

Yearly Status Report - 2018-2019

Part A

Data of the Institution

1. Name of the Institution

S. C. M. S. SCHOOL OF ENGINEERING AND
TECHNOLOGY

Name of the head of the Institution	Dr. Praveensal C J
Designation	Principal
Does the Institution function from own campus	Yes
Phone no/Alternate Phone no.	04842450330
Mobile no.	9446763487
Registered Email	sset@scmsgroup.org
Alternate Email	praveensal@scmsgroup.org
Address	SCMS School of Engineering and Technology Vidya Nagar, Palissery, Karukutty, Ernakulam - 683 576 Kerala
City/Town	Ernakulam
State/UT	Kerala
Pincode	683582
2. Institutional Status	
Affiliated / Constituent	Affiliated
Type of Institution	Co-education
Location	Rural
Financial Status	private
Name of the IQAC co-ordinator/Director	Dr. Vinod P
Phone no/Alternate Phone no.	04842450330
Mobile no.	9497179735
Registered Email	sset@scmsgroup.org
Alternate Email	vinodp@scmsgroup.org
3. Website Address	

Web-link of the AQAR: (Previous Academic Year)	https://www.scmsgroup.org/sset/NAAC/AQAR_2018_19/AQAR2018_19.pdf
4. Whether Academic Calendar prepared during the year	Yes
if yes,whether it is uploaded in the institutional website: Weblink :	https://www.scmsgroup.org/sset/NAAC/AQAR_2018_19/academiccalendar2018_19.pdf

5. Accrediation Details

Cycle	Grade	CGPA	Year of Accrediation	Validity	
				Period From	Period To
1	B+	2.67	2016	05-Nov-2016	04-Nov-2021

6. Date of Establishment of IQAC

14-Oct-2015

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
Submission of pre-qualifier to NBA- CE, CS and ME	04-Jun-2019 1	3
IQAC Meeting	06-Jun-2018 1	12
KTU academic audit	23-Nov-2018 1	9
ISO periodic audit	23-Jul-2018 3	16
ISO periodic audit	30-Jul-2018 1	16
ISO periodic audit	06-Aug-2018 2	16
IQAC Meeting	14-Aug-2018 1	16
IQAC Meeting	15-Nov-2018 1	14
IQAC Meeting	14-Feb-2019 1	15
IQAC Meeting	13-Jun-2019 1	14
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8. Provide the list of funds 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
Institution	IEDC GRANT	KERALA STARTUP MISSION	2018 365	200000
Institution	IEDC GRANT	KERALA STARTUP MISSION	2018 365	20000
Institution	IEDC GRANT	KERALA STARTUP MISSION	2018 365	5447
Institution	For promoting S & T Semina/symposia/ workshop	Kerala State Council for Science Technology and Environment	2018 2	50000
Department of Civil Engineering	FDP on Emerging challenges in sustainable development	A P J Abdul Kalam Technological University	2019 3	124591
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9. Whether composition of IQAC as per latest NAAC guidelines:

Yes

Upload latest notification of formation of IQAC

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10. Number of IQAC meetings held during the year :

5

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)

• Improved outreach activities in association with government agencies • Greater number of MoUs with International Universities for academic and research excellence • NPTEL local chapter (LC ID: 1813) formed in Feb 2018 and received top 100 achievement certificate in JulyNovember 2018 semester. • Preparing for NBA Accreditation for three B. Tech. programmes. • Orientation sessions arranged to staff for accreditation process • Timely conduct of academic audits and other academic activities. ISO periodic audits were undertaken and documents prepared and submitted for external audit by the affiliating university. • Participation

in NIRF Ranking ARIIA. • Various outreach activities were organized in association with Government agencies. • Recommendations for revising the service rules and procedures to encourage and enable faculty to undertake and complete Ph.D as well as incentives for publications.

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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	Achievements/Outcomes
Apply for funding offered for FDPs by the APJAKTU	Department of Civil Engineering & Computer Science & Engineering applied for the funding and were granted funding for conduct of FDPs Emerging Challenges in Sustainable Development & Information and Network Security Challenges respectively.
Enhance placement activities	294 job offers and 77 recruiters
Boost extra-curricular activities	SSET won TWO KTU Interzone championships (Women's Kabaddi & Men's Volleyball), 6 KTU D Zone championships, 15 All Kerala Inter collegiate prizes in various sports disciplines. In this year our SIX students represent KTU UNIVERSITY Team which participated in All India Inter university championships in various games.
Boost extra-curricular activities Collaboration, Linkages and MoUs with Academic institutions and industries	MoUs entered into with 11 universities for Exchange of faculty, researchers and students, joint conferences and research programs Universidad del Rosario, Hung Kuang University, Shimane University, Japan University of Economics, Technical University Varna, Earth University, University of Derby, Lincoln University College, Malaysia, FPT University, Ho Chi Minh City University of Economics and Finance, Daffodils International University. The Projects 1. Modelling of salinity intrusion to ground water in Kochi Municipal Corporation Area, Assessment and Optimization of water distribution network in Kochi, 2. Estimation of NonRevenue Water for a Distinct Metering Area (DMA) in Kochi city 3. Development of Water Quality GIS for Koratty Panchayat in Thrissur District undertaken for Kochi Corporation, Kerala Water Authority and Koratty Panchayat are ongoing

Social Extension activities	Students participated extensively in post flood rehabilitation efforts of the State Government as well as associated with Ernalakulam District Administration Anbodu Kochi for the Ente Kulam Ernakulam cleaning of ponds.
Apply for NBA accreditation	Registration with NBA done and prequalifiers submitted
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14. Whether AQAR was placed before statutory body ?	Yes
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Name of Statutory Body	Meeting Date
Board of Management	30-Dec-2019

15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?	No
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16. Whether institutional data submitted to AISHE:	Yes
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Year of Submission	2019
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Date of Submission	22-Mar-2019
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17. Does the Institution have Management Information System ?	Yes
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If yes, give a brief description and a list of modules currently operational (maximum 500 words)	Our institution uses Ospyns Ecoleaide, an enterprise class ERP system, which takes care of the requirements of all the stakeholders management, teachers, operational staffs, students and parents. Ecoleaide is a comprehensive system that enables our Institutions information management process by automating the various operations of the Institution including Academics, Student Management, Accounting, Human Resources etc. All the information that are necessary are easily retrievable at any time by a simple mouse click. The main modules in Ecoleaide described below: 1. Student Management The Student Management module handles all functionality related to the lifecycle of a student in the Institution starting from registration, enrolment, promotion, completion and exit. 2. Staff Management Module This module
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enables the HR (Human Resources) department to create and manage a comprehensive record of the entire workforce (staff) in the Institution.

