Yearly Status Report - 2019-2020

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.	**04842882901**
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	**683576**

2. Institutional Status

Affiliated / Constituent	**Affiliated**
Type of Institution	**Co-education**
Location	**Rural**
Financial Status	**Self financed**
Name of the IQAC co-ordinator/Director	**Dr. Saira Joseph**
Phone no/Alternate Phone no.	**04842882900**
Mobile no.	**9846519453**
Registered Email	**sset@scmsgroup.org**
Alternate Email	**saira_joseph@scmsgroup.org**

3. Website Address

Web-link of the AQAR: (Previous Academic Year)	https://www.scmsgroup.org/sset/NAAC/AQAR_2019_20/AQAR2019_20.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_2019_20/academiccalendar2019_20.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-2016**

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
NBA Peer team visit	**14-Feb-2020 1**	**3**
NBA - SAR Submitted for three departments	**02-Sep-2019 1**	**3**
ISO periodic audit	**02-Dec-2019 1**	**8**
ISO Periodic Audit	**29-Nov-2019 1**	**8**
KTU academic audit	**04-Nov-2019 1**	**7**
IQAC Meeting	**12-Feb-2020 1**	**17**
IQAC Meeting	**11-Nov-2019 1**	**19**
IQAC Meeting	**08-Aug-2019 1**	**18**
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/ CSE/Asha S	Student Project funding scheme	Kerala State Council for Science Technology and Environment	2019 180	13000
Institution	Unnat Bharat Abhiyan - Financial Aid	MHRD	2019 730	50000
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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 :	**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)

• Increased number of consultancy for government organisations. • Increased participation of faculty in technical consultancy, projects and sociocultural activities to enhance the teaching quality and student learning. • Consistent academic results among all the engineering colleges affiliated to KTU. • Mentor mentee system made more robust. • Conduct of tutorial, remedial and special classes to be improved to address the specific needs of students. • The IQAC regulates the arrangements for holding seminars, workshops, knowledge sharing programmes etc. by individual departments to enhance the knowledge base and professional skills of students.

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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	Achivements/Outcomes

NBA Accreditation	NBA SAR for three departments were finalized and submitted on September 2019.The peer team visit for NBA accreditation of three departments (CE, CS, ME) was completed on February 14, 15 16, 2020
Enhance R D activities	Non – Ph.D. faculty have registered/are in the process of getting registered for Ph.D program Sponsored Research Fund of Rs. 13,09,000/ has been granted by Directorate of Environment Climate Change Dept of Environment Rs. 15,00,000/ granted by GYTI BIRAC SRISTI Rs. 1,14,000 by Research Council, Oman.
5th edition of PPTIA 2019 to include international participants & Creativo – the inhouse project competition to gather momentum	The 5th edition of Dr. Pradeep P Thevannoor Innovation Awards, PPTIA 2019 was conducted on 16th and 17th November 2019. Students from a total of 15 schools including an international participation from Leaders Public School, Sharjah presented their projects and ideas. At the college level also, students of 15 colleges including participants from Daffodil University, Bangladesh and Hungkuang University, Taiwan presented their innovations. In the inhouse project competition Creativo, students of Dept. of Mechanical Engineering bagged the first place for their project "Hydro Vortex Power Generator".
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14. Whether AQAR was placed before statutory body ?	Yes

Name of Statutory Body	Meeting Date
SCMS Board of Management	28-Dec-2020

15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?	Yes
Date of Visit	14-Feb-2020
16. Whether institutional data submitted to AISHE:	Yes
Year of Submission	2020
Date of Submission	22-May-2020

