KSCSTEINNOVATE	0.05	0.05
International Projects	1	AJCE	0	0
Any Other (Specify)	1	AJCE	0	0
Major Projects	2	ISRO	12.2	11.2

Major Projects	1	KSCSTE	0.45	0.45
Major Projects	2	KTU	15	11.12
Major Projects	1	KTU CERD	1.5	1
Major Projects	1	ANERT	5.4	0
Major Projects	1	ANERT	2.23	0
Major Projects	1	ANERT	1.47	0
Major Projects	2	KSCSTE	2	1
Minor Projects	.6	KSCSTE	0.15	0.15
Minor Projects	1	UBA	0.01	0.01
Interdisciplinary Projects	1	UBA	1	1
Industry sponsored Projects	1	UBA	1	1
Projects sponsored by the University	1	Amal Jyothi College	0.01	0.01
Projects sponsored by the University	1	Dept. of EEE, Amal Jyothi College	0.3	0.3
Projects sponsored by the University	1	DST FIST	60	60

### 3.2 – Innovation Ecosystem

3.2.1 – Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of workshop/seminar	Name of the Dept.	Date
Modern manufacturing techniques	Metallurgy	28/03/2019

3.2.2 – Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of Awardee	Awarding Agency	Date of award	Category
Mini Inverter Challenge	Daniel Joseph Subin Babu Vignesh Krishnan	Aranmula Engineering College	22/03/2019	Min Inverter Technology
Mini Inverter Challenge	Shijin Saji Kurian Leo Thomas Gijo S Babu	Aranmula Engineering College	22/03/2019	Min Inverter Technology
Advanced DSM system for DC residential building	Saira Philip Liss Abraham (Students) Rani Chacko Rohit Rajan Eapan (Faculty)	KTUCERD	10/11/2018	Student project
Non Isolated 3port converter	Mr Arun S (Principal	ANERT – RD	12/05/2018	RD

with single phase stage conversion for Stand alone PV application using FPGA	Investigator) Mr. Vinu Sankar (Co Investigator)			
Conductivity studies on PANI/Rho Composite Applied Polyester Based Fabric for Supercapacitor Electrode Application	Mr.Anish Benny	KETCON 2019 Conference KTU	19/02/2019	Best paper Award
A Novel Low Cost Solar Based Energy Efficient Smart Home Electrification System For Conventional Home	Mr. Sidharth Mohan Nair Mr. Midhun V M Mr. Martin Mathew Ms. Maria Mathew	Amal Jyothi Scholars' Community for Inspiring Innovation (ASCII), the RD wing of IEDC - AJCE	10/05/2019	Student projects contest
Mathematical modelling and analysis of Thermoelectric generators	Ms.Sreekala P	5th International Conference on Power and energy systems" at KLU Virudhunagar	13/04/2018	Best paper Award
Veegie Shooter	Ms. Anju Joseph Mr. Justine Varghese Varkey Mr. Akhil Sony Mr. Alen Joseph	Amal Jyothi Scholars' Community for Inspiring Innovation (ASCII), the RD wing of IEDC - AJCE	10/05/2019	Student projects contest
Early Detection of Retinal Diseases using Deep Neural Networks' in CSI - Inapp National Student Project award Project competition.	Siji A Thomas	CSI - Inapp National Student Project award	27/04/2019	Student projects contest
AID	Jis Joe Mathew,Martin Siby,Seby Joseph, Philson K Philip,Justin Moncy	Github/Hacker Earth	14/02/2019	HACKATHON

3rd Eye	Jis Joe Mathew, Martin Siby, Rajat Jaic Mendez, Philson K Philip	Microsoft/Githu b	14/12/2018	HACKATHON
Hydroponics	Sidharth Mohan, Midhun V M, Stevans Johnson, Martin Mathew, Nithin Issac,	Kerala Agricultural Development Society	06/05/2019	Smart Agriculture

### 3.2.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Center	Name	Sponsored By	Name of the Start-up	Nature of Start-up	Date of Commencement
1	TBI	DST	Exsight Future	Service activity generally delivered to Commercial clients	26/04/2019
1	TBI	DST	QKamet	Embedded System Technical Consultancy	01/04/2019

### 3.3 – Research Publications and Awards

#### 3.3.1 – Incentive to the teachers who receive recognition/awards

State	National	International
No Data Entered/Not Applicable !!!		

#### 3.3.2 – Ph. Ds awarded during the year (applicable for PG College, Research Center)

Name of the Department	Number of PhD's Awarded
ECE	2
DBS (ACeNT)	2
Mathematics	1

#### 3.3.3 – Research Publications in the Journals notified on UGC website during the year

Type	Department	Number of Publication	Average Impact Factor (if any)
National	DBS	1	0
National	Chemical Engg	3	0
International	EEE	1	3.48
International	DBS	11	2.2
International	DBS	1	.90
International	DBS	1	0
International	Metallurgy	3	1.5
International	CSE	3	3.81
International	Chemical Engg	1	0

3.3.4 – Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	Number of Publication
ME	1
EEE	3
Humanities	13
CSE	20
DBS ACeNT	8

3.3.5 – Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citation
User centric economic demand response management in a secondary distribution system in India	R R Eapen, S P Simon, K Sundareswaran and P S Nayak	IET Renewable power generation	2018	1	National Institute of Technology, Thiruchirappally,	0
Energy: Polymer Super capacitors	Anish Benny Soney.C George	Electronic s-Energy, Encyclopaedia of Polymer Applications , First Edition, DOI: 10.1201 /97813510194221400 0016 5 (3 Volume Set 1 Taylor Francis Group)	2018	1	NIT	0
Soiling of Photovoltaic Modules - Review	R. Chacko, A. Shaju	IOP Conf. Series: Materials Science and Engineering, International Conference RAEREST 2018, St.Joseph's	2018	1	NIT	0