3. Academics Module The Academics module is the centre piece functionality of Ecoleaide. It has features like managing master data (courses, class, batches, subjects, timetables, examinations, attendance, etc) and features for capturing academic details like attendance, examination marks etc.

4. Fee Collection Module Fee collection module is driven by a highly configurable feeplan setup and is integrated with all the other modules of the system. It facilitates online payment of fees by students/parents through the studentparent portal.

5. Leave and Payroll Module Though this module the management can easily configure different leave categories and can configure leaves for different employee types. The payroll generation will be linked with leave module to dynamically calculate any salary deductions based on the LOP. Different work flows can be configured to support approval work flow for granting leaves to employees.

6. Transportation Module The Transportation module handles the management of the transportation fleet under each Institution capturing important details like vehicle registration, seat availability, etc.

7. Library Module The library module deals with the management of the entire lifecycle of library collections (books, journals and CD's).

8. Hostel Module The Hostel module supports functionality required to manage hostels or dormitories run by the Institution.

9. Ecoleaide web portal The public portal for Ecoleaide is the front end web based application that brings all the stake holders - Student, Parent, Teacher, Management and Public into a single platform. The public portal can be customized to support many features that will enable continuous communication between the stake holders. The web portal contains Student and Parent login. Alerts and reminders of events can be issued by the institution. Daily time tables can be viewed. It also provides information regarding the academic and non academic

performance of the student.
Transportation facility booking and online fee payment can be done through the web portal.

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

The institution follows the academic curriculum designed by A P J Abdul Kalam Technological University (APJAKTU) to which the college is affiliated. Flexibility in making changes in curriculum is restricted due to this. The College ensures effective curriculum delivery through a well-planned and documented process. The University has taken into consideration the Outcome Based Education Parameters and the curriculum has been prepared such that it helps in the attainment of Programme Outcomes to a large extent. At the same time at institution and department level, efforts are taken to assess the curriculum and syllabus and measures taken to help attainment of PO's and PSO's. The college plans the academic schedule as per APJAKTU's academic calendar. It details the academic activities for the semester, and provides schedule for conduct of class/course committee meetings, continuous internal evaluations as well as commencement date of end semester examinations. The academic calendar is published by the university every year before the commencement of the classes. Departmental academic calendar and institutional academic calendars are prepared based on this. The departmental academic calendar and institutional academic calendar includes the specific activities carried out by the department and institution respectively. The institutional academic calendar is published in the college website. Course allotment is done well in advance, for faculty to prepare course plan, and for effective planning and preparation by the faculty for fruitful curriculum delivery. For ensuring adherence to academic calendar, course diary is prepared and maintained for each course by the respective faculty. Before the commencement of the semester a detailed course plan has to be prepared for each course by the concerned faculty and duly approved by the Head of the Department and the Principal. The timetable committee prepares time table in adherence to the requirements specified by APJAKTU based on which teachers conduct classes. The topics covered in each class are entered in the course log by the respective faculty for the effective academic monitoring. The adherence to academic calendar is verified in course committee/class committee meetings and during academic audits done internally and externally. Internal academic auditing committee monitors the adherence to academic calendar and all the academic activities. This is followed by an external audit by the University. ISO audit team also ensures the quality of the teaching learning process. Continuous Internal Assessments (CIE) are conducted in accordance with the university academic calendar. Departmental meetings are held periodically to review the syllabus completed. Bimonthly meetings are conducted by the academic committee to monitor the progress of the completion of syllabus. For the effective transmission and delivery of curricula, departments integrate classroom teaching with various ICT tools, laboratory practical, field projects, students seminars, tutorials, question papers solving etc. Special classes and remedial classes are conducted for students lagging in understanding concepts and to bring them at par with the rest of the class. Bright students are encouraged and assisted to improve upon the academic grades. For enhancing subject knowledge invited talks, workshops, seminars, conferences etc. are organised.

1.1.2 – Certificate/ Diploma Courses introduced during the academic year

Certificate	Diploma Courses	Dates of Introduction	Duration	Focus on employ ability/entrepreneurship	Skill Development
Raspberry Pi programming with Python	0	29/09/2018	5	Employment	Technology with coding
3D Game Designing With Augmented Reality and Virtual Reality	0	11/10/2018	3	Entrepreneurship	Augmented Reality
Hand-on training in CNC Lathe Smartturn	0	05/04/2019	5	Employment	Machining
Bhavishya	0	30/07/2018	2	Employment	Soft skills

1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the academic year

Programme/Course	Programme Specialization	Dates of Introduction
PhD or DPhil	Mechanical Engineering	11/12/2018
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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	Programme Specialization	Date of implementation of CBCS/Elective Course System
BTech	Automobile Engineering	01/08/2018
BTech	Civil Engineering	01/08/2018
BTech	Computer Science & Engineering	01/08/2018
BTech	Electronics & Communication Engineering	01/08/2018
BTech	Electrical & Electronics Engineering	01/08/2018
BTech	Mechanical Engineering	01/08/2018

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

	Certificate	Diploma Course
Number of Students	360	Nil

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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Machine Learning and New Generation Data Analytics	18/12/2018	49
Android Malware Analysis using Machine Learning Approaches	05/07/2018	49
Electrical Power Systems	23/07/2018	41
Introduction to Node JS	02/02/2019	48
Recent trends in the industry	08/04/2019	104
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1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	Programme Specialization	No. of students enrolled for Field Projects / Internships
BTech	Civil Engineering	105
BTech	Computer Science & Engineering (Remaining details attached)	108
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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>The institution has structured feedback system. Students' feedback, parents' feedback, alumni feedback, employers feedback etc. are collected and analysed. Feedback thus is collected from internal as well as external stakeholders to improve the employability of the students and to find the gaps in various POs and PSOs. This will also help to bridge the gap between the ongoing curriculum and recent technological trends. The feedback from the Industrial experts/Employers and alumni are collected with the help of online surveys or physically. Alumni Survey: The purpose of this survey is to obtain alumni opinion on the quality of education they received and the level of preparation they had at institution. During this survey the basic information about the alumni will be collected and a questionnaire is usually provided to measure the attainment of POs and PEOs. Employer Survey: The purpose of this survey is to obtain employer's input on the quality of education imparted at the institution and also to assess the quality of the academic program through the performance of graduate/s in the organization. In this online survey basic information about the institution and the departments are shared with the employer. A questionnaire is given to the employer which will be able to measure the attainment of POs and PEOs. Program Exit Survey: Program exit survey conducted</p>

immediately after a students' graduate from the institution covers the basic information of the students and his/her placement details. A questionnaire is provided to measure the attainment of POs and PEOs. Course exit Feedback: The feedback of students on each course are taken at the end of each semester. The feedback session is carried out at the central computing facility of the college and the reports are made available for the faculty to view, analyse and improvise wherever necessary. This will provide an insight towards the measurement of indirect attainment of the COs.