17. Does the Institution have Management Information System ?	Yes
If yes, give a brief descripiton 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 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 lifecyle 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). The curriculum has got a balanced structure comprising humanities, basic science, professional core and elective courses Flexibility in making changes in curriculum is restricted due to this. The College ensures effective curriculum delivery through a well-planned and documented process. In curriculum related activities, academic freedom is enjoyed by the faculty. They actively participate and support the curriculum development, delivery, and assessment within the overall framework of the program approved by the University. The college plans the academic schedule as per APJAKTU's academic calendar. Departmental academic calendar and institutional academic calendars are prepared based on this. 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. 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 concerned teachers prepare their subject-wise lesson plans. The lesson plan incorporates topics to be covered and, the number

of hours needed for completing each topic. Meetings are arranged periodically to review the coverage of syllabus in the respective departments and suitable corrective measures are adopted to complete the syllabus within the stipulated time. Bimonthly meetings are conducted by the academic committee to monitor the progress of the completion of syllabus. The outbreak of the pandemic demanded social distancing, and the Government has also been forced to close educational institutions temporarily. The U.G. and P.G. courses were in the middle of 2019-20 even semester. The classes were at the height of their activity when the temporary closure was announced. After the initial chaos of few days, SSET decided to resume the teaching/learning process remotely. The announcement was made through the official website and communicated with the students and parents through the class coordinators. As the initial step towards remote learning, it is decided to create digital learning resources, both textual and visual, for the course contents to continue with the classes. These course contents were communicated to the students through Google Classroom. IQAC took care of the whole procedure, ensuring all courses, theory and laboratory are assigned with Google Classroom and the entire students of the respective classes can access the learning resources. SSET became a part of the Coursera for Campus Campaign. In addition to Coursera, SSET encouraged students to do NPTEL courses as well. A good number of webinars, workshops, and talks have been conducted by all departments, where students get a medium to interact with the supporters from Academia and Industry. Students were also encouraged to be part of online- hackathons and other peer-driven activities to interact with the outside world. Project guidance and evaluations, remedial classes, and mentoring sessions were also conducted through the online conferencing.

1.1.2 – Certificate/ Diploma Courses introduced during the academic year

Certificate	Diploma Courses	Dates of Introduction	Duration	Focus on employ ability/entreprene urship	Skill Development
Software engineering using agile method	0	20/08/2019	2	Employment	Coding
Python Programming and Raspberry Pi	0	28/10/2019	2	Employment	Technology with coding
QGIS software	0	26/09/2019	2	Employment	Software knowledge
Workshop on Future technologies	0	15/10/2019	2	Employment	Technology
Hand-on training in Swarm Robotics	0	04/03/2020	4	Employment	Technology
Blockchain- Enabling revolution	0	27/08/2019	2	Entreprene urship	Technology
Automobile workshop 3.0	0	26/09/2019	2	Employment	Technology
Bhavishya	0	23/07/2019	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	Civil Engineering	15/05/2020
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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	22/07/2019
BTech	Civil Engineering	22/07/2019
BTech	Computer Science & Engineering	22/07/2019
BTech	Electronics & Communication Engineering	22/07/2019
BTech	Electrical & Electronics Engineering	22/07/2019
BTech	Mechanical Engineering	22/07/2019

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

	Certificate	Diploma Course
Number of Students	911	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
Dismantling and rebuilding of Automotive components	01/07/2019	5
Workshop on water audit	10/03/2020	27
Workshop on deep learning using Tensorflow	06/07/2019	103
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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	Automobile Engineering	6
BTech	Civil Engineering	38
BTech	Computer Science & Engineering	20
BTech	Electrical & Electronics Engineering	25
BTech	Mechanical Engineering	43
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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
Students' feedback on teaching learning process and faculty is taken every semester. These feedbacks are analysed and communicated to individual teacher which helps them to improve upon. Corrective measures are taken by the head of department, if necessary, based on the feedbacks received. Feedbacks were taken online due to non-availability of students in the campus. Online course committee meetings, class committee meetings, parents' meetings were undertaken frequently to ensure online classes are being held in the best possible manner. In addition, course exit feedback, program exit survey are also taken on teaching learning process, infrastructure facilities and the entire learning experience of the students during their tenure The institute also collects feedback from the parents on academic and administrative progress. These feedbacks are collected online as well as while parents are in campus for open house meetings. Alumni feedback collected contributes to the process of development of the institution. Employer 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.