		College of Engineering and Technology,				
Enhanced Performance of Thermoelectric Generator by Modified HBridge Converter	Sreekala P Dr. A Ramkumar	IEEE International Conference on "Intelligent Techniques in Control, Optimization and Signal Processing" INCOS'19	2019	1	NIT	0

3.3.6 – h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the Paper	Name of Author	Title of journal	Year of publication	h-index	Number of citations excluding self citation	Institutional affiliation as mentioned in the publication
Context adaptive residual coding for efficient compression of MCEEG employing wave atom transforms	Geevarghese Titus	Multidimensional Systems and Signal Processing	2019	0	0	Amal Jyothi College of Engineering
Effective EMG denoising using a hybrid model based on WAT and GARCH	Geevarghese Titus	Biomedical Signal Processing and Control	2018	1	1	Amal Jyothi College of Engineering
A Simple but Efficient EEG Data Compression Algorithm for Neuromorphic Applications	Geevarghese Titus	IETE Journal of Research	2018	0	0	Amal Jyothi College of Engineering
Analysis of Course Outcome Attainment for Engine	Therese Yamuna Mahesh	International Journal of Engineering Applied	2018	0	0	Amal Jyothi College of Engineering

ering Graduates for NBA Ac creditatio n		Sciences and Technology				
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### 3.3.7 – Faculty participation in Seminars/Conferences and Symposia during the year :

Number of Faculty	International	National	State	Local
Attended/Semina rs/Workshops	11	36	18	10
Presented papers	25	7	4	0
Resource persons	4	12	12	15

### 3.4 – Extension Activities

3.4.1 – Number of extension and outreach programmes conducted in collaboration with industry, community and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the activities	Organising unit/agency/ collaborating agency	Number of teachers participated in such activities	Number of students participated in such activities
Training for Plus Two Teachers(DBS)	RSC	32	25
Two Wheeler Technology Training AUE	Royal Enfield	2	20
TEDX AJCE	TED	3	110
KERALA FLOOD RELIEF	GOONJ	5	25
NSS CAMP	NSS	1	200
For my Keralaapp	Amal Jyothi College of Engineering	2	10
Led Bulb Manufacturing at Amalagiri	NSS Student Chapter Amal Jyothi	1	120
Cleaning activity at Kanjirappaly(Tha mpalakkadu road) as part of Gandhi Jayandi.	NSS Student Chapter Amal Jyothi	1	16
Flood Relief Activity coordinated by s6 EEE Students	Electrical Engineering Student Association and S6 EEE Students	1	40
Food and relief material supply for flood victims by EEE student and staff	AJCE EEE Dept. and Electrical Engineering Student Association	17	36

3.4.2 – Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the activity	Award/Recognition	Awarding Bodies	Number of students Benefited
Election Kottayam App	Letter of recognition and appareciation	District administration Kottayam	52
Spoken tutorial	Letter of recognition and appreciation	IITB NMEICT	249

3.4.3 – Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/Agency/collaborating agency	Name of the activity	Number of teachers participated in such activites	Number of students participated in such activites
Swatch Bharath cleaning drive	MHRD	Campus cleaning Drive	10	106
SWATCH BHARAT summer Internship	Govt organization(MHRD,Ministry of youth affairs etc)	SWATCH BHARAT summer Internship	1	2
NGO	GOONJ	KERALA FLOOD RELIEF	5	25
Kidney Awareness Camp	Mary Queens Hospital,Kottayam	Heart your Kidney	3	20

### 3.5 – Collaborations

3.5.1 – Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of activity	Participant	Source of financial support	Duration
Research	Ms. Sreekala P	CERD	201819
Research	Mr.Anish Benny	CERD	201819
Research	Mr. Arun S	CERD	201819
Research	Ms. Rani Chacko	CERD	201819
Research	Mr. Rohit Rajan Eapen	CERD	201819
Research	Mr. Victor Jose	CERD	201819
Research	Mr. Bobin k Mathew	CERD	201819
Research	Darsana P	CERD	201819
Research	Careena P	CERD	201819
Research	GeeVarghese Titus	CERD	201819
Research	Therese Yamuna Mahesh	CERD	201819
Research	Godwin Raj	CERD	201819
Collaborative Research	Dr.Soney C George	Pushpagiri Medical College	201819
Research	Binu Mathew	KSCSTE	201819
Collaborative Research	Dr.Soney C George	IIUCN, M.G University	2018

3.5.2 – Linkages with institutions/industries for internship, on-the- job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration From	Duration To	Participant
Execution Funded Project in RESPOND Scheme	ISRO respond Scheme	ISRO	01/01/2018	31/12/2019	Manu Moses Jacob / Tony Varghese
Project work	Guiding Projects	Aided colleges	01/12/2018	30/06/2019	10
Internship	Training	Christ University	01/04/2019	30/06/2019	1
OntheJob training	Electrical System Design and MEP course	SIGMOS 3rd Floor, K.C. Tower Seaport Airport Road Ernakulam, Kakkanad, Kerala 682030	01/02/2019	31/12/2019	B.Tech Students
Sharing of research facilities	Renewable Energy(Solar Thermal)	Kalashalingam Academy of Research and Education(KARE) Tamil Nadu	01/08/2018	31/12/2019	Ms. Sreekala P
Sharing of research facilities	Nano Technology "Energy storage/solar cells"	KTU, Thiruvananthapuram	01/07/2018	31/12/2019	Mr. Anish Benny
Sharing of research facilities	Electrical Engg. Power Electronics 'High efficiency highgain nonisolated DCDC converter for PV application"	KTU, Thiruvananthapuram	01/07/2018	31/12/2019	Mr. Arun S
Sharing of research facilities	Electrical Engg. "LVDC for Net Zero Energy realization"	KTU, Thiruvananthapuram	01/07/2018	31/12/2019	Ms.Rani Chacko