CRITERION II – TEACHING- LEARNING AND EVALUATION

2.1 – Student Enrolment and Profile

2.1.1 – Demand Ratio during the year

Name of the Programme	Programme Specialization	Number of seats available	Number of Application received	Students Enrolled
BTech	Automobile Engineering	60	68	34
BTech	Civil Engineering	120	112	45
BTech	Computer Science & Engineering	120	158	84
BTech	Electrical & Electronics Engineering	60	48	16
BTech	Mechanical Engineering	120	178	81
Mtech	Computer Aided Structural Engineering	18	77	18
Mtech	Environmental Engineering	24	47	15
Mtech	Computer Science and Information System	18	15	5

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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
2018	1812	199	116	Nil	52

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
168	168	9	48	1	5
View File of ICT Tools and resources					
View File of E-resources and techniques used					

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

To monitor the progress of the students and provide supportive care at a closer level under the following aspects: Attendance Discipline, academic Performance, participation in Co-curricular and Extracurricular activities.

1. Role of a Mentor: Each Class of the department is allotted with 2 mentors. Each mentor handles 25-30 students. The mentor receives input from course teachers or directly from student/s. The mentor has to interact with his group at least once every month. The progress of each student has to be recorded by the mentor and at the end of each semester this record has to be filed after getting signature from the Head of Department. The mentor has the freedom to communicate with the parents of his/her student, if necessary. Any student concern or problem, if found beyond the mentor level, can be forwarded up to the Principal, unless solved satisfactorily by the office of Head of Department and Deans.

2. Role of a Mentee: The mentor system has been introduced to help each student admitted to the department in having a smooth transition from school level to a professional course level. The mentee has the freedom to express his academic as well as personal parameters to the mentor and ensure that a healthy relationship is maintained during his/her stay in the institution. The mentee may approach the next level of the system, in case the mentor does not monitor the progress or respond inefficiently to the concerns/problems raised.

3. Psycho-social and Personal Counseling: Faculty mentors give a patient listening to all the personal issues of the students who helps the students to overcome the barriers impeding their progress. In case where expert counseling is deemed to be required then the students are directed to the professional counselor who helps the students to identify and understand their problems scientifically and then tries to develop skills to resolve them.

4. Efficacy of the system: The system develops an interaction among the teachers, students and parents and provides scope for healthy, positive and stress-free state of mind. The following parameters of the students have shown considerable improvement in the last two years: attendance, academic performance, participation in co-curricular and extra-curricular activities, self-confidence and self-esteem and involvement in socially relevant activities.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
2011	168	1:12

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
Nil	Nil	Nil	10	1

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
2019	Dr. Sunil Jacob	Professor	Dewang Mehta Education Leadership Award
2018	Dr. Varun G. Menon	Associate Professor	ACM Distinguished Speaker
2018	Dr. Varun G.	Assistant	Publons Peer

	Menon	Professor	Reviewer Award
2018	Dr. Vinod P	Professor	Post-Doctoral Fellowship, University of Padua, Italy
2019	Dr. Sheeja Janardhanan	Professor	Active NPTEL SPOC Award
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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
MCA	MCA	2	26/04/2018	12/11/2018
Mtech	M. Tech (Please find details in list attached)	2	26/04/2018	15/08/2018
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2.5.2 – Reforms initiated on Continuous Internal Evaluation(CIE) system at the institutional level (250 words)

Institute conducts two internal test per semester as per the regulations of APJ Abdul Kalam Technological University (KTU). The process for internal examination and evaluation are highlighted below. • A question paper scrutinizing committee is formed at the commencement of the semester, consisting of subject faculty, course chairman and programme coordinator. • Question paper, scheme and evaluation key for the internal examinations are prepared by the subject faculty in-charges and finalized after getting consent from the question paper scrutinizing committee. • Question paper cognitive level is determined by the committee, and the paper will be accepted if the level of the question paper is 100 or above as per the evaluation standards of Bloom's taxonomy. On finding satisfactory standard of the question paper, the scrutinizing committee gives the final approval after reviewing the quality, course outcomes and levels. • If the quality of the question paper is not satisfactory, the committee gives it for re-work and the corrected question paper is verified by the course chairman. Examination schedule is prepared one week before the commencement of the examination after which examination will be conducted as per the schedule. Examination answer papers is collected immediately after the examination from the internal examination cell and valuated within three days. • The question paper is discussed in the class and answer papers after valuation are produced to the students individually to make the students aware about their performance.

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

The college is affiliated to APJ Kerala Technological University. Every semester university provides academic calendar at the start of the semester. Based on this the college schedules the date of internal tests and these are incorporated in the calendar of activities. IQAC monitors the process and ensures the proper execution of this process by providing timely guidelines in the preparation of timetable and question paper format. Examination cell is

responsible for conducting two internal test and the end semester university exam in each semester. The answer papers of the internal tests should be evaluated and the marks should be made available to the students and entered in Ecoleaide portal (ERP software) within one and half week of the conduct of the exam. The university examinations dates are scheduled by the university. The available invigilator list is collected from each department through the exam cell members. Invigilation schedule, seat allocation for the students, downloading of the question papers and distribution to classes, uploading the absentees etc. are done by members of the examination cell. For the university exam, the invigilator to student ratio is 1:30. All malpractice incidences reports are investigated by the Disciplinary action committee and reports are filed.