Sharing of research facilities	Smart Grid	NIT Trichy	01/07/2019	31/12/2019	Mr.Rohit Rajan Eapen
Sharing of research facilities	Renewable energy	CUSATCUCCEK in the School of Engineering	01/10/2018	31/07/2019	Mr.Victor Jose
Sharing of research facilities	Electrical Engg. 'Power Electronics Applications in Renewable Energies'	VIT University, Vellore	01/09/2018	31/07/2019	Mr. Bobin K Mathew
Training and Development	Election Kottayam App	District Administration Kottayam	01/03/2019	31/05/2019	Govt Officials deputed for election duty for Kottayam

3.5.3 – MoUs signed with institutions of national, international importance, other universities, industries, corporate houses etc. during the year

Organisation	Date of MoU signed	Purpose/Activities	Number of students/teachers participated under MoUs
(EEE) Sigmos India, Kochi	05/02/2019	Traning in Electrical System Design	21
ASAP –Addidional Skill Aquisition Programme (Govt. Of Kerala)	15/11/2018	Training and placement	12
British Council	01/08/2018	IELTS	20
Yamaha India Motors AUE	30/04/2019	Technician Training	3

#### CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES

##### 4.1 – Physical Facilities

4.1.1 – Budget allocation, excluding salary for infrastructure augmentation during the year

Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development
20000000	20756469

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Campus Area	Existing
Class rooms	Existing
Seminar Halls	Existing
Classrooms with LCD facilities	Existing
Classrooms with Wi-Fi OR LAN	Existing
Seminar halls with ICT facilities	Existing

<b>Video Centre</b>	<b>Existing</b>
<b>Number of important equipments purchased (Greater than 1-0 lakh) during the current year</b>	<b>Newly Added</b>
<b>Value of the equipment purchased during the year (rs. in lakhs)</b>	<b>Newly Added</b>

#### 4.2 – Library as a Learning Resource

4.2.1 – Library is automated {Integrated Library Management System (ILMS)}

<b>Name of the ILMS software</b>	<b>Nature of automation (fully or patially)</b>	<b>Version</b>	<b>Year of automation</b>
<b>Santhom Library Systems</b>	<b>Partially</b>	<b>VER:18.10.09:13:16b</b>	<b>2001</b>

4.2.2 – Library Services

<b>Library Service Type</b>	<b>Existing</b>		<b>Newly Added</b>		<b>Total</b>	
<b>Text Books</b>	<b>32832</b>	<b>21334975</b>	<b>7338</b>	<b>2935200</b>	<b>40170</b>	<b>24270175</b>
<b>Reference Books</b>	<b>12671</b>	<b>9824475</b>	<b>136</b>	<b>86360</b>	<b>12807</b>	<b>9910835</b>
<b>e-Books</b>	<b>0</b>	<b>0</b>	<b>3778</b>	<b>291547</b>	<b>3778</b>	<b>291547</b>
<b>Journals</b>	<b>383</b>	<b>2205048</b>	<b>152</b>	<b>349851</b>	<b>535</b>	<b>2554899</b>
<b>e-Journals</b>	<b>313</b>	<b>16966559</b>	<b>310</b>	<b>918752</b>	<b>623</b>	<b>17885311</b>
<b>Digital Database</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CD &amp; Video</b>	<b>8000</b>	<b>100000</b>	<b>0</b>	<b>0</b>	<b>8000</b>	<b>100000</b>
<b>Weeding (hard &amp; soft)</b>	<b>79</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>79</b>	<b>0</b>

4.2.3 – E-content developed by teachers such as: e-PG- Pathshala, CEC (under e-PG- Pathshala CEC (Under Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System (LMS) etc

<b>Name of the Teacher</b>	<b>Name of the Module</b>	<b>Platform on which module is developed</b>	<b>Date of launching e-content</b>
<b>Joms Antony</b>	<b>Java Programming Track</b>	<b>MHRD SPOKEN TUTORIAL PROJECT</b>	<b>04/07/2018</b>

#### 4.3 – IT Infrastructure

4.3.1 – Technology Upgradation (overall)

<b>Type</b>	<b>Total Co mputers</b>	<b>Computer Lab</b>	<b>Internet</b>	<b>Browsing centers</b>	<b>Computer Centers</b>	<b>Office</b>	<b>Departments</b>	<b>Available Bandwidth (MGBPS)</b>	<b>Others</b>
<b>Existin g</b>	<b>1401</b>	<b>960</b>	<b>214</b>	<b>214</b>	<b>89</b>	<b>15</b>	<b>123</b>	<b>640</b>	
<b>Added</b>	<b>27</b>	<b>1135</b>					<b>27</b>	<b>700</b>	
<b>Total</b>	<b>1428</b>	<b>2095</b>	<b>214</b>	<b>214</b>	<b>89</b>	<b>15</b>	<b>150</b>	<b>1340</b>	<b>0</b>

4.3.2 – Bandwidth available of internet connection in the Institution (Leased line)

1340 MBPS/ GBPS

#### 4.3.3 – Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and recording facility
No Data Entered/Not Applicable !!!	

#### 4.4 – Maintenance of Campus Infrastructure

4.4.1 – Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary component, during the year

Assigned Budget on academic facilities	Expenditure incurred on maintenance of academic facilities	Assigned budget on physical facilities	Expenditure incurred on maintenance of physical facilities
138705000	126144385	20000000	20756469

4.4.2 – Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (maximum 500 words) (information to be available in institutional Website, provide link)

Procedures have been set up to maintain academic and laboratory facilities in the respective Department. The laboratories of the department have been reorganized to improve the academic instruction. The faculty have been assigned to designated areas in proximity to the laboratories. All academic activity maintained and monitored online. Class rooms are allocated centrally from dean adman's office. Department laboratories are maintained and updated under the control of head of the departments. Interdepartmental lab facilities are used with the concern of respective HoDs. College central library is managed by Chief librarian and policies for issue and return is well laid. Book request and status of availability due date all these informations are available on intranet and campus developed software AES individual login of staff and students. Books are issued on semester wise for faculty and best library user award winning students. Rest all issued on 20 days and if required they can renew the same text if that text is not in ques We can book the text also online. Purchase request, repair etc is done through online upto approval process and the process is initiated by the respective lab in charges, HoDs, principal and final approval from the manager of the college. In addition to the individual faculty and department labs a central computing facility exists in the campus. College central computer facility is also monitored and issued to the students and faculty as and when required. Sports facilities are centrally controlled under the HoD physical education and managed and maintained with well established procedures.

<https://docs.google.com/spreadsheets/d/1GDyNP28LevBh091Zjdlpvs5b7wvHmLg8njz98soHMNE/edit#gid=1704278338>

#### CRITERION V – STUDENT SUPPORT AND PROGRESSION

##### 5.1 – Student Support

##### 5.1.1 – Scholarships and Financial Support

	Name/Title of the scheme	Number of students	Amount in Rupees
Financial Support from institution	Tution fee waiver scheme, Management fee concession scholarship, Financial support from alumni EEE, Dicesion of	494	19765029

	Kanjirappally Scholarship, Semester topper Scholarship		
Financial Support from Other Sources			
a) National	0	0	0
b) International	0	0	0

5.1.2 – Number of capability enhancement and development schemes such as Soft skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,

Name of the capability enhancement scheme	Date of implemetation	Number of students enrolled	Agencies involved
Personal counseling	16/07/2018	363	Professional paid counsellors, faculty
Mentoring	16/07/2018	2500	A ratio of 1:20 mentor mentee is maintained and regular interaction is designed and monitored
Soft Skills	16/07/2018	800	Internal Faculty
Language lab	01/07/2019	1600	Humanities department
Yoga	01/07/2019	200	Tony Michael, Librarian( trained Yoga faculty )
Remedial coaching	01/07/2019	200	Respective department/ subject faculty
Bridge Course	01/07/2019	200	Department

5.1.3 – Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the scheme	Number of benefited students for competitive examination	Number of benefited students by career counseling activities	Number of students who have passedin the comp. exam	Number of studentsp placed
2019	GATE	5	100	35	159

5.1.4 – Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	Number of grievances redressed	Avg. number of days for grievance redressal
10	10	7

## 5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus	Off campus
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Name of organizations visited	Number of students participated	Number of students placed	Name of organizations visited	Number of students participated	Number of students placed
TCS, Algomox, UST Global, Sudentec, Speridian Technologies, Omnex India, Mphasis, Maveric Systems India, Malayala Manorama, IBS, Federal Bank, Experion Technologies, Cognizant,	1008	92	Agile Business, Amazon, Attinad Softwares, Byjus Learning App, Cameron, CCTS, Digital Core Technologies, Fingent, Hexaware Technologies, IBM, Infosys, Inszoom, Litmus 7, Manhattan Associates, Maxwell, Mitso go Technologies, Muziris Softech, Navigator, Neudesic, Orion	1180	67

5.2.2 – Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Department graduated from	Name of institution joined	Name of programme admitted to
2018	7	B Tech	Computer science and Engg.	MIT, Chennai Australia SB College Amal Jyothi College	Fashion Designing, Style Designing MS in Cyber Security MBA M.Tech CSE
2018	5	B.Tech	Metallurgy	University of Windsor, Ontario, Canada Dong-eui University, South Korea, The University of Canterbury is New Zealand's Cape Breton University, Canada	Materials Engineering Welding Engineering Dala Analytics Petroleum Engineering
2019	12	B.Tech	Electrical and	Universities in Canada	M.S in Automation,

			Electronics Engg.		Robotics and Energy
2019	12	B Tech	Electronics and Communication Engg.	Universities	Universities

5.2.3 – Students qualifying in state/ national/ international level examinations during the year  
(eg:NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Items	Number of students selected/ qualifying	Reg no/ Rollno for the examination
GATE	1	EE19S67053012
GATE	1	CS19S37043193
CAT	1	8177759
GRE	1	4551709
TOFEL	1	0000000034742247
Any Other	11	800112

5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
Arena Basket ball tournament	State level	12
APJAKTU C Zone Inter Collegiate Basketball Men and Women Championship 201819	State Level	24
APJAKTU C Zone Inter Collegiate Badminton Men and Women Championship 201819	state Level	13
APJAKTU C Zone Inter Collegiate Handball Men and Women Championship 201819.	State level	32
APJAKTU C Zone Inter Collegiate Cricket Men Championship 201819.	State Level	16
APJAKTU Football Men team camp for the year 201819.	state level	20