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://www.scmsgroup.org/sset/NAAC/AOAR_2018_19/PEOPOPSOCO.pdf

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
B. Tech	BTech	Civil Engineering	120	89	74.17
B. Tech	BTech	Computer Sc. & Engg.(Please find details in attached list)	108	73	67.69

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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.scmsgroup.org/sset/NAAC/AOAR_2018_19/studentssatisfactionsurvey2018_19.pdf

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
Minor Projects	30	Rotary Club	0.2	0.2
Major Projects	365	IEEE	2.03	2.03

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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
"Electric Cars - Technology, Business and Policy perspectives"	Automobile Engineering	21/01/2019
Automotive Electronics	Automobile Engineering	22/11/2018
Course on membrane technology Prof. Dr. Johannes Fritsch Water Technology and Management, University of Applied Sciences Ravensburg-Weingarten	Civil Engineering	22/11/2018
Civil engineering Softwares and Scope	Civil Engineering	29/04/2019
Recent trends in the industry	Computer Science and Engineering	08/04/2019
Leading a student life to become an industry ready candidate	Mechanical Engineering	12/10/2018
Seminar - Alternative Materials for Construction Technology Talk Er. Abhilash Joy, Stuba Consultants	Civil Engineering	19/03/2019

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
Clash of Droids Competition	Akhil Rajesh, Charan R, Abdul Ribas, Abdul Rijas, Akshay Ramdas	IIT Palakkad	01/10/2018	Innovative Project
8th Position in the Student Design Challenge	Anish B Soman and team (S7 ME I and II)	International Mechanical Engineering Congress and Exposition, Pittsburg, USA	01/11/2018	Innovative Project
A non-invasive anti-depression E-M stimulator	Dr.Sunil Jacob, Ajish S, AN George, KrishnaSudheer, Ganes h.M.Nair	Orion- KSID Innovation Awards	22/11/2018	Research and Innovation
Dynamic brake lighting emergency system	Dr.Sunil Jacob, Adhil Basheer	Indian automotive technology and innovation awards	Nill	Innovative Project
Navigational Emergency	Dr. Sheeja Janardhanan	eYantra Ideas Challenge	01/04/2019	Research and Innovation

Marine Object (NEMO)	Allen Issac, Fahad, Abhijith O	(eYIC) at IIT Bombay		
Intelligent Plant Monitoring System	Mr. Sajith E, Lijo George, K S Adithyan, Srinath Kamath	Kerala Start-up Mission Idea Fest	01/05/2019	Innovative Project
Hydro-vortex Power Generator	Dr. Vidya Chandran, Jijo George, Anand Rajeev, Ashwin T, Ajay S Kumar	ICT Academy	01/06/2019	Innovative Project
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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
0	0	0	0	0	01/06/2020
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3.3 – Research Publications and Awards

3.3.1 – Incentive to the teachers who receive recognition/awards

State	National	International
0	0	0

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

Name of the Department	Number of PhD's Awarded
0	Nil

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)
International	Civil Engineering	20	5.1
International	Computer Science Engineering	30	2.83
International	Electrical Electronics Engineering	1	0.49
International	Electronics Communication Engineering	2	1.82
International	Mechanical Engineering	12	3.16
International	Basic Science Humanities	2	3.02
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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

Civil Engineering	4
Computer Science Engineering	9
Electrical Electronics Engineering	1
Electronics Communication Engineering	3
Mechanical Engineering	2
Basic Science humanities	1
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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
Scheduling Distributed Energy Resource Operation and Daily Power Consumption for a Smart Building to Optimize Economic and Environmental Parameters	Dr. Vinod P	Energies EISSN 1996-1073, pp 1348,	2018	0	SCMS School of Engineering and Technology	35
Hybrid brainactuated muscle interface for the physically disabled	VINOJ P G	Basic Clinical Pharmacology Toxicology Journal	2018	0	SCMS School of Engineering and Technology	13
Parametric Study of Heat Transfer and Pressure Drop Characteristics of a Rectangular Offset Strip Fin Compact Heat	Ajith Kumar R	Chemical Engineering Transactions	2018	1.3	SCMS School of Engineering and Technology	Nil

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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
Hybrid brainactuated muscle interface for the physically disabled	VINOJ P G	Basic Clinical Pharmacology Toxicology Journal	2018	Nil	13	SCMS School of Engineering and Technology
MEDICO-A Simple IoT Integrated Medical Kiosk for the Rural People	Dr.Sunil Jacob	Preprints	2019	Nil	5	SCMS School of Engineering and Technology
A Simplified and Portable Capacitance Sensor to Measure Moisture Content of Paddy.	Divya Nath K	Gazi University Journal of Science.	2018	Nil	Nil	Vellore institute of Technology
A machine learning based approach to detect malicious android apps using discriminant system calls	Dr. Vinod P	Future Generation Computer Systems	2019	Nil	24	SCMS School of Engineering and Technology
Assessment of spatiotemporal changes in terrestrial carbon sequestration due to Kochi metro rail	James, A.C., John, C.M., Menon, R.,	Urban Climate	2018	Nil	2	SCMS School of Engineering and Technology

project in India						
Numerical study on the influence of mass and stiffness ratios on the vortex induced motion of an elastically mounted cylinder for harnessing power	Numerical study on the influence of mass and stiffness ratios on the vortex induced motion of an elastically mounted cylinder for harnessing power	Energies	2018	64	7	KITS, SCMS
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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/Seminars/Workshops	13	13	5	Nil
Presented papers	16	4	Nil	Nil
Resource persons	2	1	Nil	6
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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
RAPID VISUAL SURVEY	National Service Scheme	2	100
FOOD COLLECTION FOR RELIEF CAMPS	National Service Scheme	2	100
DISASTER MANAGEMENT VOLUNTEERING	National Service Scheme	2	100
PUNARJJANI 6 day Camp	National Service Scheme	2	100
KOCHI TRANSPORTATION 6TH EDITION	National Service Scheme	2	30
CLEANING CAMPAIGN	National Service	2	35

Scheme

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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
Implementing Green Protocol At Thiruvairanikulam temple Mahastov	Special Appreciation	Kerala Climate control Department. Award Received from Mr. Pinarayi Vijayan, Honble Chief Minister of Kerala.	100
Water Survey at flood affected area in Thrissur district	Secured Third Prize For Completing Maximum No. of Survey and for generating result based on the survey	Mathrubhumi - Malayalam Daily	100
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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 activities	Number of students participated in such activities
ENTE KULAM ERNAKULAM POND CLEANING	Ernalakulam District Administration Anbodu Kochi	ENTE KULAM ERNAKULAM	2	100
Punarjjani	National Service Scheme - Technical Cell	Punarjjani	2	100
SUCHITWA MISSION GREEN CAMPUS CLEAN CAMPUS	Suchitwa Mission	SUCHITWA MISSION GREEN CAMPUS CLEAN CAMPUS	2	100
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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
Internship on ROBOTICS	Four students and one faculty from Daffodil International University Bangladesh	SCMS School of Engineering Technology	15
International Internship	Three students	Matsue City Japan	12

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
MoU	Campus Connect Program	Infosys Limited, Mr. Hari S, Lead-Education and Training Infosys Trivandrum Center, Contact: Hari_S@infosys.com	05/01/2018	05/01/2019	3 faculty
Student Internship, Training and Recruitment	SCMS- Matsue City IT Internship Program	Matsue City and Shimane University, Japan, Contact: Ms. Aarti Daas Email: aarti daas.960306@yahoo.com	04/03/2019	15/03/2019	3 students
MoU	Student and Faculty Exchange	Daffodil International University (DIU), Dhaka, Bangladesh, Mr. Syed Raihan-Ul-Islam, Assistant Director, International Affairs Daffodil International University Daffodil Tower-4,102/1 Shukrabad, Dhanmondi, Dhaka-1207, Bangladesh. Email: int@daffo	17/06/2019	01/07/2019	5 from DIU 14 internal participants

MoU	Student and Faculty Exchange	Hung Kung University, Taiwan, Prof. Tiger Tien Head of International Relations, Hungkuang University, Taiwan Email: tiger t@hk.edu.tw	22/03/2019	22/03/2019	2 faculty
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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
Universidad del Rosario	30/06/2019	Exchange of faculty, researchers and students. Joint conferences and research programs	2
Hung Kuang University	22/03/2019	Exchange of faculty and students. short term programs and joint research programs	10
Shimane University	18/12/2018	Exchange of faculty, researchers and students.	11
Japan University of Economics	27/11/2018	Exchange of faculty, researchers and students. Joint conferences and research programs	2
Technical University Varna	08/11/2018	R D projects	1
FPT University	27/07/2018	Exchange of faculty, researchers and students. Joint conferences and research programs. Faculty Talks and workshops.	2
Ho Chi Minh City University of Economics and	26/07/2018	Exchange of faculty and students. Cultural	2

Finance		and academic visit	
Daffodils International University (PFA remaining details)	25/07/2018	Short projects, study tours, faculty exchange. resource sharing and scholarship opportunity	21
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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
6600000	6244409

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Laboratories	Newly Added
Video Centre	Newly Added
Classrooms with Wi-Fi OR LAN	Newly Added
Number of important equipments purchased (Greater than 1-0 lakh) during the current year	Existing
Number of important equipments purchased (Greater than 1-0 lakh) during the current year	Newly Added
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4.2 – Library as a Learning Resource

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

Name of the ILMS software	Nature of automation (fully or patially)	Version	Year of automation
Ecoleaide	Fully	3.3.0	2015

4.2.2 – Library Services

Library Service Type	Existing		Newly Added		Total	
Digital Database	4	Nill	Nill	Nill	4	Nill
CD & Video	1827	Nill	Nill	Nill	1827	Nill
CD & Video	37457	8851072	125	358164	37582	9209236
Journals	140	400455	Nill	Nill	140	400455
e-Journals	8233	84370	Nill	Nill	8233	84370
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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

Name of the Teacher	Name of the Module	Platform on which module is developed	Date of launching e-content
0	0	0	01/06/2020
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4.3 – IT Infrastructure

4.3.1 – Technology Upgradation (overall)

Type	Total Computers	Computer Lab	Internet	Browsing centers	Computer Centers	Office	Departments	Available Bandwidth (MBPS/GBPS)	Others
Existing	774	12	100	1	2	10	159	100	41
Added	0	0	0	0	0	0	0	0	0
Total	774	12	100	1	2	10	159	100	41

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

100 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
0	0

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
37285000	34797784	95410000	94664451

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)

<p>The norms of AICTE, Mahatma Gandhi University and A P J Abdul Kalam Technological University are used as a guideline for developing and enhancing the infrastructure of the college in line with the academic growth. Additional infrastructures are added from time to time and existing ones are augmented based on need.</p> <p>https://www.scmsgroup.org/sset/ppt_learning_center https://www.scmsgroup.org/sset/centre_for_robotics https://www.scmsgroup.org/sset/automobile-engineering https://www.scmsgroup.org/sset/civil-engineering https://www.scmsgroup.org/sset/computer-science-engineering https://www.scmsgroup.org/sset/electrical-electronics-engineering https://www.scmsgroup.org/sset/electronics-communication-engineering https://www.scmsgroup.org/sset/mechanical-engineering</p> <p style="text-align: center;">https://www.scmsgroup.org/sset/water_institution</p>

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	Merit based scholarships	526	16356500
Financial Support from Other Sources			
a) National	Central State Government schemes	279	15182628
b) International	0	Nil	0
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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 implementation	Number of students enrolled	Agencies involved
A Bridge Course - Object Oriented Programming	28/01/2019	20	Dept of CSE, SSET
Industry Expectation from a Professional	14/09/2018	97	Rapid Value Solutions
Language Lab	26/07/2019	279	In-house
Bhavishya	30/07/2018	277	ICTAK, Kerala
No file uploaded.			

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 passed in the comp. exam	Number of students placed
2018	Aptitude Training Program by Konfidence Group	360	360	Nil	243
2018	"Pre-Placement Mock Tests by Reference Globe"	427	427	Nil	243
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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

3	3	10
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5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Name of organizations visited	Number of students participated	Number of students placed	Name of organizations visited	Number of students participated	Number of students placed
INFOSYS LIMITED	338	127	TCS	147	13
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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
2019	1	B. Tech	Civil Engineering	IIT Bombay	M. Tech in Transportation Engineering
2019	1	B. Tech	Civil Engineering (PFA remaining details)	Government Engineering College, Thrissur	Environmental Engineering
2019	1	B. Tech	Electronics Communication Engineering	Karunya Institute of Technology	M.Tech in Embedded Systems
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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
CAT	1
GRE	1
Any Other	1
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5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
Intra SCMS Sports Fest	Inter Collegiate	228
Cricket Tournament	Inter Class	256
Badminton Tournament	Singles Doubles (Intramural)	170
Football Tournament	Inter Class	192
Inter Collegiate	State Level	384

Volleyball
Tournament (Mens Womens)

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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/ International	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
2018	Intercollegiate University level - details attached	Nil	Nil	Nil	PFA	PFA