### 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)

Year	Name of the award/medal	National/ Internaional	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
2018	KTU Interzone Handball tournament	National	1	1	10706	Chippy Ajith
2018	KTU	National	1	1	9884	Mathew

	Interzone Athletic C hampionshi p				Shabu John
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5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

The Students Council (SC) is the representative body of the entire student community of the Amal Jyothi College of Engineering. Its executive committee comprises of advisors from the Management and Faculty and students elected from the representatives off all the classes across different programmes in our campus. Established since the beginning of the College, the SC promotes welfare measures and activities that encourage intellectual and personal development of the students in our campus. The Council along with the various sub committees conducts 2 major programmes that created distinct mark for Amal Jyothi at national and state levels over these years since its inception. Azure - National Level Inter Collegiate Technical Cultural Festival Arena - All Kerala Basketball Tournament Apart from these, the Council conducts regular programmes for the students of AJCE as Arts Day, Sports Day, Talent'EVE, Onam Celebrations, Christmas Celebrations various intracollegiate games etc.

**5.4 – Alumni Engagement**

5.4.1 – Whether the institution has registered Alumni Association?

Yes

Yes, The Association of Amal Jyothi Alumni (AAJA) was founded in the year 2005 with the graduation of the first batch with the following objectives. It serves as a forum to foster relationship, networking and alliances among alumni, the present students, the staff and the management of AJCE. AAJA Bring together the alumni on a common platform for organizing activities and programs They actively and constructively contribute to almatmater as a fraternity of global ambassadors They arrange lectures by eminent Alumni and other renowned personalities for the benefit of students and alumni also distinguished alumni are recognized through awards and honours.

5.4.2 – No. of enrolled Alumni:

8089

5.4.3 – Alumni contribution during the year (in Rupees) :

200000

5.4.4 – Meetings/activities organized by Alumni Association :

Branch wise meetings are organised every year. Decennial Alumni Meet "Ormacheppu" B Tech EEE200408 Batch on 29th December 2018, ME, ECE, CE also conducted in themonth of December 2018, January 2019

**CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT**

**6.1 – Institutional Vision and Leadership**

6.1.1 – Mention two practices of decentralization and participative management during the last year (maximum 500 words)

Vision: To be a centre of excellence in technical higher education, research and support services, capable of making significant contribution to individual and societal empowerment. Mission To create technically qualified worldclass professionals with social commitment through careeroriented courses conducted by high profile faculties, complemented with globally interactive learning

processes and leading edge technology.

6.1.2 – Does the institution have a Management Information System (MIS)?

Yes

## 6.2 – Strategy Development and Deployment

6.2.1 – Quality improvement strategies adopted by the institution for each of the following (with in 100 words each):

Strategy Type	Details
Curriculum Development	<p>The curriculum implementation process of the institution starts with an Annual Academic Planning and Calendar for the year, which are strictly followed. Several procedural and practical supports are provided by the institution in the course of curriculum planning and implementation. Preparation of Course Plan, Engagement of Course coordinators, Class teachers and Mentors, appointment of a Controller of Examination, Industry/agency internships, Networking and signing MoUs with international universities and national level nongovernment organizations, assignment of projects to senior students and engagement of a host of practitioners/experts as Senior Faculty are some of the strategies for effective curriculum implementation at the College. Timetables, course plans and portions covered daily are entered in the Academic Enterprise Solution (AES) software which is developed inhouse. The AES monitors the student attendance and progress in teaching and is accessible to all the stakeholders. Several faculty members contribute in the curriculum designing at the University level by being members of different Boards of Study. The lacunae in the University curriculum are identified through a need assessment process and are dealt with by offering addon courses, training programmes and entrepreneurial and creative engagements. Periodic reviews at the department level ensure the achievement of curriculum objectives.</p>
Examination and Evaluation	<p>Examinations are mostly conducted as per the guidelines prescribed by the affiliating university. The institution has only limited freedom in this respect. The institution tries to implement outcome based learning strategies while conducting internal examinations and evaluation of</p>

	students.
Teaching and Learning	<p>Both advanced and slow learners are identified, with advanced learners given higher challenges and slow learners remedial support. Academic Enterprise Solution (AES) software at AJCE serves as a launching ground for academic planning, teachinglearning organization, scheduling evaluation and overall planning. The IQAC team spearheads the quality initiatives in all aspects of teaching, learning and evaluation. Student-centric pedagogies are progressively adopted and ICT is increasingly integrated in the teachinglearning process. Several activities are planned and implemented for fostering critical thinking, creative and innovative engagements and developing scientific temper among students. The College provides an academic ambience for the growth of each student and offers excellent learning resource support for the achievement of optimal learning outcomes. The quality of teachinglearning process is evaluated by the course/class teacher and HOD at the department level and through interim audit by a team led by the Principal at the College level. The feedback taken is considered for the next year's academic planning.</p>
Research and Development	<p>In order to foster a research culture, AJCE has instituted several incentives and support systems for conducting research studies and their output in terms of publications, patents and technology transfers. Commendable weightage is given to research output while identifying the best students and teachers. Financing students and teachers for implementation of research projects, publication of students' research etc. are some of the strategies utilized to encourage students and teachers. The College has spent about one percent of its budget for research and projectrelated activities. The institution's collaboration with other national and international Universities and institutions is aimed at the promotion of joint research. An online Research Methodology course called 'Steps 2 Research' has been organized jointly with the IIT Bombay for PhD scholars.</p>

This was attended by participants from over 50 institutions in the country. During the assessment period, two DST research projects and two KSCSTE projects have been completed and 25 minor projects from different agencies are at different stages of completion. The College has given financial support to 20 student projects during the period. Amal Jyothi provides adequate research infrastructure including databases, Data Analysis Software, etc. Ten faculty members are recognized research guides of different universities and about fifteen faculty members are pursuing Ph. D. at different Universities/institutions. The Centre for Research and Extension in Sustainable Technology (CREST) is a Department that brings all RD, consultancy and extension activities of AJCE under one umbrella, directed by Dean, Research. CREST with its five arms promotes student services to industries, computerbased projects and trainings, promotes national and international research collaborations, promotes research in nanomaterials etc. The College has a welldefined consultancy policy and provides technical consultancy and design services to industries, institutions and the general public. The areas of expertise of each faculty are announced through the college website. The policy frame work of Research, Consultancy and Extension envisions the development of the college into a topnotch knowledge centre which shares its knowledge and expertise with various stakeholders like related industries/ organizations/ institutions and communities.

Library, ICT and Physical Infrastructure / Instrumentation

The Master Plan of the College gives direction to the spatial/infrastructural planning and development in synchronization with the academic growth. AJCE provides excellent infrastructure required for an Engineering College. She enjoys technologyenabled learning spaces, network resource centre, host of laboratories for various engineering disciplines, computer labs, language labs and a host of other facilities within the campus. Facilities for sports, physical fitness, health care, gymnasium, indoor and outdoor games and yoga are available. Hostel facilities

are provided for men and women. A wellstocked, spacious central library with browsing facilities and numerous other services is available to students and members of staff. It houses 39080 volumes and subscribes 132 print journals. In addition, the library has a collection of 370 ebooks and subscribes 262 ejournals. About 1200 computers and several licensed software are available in various labs for students. The campus is WiFi enabled for the benefit of students and the faculty. The College possesses one main auditorium with a capacity of around 1000, and several smaller auditoria for the conduct of various functions like seminars, workshops, meetings etc. Extended lab and library working hours is another feature. Backup generator of capacity 650 kW and a 100kW solar power station are installed in the campus. For maintenance, monitoring and upkeep of the infrastructure an Online Tracking System is being experimented with. A well maintained, ecofriendly, plastic and litterfree campus is a unique feature of AJCE.

#### Human Resource Management

The Faculty Development Policy of AJCE delineates provisions for enhancing teacher quality. Conscious efforts are made to identify growth needs and the same is used for planning faculty development programs. The College has a Faculty Development policy to streamline its faculty development activities. The policy aims at faculty empowerment for continuous improvement in teachinglearning, research, consultancy and extension, thereby transforming faculty members into Thought Leaders and AJCE into a Knowledge Centre. The institution has a transparent policy for recruitment of faculty and staff. When a vacancy arises, positions are notified through website and Newspapers inviting applications. This happens usually twice every year. Faculty and staff are appointed purely based on merit, the selection being done based on interviews conducted by duly constituted selection committees. Due weightages are given to the academic merit of the candidates and his/her performance in the interview. Taking a model class on a subject of choice of the candidate is usually a part of the



	interview.
Industry Interaction / Collaboration	<p>The institution has a very active interaction/collaboration with different industries. The institution organizes industry visits for students. The selection of industries is based on the branch of study of the students. Many industries have established their training centres in the institution.</p> <p>The following training centres currently operate in the institution.</p> <p>1. VolvoEicher Centre for Automobile Technology 2. KEMPPI Centre for welding technology 3. NeST Centre for Fiber Optics Technology 4. Bosch Centre for Automobile electronics 5. Yamaha Centre for Twowheeler technology 6. Royal Enfield Centre for Twowheeler technology These centres impart training to our students as well so that our students get industrial training, which equip them to become better engineers. Negotiations are on to establish more such centres in the campus. In addition, seminars and talks by experts from industry are regularly organized for the benefit of the students. The institution has also established a TBI (TechnologyBusiness Incubator) with financial support from DST, Govt. of India, where students are encouraged to become entrepreneurs.</p>
Admission of Students	<p>The admission process at AJCE is transparent and merit based. All seats are in the selffunded stream. 50 of B. Tech. seats (General Merit) are filled as per the State Government norms through CAP (Centralized Admission Process) and the rank list is published in the Government website. The other 50 seats consist of Community and Management Quota which is filled as per the College policy of inclusion and merit based admission. Merit is based on Kerala Engineering and Medical (KEAM) entrance conducted by the State Government. Admission to M. Tech. is based on marks scored in the qualifying Examinations and GATE score/DTE Rank list. Admission to MCA course is based on the marks scored in the qualifying examination. The Spiritual Ethos: Catholic spirituality animates the campus which has four centres of learningthe College Chapel, the Library, classrooms and the laboratories. The hostels are managed</p>



by dedicated priests and nuns meticulously helping the inculcation of a humane value system. The institution is free of party politics and has a history of being a zero-strike campus. It admits students irrespective of their caste, creed or locality, the prime criterion being academic merit.