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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 student council provides opportunities for the students to develop their social and cultural life and focuses on their overall development. This Council is a non-political forum. Student council is a group of teaching faculty along with the elected student representative. Teaching faculty members will be from various departments. The student representatives will be given the post of Chairman, Vice chairman, General Secretary, two University Union Councillor, Editor College Magazine, Sports Secretary, Arts Club Secretary, a 4th year Representative, a 3rd year Representative, a 2nd year Representative, a first year Representative, two lady Representatives and M.Tech representatives. The constitution is as per the Statutes of APJAKTU. The student council along with the faculty members in the student council is responsible for the conduct of celebrations like Onam, Christmas etc. as also taking up responsibility of various technical, cultural and sports meets. Students are part of various chapters of professional bodies and department associations which play a pivotal role in the development of students as engineers by various out-of-curriculum and extra-curricular activities. They aim to introduce among its members an awareness and appreciation of the various disciplines of not just Engineering but also other relevant fields. Some of the programmes are: 1. 16th and 17th Nov 2018: PPTIA 2018 2. 24-11-2018 : Union day celebrations-Aaravam 3. 21-12-2018 : Christmas celebration 4. 19th-21st Feb 2019 :SSET Intramural Badminton tournament (Men's Women's) 5. 13th to 15th March 2019 : Sports fest 6. 29-03-2019 :Cultural Fest - Vipanchika 2019 7. 3rd-10th April 2019: PPT Memorial all Kerala Volley ball Tournament (Men's Women's)

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

SCMS Alumni Association was formally registered in 2017 covering all the institutions under the SCMS Group. It is an umbrella organization, coordinating many alumni chapters both national and international. The purpose of the SCMS Alumni Association is to support its members throughout the world with a comprehensive and wide range of professional and social activities to nourish the network and to promote SCMS Group of Institutions. The administration of the SCMS Alumni Association is vested with the Executive Committee consisting of the President, Secretary, Treasurer, Vice President and Joint Secretary and

six members. The Committee is responsible for the affairs of the Association. The registered office of the Association is SCMS Campus, Prathap Nagar, Muttom, Aluva.

5.4.2 – No. of enrolled Alumni:

1023

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

0

5.4.4 – Meetings/activities organized by Alumni Association :

Alumni meets: SCMS alumni meet on 9 December 2018 at Silver Oak resorts, Bangalore, Qatar ASSET alumni meet on 5 Dec 2018, ASSET Pookkalam 2018 on 26 Oct 2018 at Ajaman, UAE Alumni activities: 1. Expert Talk - Mr.Arun Valiyaparambil (2003-2007 B. Tech CSE) - 4/8/2019 2. External Examiner for Viva Voce of Comprehensive Exam -Mr. Unnikrishnan Ambady (2006-2010 B. Tech ECE) - 26/4/2019 3. External Examiner for Viva Voce of Comprehensive Exam -Mr. Enesh Manian (2005-2009 B. Tech ECE) - 26/4/2019 4. External Examiner for Viva Voce of Comprehensive Exam -Ms. Gayathri (2008-2012 B. Tech ECE) - 26/4/2019 5. External Examiner for Viva Voce of Comprehensive Exam -Mr. Dipu R (2006-2010 B. Tech CSE) - 12/4/2018 6. External Examiner for Viva Voce of Comprehensive Exam - Mr. Hebin N J (2005-2009 B. Tech CSE) - 11/4/2018 7. External Examiner for Viva Voce of Comprehensive Exam - Ms. Bincy Thomas (2013-2015 M. Tech CSE) - 10/4/2018 8. External Examiner for Viva Voce of Comprehensive Exam - Mr. Krishnachandran M (2013-2015 M. Tech CSE) - 9/4/2018

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)

The Management of the Institution believes and promotes participative management at various levels of the Institution. Participative management is practiced at all levels of administration. With an open door policy in communication with top management and by actively seeking suggestions from various levels during interactions, everybody in the organization is offered a chance to contribute for the governance system. Each department works in a decentralised manner. Each department prepares its Annual Calendar to implement various development initiatives and student centric activities. The faculty and Management have formed various committees wherein faculty and members of the management make action plans for the benefit of the Institution.

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
Admission of Students	The procedure, rules and regulations of admissions policy and enrolment prescribed by the Commissioner of Entrance Examination, University and Government from time to time are strictly followed. College has admission committee counsels and guide

	the students for admission process.
Industry Interaction / Collaboration	Career guidance, counselling, soft skills development programmes, personality development programmes, campus interviews, off campus placement, pool placement initiatives etc. are regularly arranged by the placement cell in addition to closely functioning with the Industry Institute Interaction Cell to arrange lectures by industry expert, collaborate as well as enter into tie ups with industries.
Human Resource Management	The quality policy is framed by Top Management and is implemented through the principal and faculty who are also actively involved in the design and finalization of various action plans for implementation. The teaching and learning objectives are mainly achieved through approved course plans. The faculty members are actively involved in the design and formulation of the course plan in their respective specialization. The evaluation, counseling, mentoring, conducting remedial sessions for weaker students and organizing project works are also undertaken in the most effective manner. Monitoring and follow up is done by the Principal and Dean with the support of the Heads of Departments. This is carried out through periodical review of various action plans. Top management is supportive of the faculty and always appreciates their good performance. Faculty with good potential for leadership are identified during academic sessions, group activities and interactions, and are entrusted with specific role functions in important academic and administrative activities.
Library, ICT and Physical Infrastructure / Instrumentation	Library, ICT and Physical Infrastructure is upgraded periodically based on the recommendations of the Library Committee, ICT Committee and Infrastructure Committee respectively. These committees meet periodically to assess needs and plan requirements accordingly
Research and Development	Institution has a well-defined research policy. The policy applies to every person conducting research under the auspices of the Institution irrespective of the location of research and the funding agency. A

research cell has been established to oversee faculty involvement in research projects and provide necessary guidance and monitoring. Faculty and students involved in research form research groups. Research groups comprises of Principal Investigator, Principal Conceptualist(s), Co-Principal Investigator, Researchers, Project Associates, Scholars and Technical Assistants. Research committee governing the research cell comprises of Chairman, Vice-Chairman, Research Secretary, Finance Manager, Departmental Representatives and Principal Investigators. Faculty members from all departments actively engage in research and also publishes their research work.

Examination and Evaluation

Examination Monitoring Cell with a senior professor as convener and acting as the Chief Superintendent of Examinations assisted by Senior Assistant Superintendent and a group of faculty members is responsible for conduct of university examinations. The cell also officiates as the examination squad to keep a vigil on all Semester-End examinations. In addition, the cell is also entitled to receive any grievances from students regarding issues like out-of-syllabus questions, printing mistakes, etc. of end semester examinations of theory and practical subjects. The cell investigates such complaints and if necessary, forwards it to university with specific comments.