#### 6.2.2 – Implementation of e-governance in areas of operations:

E-governance area	Details
Planning and Development	Planning and development
Administration	Administration
Finance and Accounts	Administration
Student Admission and Support	Administration
Examination	Administration

### 6.3 – Faculty Empowerment Strategies

6.3.1 – Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

Year	Name of Teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2018	Meby Mathew	BioInspired Robots at IIT Kanpur	BioInspired Robots at IIT Kanpur	3750
2018	Richu Zachariah	Green Building Sustainable Engineering at Rajagiri C.O.E, Kochi	Green Building Sustainable Engineering at Rajagiri C.O.E, Kochi	3750

6.3.2 – Number of professional development / administrative training programmes organized by the College for teaching and non teaching staff during the year

Year	Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	From date	To Date	Number of participants (Teaching staff)	Number of participants (non-teaching staff)
2019	Compiler Design Workshop sponsored by ACM Kottayam Chapter	Compiler Design Workshop sponsored by ACM Kottayam Chapter	10/06/2019	14/06/2019	100	50

6.3.3 – No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

Title of the professional	Number of teachers who attended	From Date	To date	Duration
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development programme				
Compiler Design Workshop sponsored by ACM Kottayam Chapter (CSE)	8	17/12/2018	21/12/2018	5
Theory of ComputationFDP(CSE)	1	18/07/2018	26/07/2018	8
TEQIP Phase II sponsored Faculty development programme on Research Trends in Biomedical and Satellite Image Processing(CSE)	2	01/01/2019	05/01/2019	5
DST sponsored two weeks FDP on Entrepreneurship at AJCE. (CSE)	1	03/01/2019	16/01/2019	10
FDP on AI and Machine Learning C0sponsored by IEI(CSE)	1	14/12/2018	19/12/2018	5
NPTEL course(CSE)	4	01/02/2019	30/04/2019	90
BioInspired Robots at IIT Kanpur ME	1	19/11/2018	23/11/2018	5
Advanced Mechanical Micro machining Techniques for Miniaturisation of Products Process at IIT Madras ME	1	14/01/2019	19/01/2019	6
Recent Advances In Manufacturing at SJ CET PalaiME	4	07/01/2019	11/01/2019	5
ISTE sponsored Five day STTP on Digital System Design using VHDL	7	02/07/2018	06/07/2018	5
FDP on	1	17/07/2018	21/07/2018	5

Electrical System Design organized by EEE Dept. at MBC Peermade.				
One Week STTP on Design and development of Power Converters for Renewable Energy Applications at Saint Gits College of Engineering, Pathamuttom.	1	03/12/2018	07/12/2018	5
FDP on Implementation on Virtual Instrumentation in Control Robotics and Mechatronics.	7	16/01/2019	18/01/2019	3
Hands on training for AI ML conducted by ASAP (Govt. Of Kerala) at Maria Rani Center, Trivandrum.	1	17/12/2018	22/12/2018	6
NPTEL FDP On Social Networks	1	02/07/2018	31/10/2019	120
Trainers Programme for handson session on Artificial Intelligence and Machine Learning tools	1	17/12/2018	22/12/2018	6
Two week National Level FDP On Entrepreneurship	1	03/01/2019	16/01/2019	10
Five Day Workshop on Deep Learning for Computer Vision	1	07/01/2019	11/01/2019	5
NPTEL on Data Mining	1	01/02/2019	30/04/2019	90
NPTEL FDP on Discrete	1	01/01/2019	30/04/2019	120

Mathematics				
NPTEL on Programming in Java	2	01/01/2019	30/04/2019	120
NPTEL FDP on Introduction to Internet of Things	1	01/01/2019	30/04/2019	120
NPTEL on Computer Organisation and Architecture	1	01/01/2019	30/04/2019	120

6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
247	247	107	107

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
Group insurance	Group insurance	Group insurance

**6.4 – Financial Management and Resource Mobilization**

6.4.1 – Institution conducts internal and external financial audits regularly (with in 100 words each)

Institution conducts all the financial transactions through digital systems through the login of various stake holders. All purchase and payments are done through electronic transfer of funds. Internal and external auditing has been done regularly.

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

Name of the non government funding agencies /individuals	Funds/ Grnats received in Rs.	Purpose
No Data Entered/Not Applicable !!!		

6.4.3 – Total corpus fund generated

572492
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**6.5 – Internal Quality Assurance System**

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

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	Dr.APJ Abdul Kalam Technological UniversityKTU	Yes	IQAC
Administrative	Yes	University	Yes	Management

6.5.2 – Activities and support from the Parent – Teacher Association (at least three)

A general body common PTA meeting is conducted once in the beginning of new

academic year and branch wise and class wise PTA meeting is conducted once in every semester. PTA executive meeting is conducted once in month and their suggestions and feedbacks are analysed and implemented in practice as and when needed. Few of them are listed below. Department class wise PTA meeting minutes is maintained in the respective department. Parent's feedback is collected regularly and analysed. Remedial measures are enumerated.

#### 6.5.3 – Development programmes for support staff (at least three)

- The institution organizes motivational classes for the staff (teaching and nonteaching)
- The institution has arranged group medical insurance for all staff members
- An HR policy is in force for the staff of the college. All service and leave benefits for staff are made very clear and transparent in this HR policy

#### 6.5.4 – Post Accreditation initiative(s) (mention at least three)

NIRF ranking application NBA accreditation Feedback analysis Remedial class Promotion to the faculty to maintain cadre ration

#### 6.5.5 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	Yes
b) Participation in NIRF	Yes
c) ISO certification	Yes
d) NBA or any other quality audit	Yes

#### 6.5.6 – Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting IQAC	Duration From	Duration To	Number of participants
2019	Online outcome attainment calculation for OBE assessment methods	01/01/2018	01/01/2018	15/07/2019	20

### CRITERION VII – INSTITUTIONAL VALUES AND BEST PRACTICES

#### 7.1 – Institutional Values and Social Responsibilities

##### 7.1.1 – Gender Equity (Number of gender equity promotion programmes organized by the institution during the year)

Title of the programme	Period from	Period To	Number of Participants	
			Female	Male
No Data Entered/Not Applicable !!!				

##### 7.1.2 – Environmental Consciousness and Sustainability/Alternate Energy initiatives such as:

Percentage of power requirement of the University met by the renewable energy sources

The institution makes every effort to make the campus ecofriendly. The campus is very green with trees and plants. The campus is litterfree, plasticfree and wastefree. The institution has employed a group of workers to keep the campus neat, tidy and ecofriendly. The Campus is perhaps one of the best ecofriendly campuses in the state of Kerala. The institution maintains an ecofriendly campus, and does everything possible to spread the importance of environmental

awareness/protection among staff and students.

#### 7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Scribes for examination	Yes	1
Special skill development for differently abled students	Yes	1
Physical facilities	Yes	1
Provision for lift	Yes	1
Ramp/Rails	Yes	1
Braille Software/facilities	Yes	1
Rest Rooms	Yes	1

#### 7.1.4 – Inclusion and Situatedness

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date	Duration	Name of initiative	Issues addressed	Number of participating students and staff
2018	1	1	30/08/2018	111111	Flood relief	1	1000

#### 7.1.5 – Human Values and Professional Ethics Code of conduct (handbooks) for various stakeholders

Title	Date of publication	Follow up(max 100 words)
AJCE students handbook	01/07/2019	AJCE students handbook
Life Skills For Engineers	01/07/2019	Life Skills For Engineers
Professional ethics	01/07/2019	Professional ethics

#### 7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Awareness program along with first year induction program	01/08/2018	31/08/2018	500
Awareness program along with first year PTA meeting	01/08/2018	31/08/2018	500
Invited lectures from cyber security department, excise department, motor vehicle department of Govt of Kerala, Kerala legal cells	01/08/2018	31/08/2018	500
Life Skills and soft skills	01/08/2018	31/08/2018	1600

7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

Outside classes, walk and talk, paper instead of plastic bags, installation of dustbins, water coolers

## 7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

Automation of the campus Academic and administrative auditing

Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

<https://ajce.in/>

## 7.3 – Institutional Distinctiveness

7.3.1 – Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust in not more than 500 words

Institute give thrust in both innovation and entrepreneurship among the students. We initiated the entrepreneurial journey by starting an IEDC under the mentor ship of TTBI, Trivandrum. As a result of this great beginning, many of our students have come up with new innovative ventures. To realize the inspiration and enthusiasm of our student community into marketable products, it was essential to scale up the IEDC to the level of TBI. We have STARTUPS VALLEY AJCE TBI. An overriding objective of the venture is to achieve a transformation of minds of the students from being jobseekers to being entrepreneurs themselves, utilising the theoretical and practical lessons they get in the college. The TBI will also be the beginning of a stronger industryacademiaconsumer linkage where ideas can flow to and fro through the three stakeholder groups so that everyone benefits. The industry will benefit from technological developments initiated by the TBI as well as qualified students who have an innovative mind to join their workforce. Academia will stand to gain from its constant interaction with industry, and consumers will gain from the innovations that are rolled out through the association. Startups valley at Amal Jyothi College of Engineering, Kanjirappally, concentrates on the following thrust areas of Rural technology, Green Technology, Artificial Intelligence and Information Technology. There are 30 starts ups as on now exists in our TBI. We have industrial collaborations with more than 30 industries in various areas like. Harichandrika Educational Services Pvt Ltd, Kollam for GATE coaching, AMLIRE Pvt Ltd., Kochi for Operation of Canteen based students internet TV Channel, Stepwey Academy for International Languages, Kochi for IELTS Training, ASAP, Higher Edn Dept, Kerala for Conducting Skill Development programs Artificial Intelligence and Machine Learning, BVT TECHNOLOGIES, CZECH REP for Engineering education and Scientific Research, KDISC and Malayala Manorama for Innovation Promotion. Pushpagiri Medical College for Collaborative teaching, research and exchanges between students, teachers, researchers and staff, India Yamaha Pvt Ltd., Royal Enfield for automotive training Innovation Idea Unleashed Project contest to promote students research interest by funding upto an amount of 20000/ per students team. Technology park set up in the campus for the excursion of students and parents inside and outside the campus.

Provide the weblink of the institution

<https://ajce.in/>

## 8.Future Plans of Actions for Next Academic Year

The future plans for the Department of Electrical and Electronics Engg. are presently centred around Academics, Research and the attainment of quality

mileposts (NIRF, NAAC and NBA) to increase the visibility of the EEE program. On the academic front, the pace of academic effort by the Department faculty is not matched by the corresponding motivation of the students. This can be attributed by the stagnant admission intake and their declining motivation levels. We are making concerted efforts maintain the limited UG strength and ingrain quality systems in them. On the lateral front, they are being tutored in core electrical technologies by external trainers. Earlier, the research activities were largely linked to the PG programs of Power Electronics and Energy Systems and to some extent, the doctoral studies of individual faculty. Taken into account the policy thrust on research, efforts are on to make a strongly link to the B. Tech program by way of main project, seminars and miniprojects. AUE 1. Increasing the academic lab facilities to empower the capability of the students 2. Initiate various staff welfare programmes and knowledge enrichment programmes for faculty (FDP participation, FDP coordination, etc...)