Teaching and Learning

Departments organise special talks, workshops, seminars and conferences regularly. This helps not just them but also exposes students to the best minds in the field. Various departments and Training Placement Cell have been working towards augmenting institute-industry interface by organizing various seminars, workshops, invited talks, institute - industry interactions, etc.

Curriculum Development

The College is affiliated to A P J Abdul Kalam Technological University, Kerala and follows the curriculum design and developed by APJAKTU. 2015 scheme is being followed. For curriculum enrichment various academic programmes are conducted by the departments such as seminars,

workshops, hands on training, IIIC activities etc. The programme assessment committee, department advisory committee, feedbacks from stakeholders etc, identifies gaps in syllabus and recommends how to bridge the same. Wherever required for newly introduced courses or else faculty members are send for short term training or faculty development programmes. Such training programmes are at times organised by the University itself and faculty members benefit from these and thus effective curriculum delivery is ensured.

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

E-governance area	Details
Planning and Development	E-governance not yet executed fully.
Administration	Partially paper free by integrating the biometric punching with the ERP software and provision for requesting for leave and approval therein of faculty and staff. Students attendance marking is also possible and automatic SMS facility to keep the parents informed. Mark entry and generation of various reports with respect to students and staff is also possible.
Finance and Accounts	Finance module in ERP Ecoleaide - digital transaction of tuition fees, hostel fees, transportation fees etc. The fine payment at library is also digitised.
Student Admission and Support	Admission module in ERP Ecoleaide - prospective students can apply online.
Examination	CIE using exam module in ERP Ecoleaide and ESE using university (KTU) e governance platform. The e governance platform also captures the attendance and internal marks of students deciding their eligibility for end semester examination. The end semester examination question papers are made available through secured download option one hour prior to the exam.

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

2019	IEEE	Nil	IEEE	7500
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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)
2018	Nil	Water and Waste water quality analysis	24/10/2018	26/10/2018	Nil	2
2018	Nil	Lab Training - Concrete laboratory	20/11/2018	22/11/2018	Nil	2
2019	Nil	Basic Computer Skills	26/07/2019	26/07/2019	Nil	20
2018	Nil	Principle of Experiments - Hydraulic Machines	04/06/2018	04/06/2018	Nil	10
2018	Workshop on Latex	Nil	18/07/2018	20/07/2018	55	Nil
2018	Nil	Basics of Microsoft Excel	28/11/2018	28/11/2019	Nil	15
2018	Training on Environmental Hydraulics	Nil	07/02/2018	07/02/2018	3	Nil
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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 development programme	Number of teachers who attended	From Date	To date	Duration
NPTEL-AICTE FDP (Integral Equations, Calculus of variations and its	4	01/07/2018	01/10/2018	84

applications				
NPTEL- Introduction to Smart grid	6	27/08/2019	18/10/2019	56
Faculty Enablement Program Foundation Program 5.0 conducted by Infosys ltd	1	06/08/2018	10/08/2018	5
KTU sponsored FDP on Information and Network Security Challenges	21	01/07/2018	05/07/2018	5
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6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
10	10	3	3

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
Ph.D Leave with pay, Course work leave, Travelling allowance, Employees Provident Fund, reservation in admission for eligible wards of employees and concession/fee waiver for meritorious students, One month of vacation every year Incentive for research publication	Employees Provident Fund ESI, 12 earned leave per year and if not availed can be carried forward to next year, reservation in admission eligible wards of employees and concession/fee waiver for meritorious students	Students insurance, Merit Scholarship

6.4 – Financial Management and Resource Mobilization

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

Efficient allocation and utilisation financial resources is ensured by the following procedure. Before the commencement of every financial year, principal submits a budget proposal, by considering the recommendations made by the heads of all the departments, and various units to the management. Recurring expenses such as salary, electricity, internet charges, bottled drinking water, maintenance cost, stationery, other consumable charges, transportation, security, etc., and non - recurring expenses or fixed assets expenses like lab equipment purchases, furniture and other development expenses. are considered. Budget allocation is done by the management based on this and the expenses are monitored by the accounts department. Depreciation costs of various assets s are also worked out. The expenses incurred under different heads are thoroughly checked by verifying the bills and vouchers internal financial committee. In case of external audit, accounts of the institution are audited by chartered

accountant. The auditor ensures that all payments are duly authorized after the audit and the report submitted to the management for review. Any queries, in the process of audit is attended immediately along with the supporting documents within the prescribed time limits. No major any major audit objection has been raised during the preceding years. The financial statements are filed with the Income Tax department by September every year.

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
Kinfra Small Industries park , Koratty Kairali Minerals, Nalukettu Oliviya Project ChalakudyCeecon Ready mix concrete pvt, Pudukkad, T P Construction Malayala Manorama Management	186500	Consultancy , Project funding ,Research and development
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6.4.3 – Total corpus fund generated

267595589

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	KTU, ISO	Yes	Internal academic audit committee
Administrative	Yes	ISO	Yes	Internal audit committee, ISO

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

The institute organizes open house meetings with parents once every semester. During the meetings suggestions are taken from parents w.r.t teaching learning process, students' internships are facilitated, and suggestions are also invited and support obtained for enhancing placements, trainings, co-curricular and extra-curricular activities as well for industrial visits. Faculty advisors keep a close rapport with the parents to students. Parents are also encouraged to contact the faculty advisors/subject teachers over phone or visit the campus occasionally to keep a close track on their ward's performance. Open house meetings conducted enable one to one interaction with the subject teachers. Parents are also part of many committees in the institution, including important committees like IQAC and anti-ragging committee. In addition, by taking part in the SWOT analysis valuable suggestions which contribute towards institutional development are provided.

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

- Computer skills
- Laboratory upskilling and reskilling
- Training to assist in consultancy works of the institution

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

- Meaningful collaborations with international universities facilitating internship, placement, student faculty exchanges
- Establishment of IoT lab
- Promoting culture of research, innovation leading to product development

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
2018	Innovation and Faculty training programme on Quality circle by Dr. K P Ouseph IFS	15/11/2018	11/12/2018	12/12/2018	88
2018	Interactive session on Innovation by Prof. K. Krishnakumar , Retd. Professor, GEC Thrissur	15/11/2018	10/12/2018	10/12/2018	30
2018	Workshop on NBA Accreditation process	14/08/2018	15/08/2018	15/08/2018	92
2018	Workshop on NBA Accreditation process	15/10/2018	08/09/2018	08/09/2018	65
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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
Womens Day Celebrations	06/03/2019	06/03/2019	69	23

Orientation to group dynamics	15/09/2018	15/09/2018	45	47
Ill effects of Narcotics	08/11/2018	08/11/2018	67	53

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
Solar power plant generating around 6000 units monthly against total energy requirement of campus between (45,000-70,000) units monthly.

7.1.3 – Differently abled (Divyangjan) friendliness

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

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	Nil	1	15/08/2018	50	Sanitisation, rehabilitation, Electrification, Cleaning and Relief Material Distribution At Paravoor Thaluk due to Main Kerala Flood 2018	Flood relief	100
2018	Nil	1	31/08/2018	2	Make My Meloor -	Institute	82

					Cleaning and sanitization at Divine Colony	neighborhood linkage	
2018	Nil	1	04/12/2018	60	Technical advice provided to "Koodorukam Keralam" Project	Life mission project of Kerala Govt.	8
View File							

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

Title	Date of publication	Follow up(max 100 words)
Manual of policies	26/07/2018	This is a comprehensive document that is aimed at providing students of SCMS School of Engineering and Technology (SSET), a very clear picture of the framework within which the institution functions. This document also provides a clear idea about the rules and regulations applicable to the students, procedures to be followed, rules of conduct of students and details of academic activities.
Service Rules	01/01/2018	Major additions/amendments during the period - Code of conduct - 28.03.2019 Policy on incentive for research publication -12.06.2019

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Birthday Big Day #Event 1	22/09/2018	22/09/2018	27
Sparsham 18:	02/03/2018	02/03/2018	20
Birthday Big Day Event #2	14/11/2018	14/11/2018	15
View File			

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

- Use of renewable energy • Effluent Treatment plant • Rain Water Harvesting •

Organic Farming Initiative in Campus by NSS • Single use plastic prohibited in the campus • Promotion and use of bio degradable materials wherever possible

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

1. Title of the Practice: Research and Product Development Goal Develop innovative product and technology having social impact by applying the multidisciplinary engineering principles. The Practice To achieve the desired goal, several practices followed in the Fablab are listed below • Organizing training programmes on the latest technologies. Soft-wares and machines available in Fablab to our students and outside world. • Formulating project groups consisting of students and faculty members. • Organizing project discussions, Idea fest to identify the problems faced by the society, analysing innovative Ideas. • Reviewing and feedback sessions with expert committee on the ideas and solutions developed. • Encouraging and guiding students to participate in the technical project competitions and submitting proposals for funding. 2. Title of the Practice: Tie ups with LSGs, State Central Government bodies. Goal To provide technical support to various government bodies to resolve their water sector challenges. The Context Many government bodies in Kerala face water scarcity and quality degradation. Though they have funds allocated to deal with these issues, they lack technical expertise to find appropriate solutions that can be implemented in a specific locality. An engineering institution with adequate human resource can handhold and develop the capacity of government bodies to face these challenges. Evidence of Success The tie up of SSET with government bodies have resulted in the development of water management plans, detailed project reports and formulation of projects for ground level implementation.

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

https://www.scmsgroup.org/sset/NAAC/AOAR_2018_19/bestpractices2018_19.pdf

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

SSET aspires to become a globally recognized institution known for high-quality technical education, trailblazing research, and innovative solutions that address global needs. The Institute developed a comprehensive education policy to foster research and innovation in graduates by aiding their overall growth to the countrys socioeconomicdevelopment. FAB Lab and the Robotics centre have always emphasized the goal of utilizing multidisciplinary engineering principles to develop products and technologies with a global impact, as well as instilling start-up culture and entrepreneurship activities in students. The Fab Lab predominately develops socially relevant projects at a low cost by utilizing cutting-edge technologies such as 3D printing, laser cutting, electronic workbench, and so on. The projects that were implemented had a significant impact on society thereby improving the theoretical and practical knowledge of students. Fab Lab implements a range of techniques to produce the desired results, including training sessions on the latest technology, applications, and machinery. Organizing project discussions and ideas to identify societal issues, as well as analyzing innovative ideas by forming project groups comprised of students and faculty. We have sessions with an expert committee to review and provide feedback on the ideas and solutions developed by students, as well as to help them navigate technical project competitions and funding proposals. Fab Labs projects have received numerous national and international awards including the Gandhian Young Technological

Innovation Award with a funding of 15 lakhs was given to a project on Artificial Deep Learning Brain Actuated Lower Limb Exoskeleton for Paralyzed in 2020. In 2018, Brain Wave Nerve Excitation for Physically Disabled was nominated for the Gandhian Young Technological Innovation Award at the national level. The project on De-Addiction Coil for Drug Addicts was awarded the First Prize in AICTE-ECI Chhatra Vishwakarma Awards, IIT Delhi in 2017. The Life Detection and Rescue System Using Snake Robot took third place in the National Level 2017 Third Dialogue India Academia Conclave (IIT, Delhi). Bionic Haptic Arm won 2nd place in the KSCSTE Tech Fest 2016, which was held at the state level. We promote the use of creativity in the teaching and learning process and encourage students to learn the most up-to-date information for the benefit of society. Many projects were funded, such as Bionic Haptic Arm and Eco friendly and energy efficient traffic junctions, which received external funding of KSCSTE-15000 INR each in the academic year 2015-16. During the academic year 2016-2017, we received an external funding from KSCSTE of 15000 INR each for the projects Wearable device for detection and prevention of heart failure and Muscles To Machine Interface for Paralyzed. Bug-bot with Mosquito attractor, A De-addictive coil for drug addicts and Brain to muscle interface for paralyzed person were the projects done during the year 2017-2018, which received both external and internal funding. 2018-19 brought out a handful of projects like Medicos (Patent Filing), De-addiction coil for drug addicts (Patent Filing), Brain Control Lower Limb Exoskeleton, Self-Assistive Brain Body Control Physiotherapy device (Patent Filing) and Lower Limb Exoskeleton, which received internal and external

Provide the weblink of the institution

<https://www.scmsgroup.org/sset/>

8.Future Plans of Actions for Next Academic Year

- NBA Accreditation of three departments
- Obtain APJAKTU funding for FDPs
- Mentor and motivate students to participate in Young Innovators Programme by Kerala Development and Innovation Strategic Council (K-DISC).
- Apply and procure APJAKTU funding for FDPs