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	Computer Science & Engineering ((Remaining details attached))	120	183	115
BTech	Automobile Engineering	60	42	22
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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

2019	1514	186	108	Nill	33

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	Numberof smart classrooms	E-resources and techniques used
141	141	9	48	1	6

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)

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. With the pandemic outbreak the entire process was taken up online and all measures taken to ensure that the rapport with students are maintained and necessary support given at all times.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
1696	141	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
Nill	Nill	Nill	15	5

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. Varun G. Menon	Assistant Professor	Top Peer Reviewer Award

2019	Dr. Varun G. Menon	Associate Professor	IEEE Senior Member

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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
BTech	BTech	S1(Batch 19)	19/12/2019	09/05/2020
MCA	MCA	S4	27/06/2019	12/11/2019
BTech	B.Tech (Honours)	S8(Batch 15)	17/06/2019	14/07/2019

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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 examinations per semester as per the regulations of APJ Abdul Kalam Technological University (KTU). The outbreak of the pandemic demanded the ESE of final year students to be carried out online. University entrusted the institutions to complete the final year examinations. At SSET, Heads of Departments monitored the exam procedure, and teachers posted question papers through Google Classroom, monitored students through live meets, and later collected answer scripts through Google Classroom. A brief structure on the internal assessment is highlighted below: • The department conducts two internal assessment tests as per the regulations of KTU calendar at 6th and 12th week. • 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. • A class test is conducted for the weak students immediately after the remedial classes. • Students who fail to score 45 marks in internal assessment and achieve 75 attendance are directed to attend the summer class to improve their performance. The schedule for the summer class will be as per KTU directions. • The quality of question papers, scheme and evaluation procedure are analyzed and discussed in PAC meeting for further action.

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. With the outbreak of the pandemic the planning was disrupted towards the end of the even semester. After the initial chaos of few days, SSET decided to resume the teaching/learning process and evaluations remotely. SSET, as a dynamic community, embraced the new normal quickly. In addition to following the University guidelines scrupulously the IQAC laid out guidelines to ensure that class tests, quizzes etc. are undertaken in an effort to ensure students are evaluated to ensure effectiveness of online learning.

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/AQAR_2019_20/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
MTech	Mtech	Civil Engineering-Computer Aided Structural Engineering	17	17	100
BTech	BTech	Mechanical Engineering	116	88	75.86
BTech	BTech	Electronics & Communication Engineering	80	61	76.25
BTech	BTech	Electrical & Electronics Engineering	67	42	62.69
BTech	BTech	Civil Engineering	115	95	82.61

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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/AQAR_2019_20/studentssatisfactionsurvey2019_20.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
Major Projects	730	Department of Environment and Climate Change, Kerala State	13.09	5.23
Major Projects	365	GYTI- BIRAC SRISTI	15	15
Industry sponsored	90	Research council, Oman	1.14	1.14

Projects					
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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
INDUSTRY INSTITUTE INTERACTION 2 - Vehicle Electrification	Automobile Engineering	03/11/2019
Geosynthetics-Products,Functions and Applications	Civil Engineering	30/08/2019
1D Convolution Neural Networks and Natural Language Processing	Computer Science and Engineering	30/04/2020
Communication Standards in Avionics	Electronics Communication Engineering	30/05/2020
Advanced Electrical Machines for Electric Vehicle (EV) Applications	Electrical Electronics Engineering	12/05/2020
Engineering in the Oil and Gas Industry	Mechanical Engineering	12/06/2020

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
Human Powered Vehicle Challenge - Design category (Runner-up) and Overall Championship	Rohit Krishna T J, Poornima and team	ASME E-Fest Asia Pacific	16/03/2020	Innovative Project
E - kart No 107	13 member student team led by Mohammed Fannan, Faculty Advisor - Sujay K	ISNEE - 8th Go Kart Design Challenge (GKDC)	02/01/2020	Innovative Project
Energy Generation from WHEY	Ms. Beena Puthillath, Aravind, Anwin Francis, Ajin C, Akhil Krishna	Quest Global	18/10/2019	Innovative Project
ASME Student Regional Chair, Southeast Asia Region	Anish B Soman	ASME	08/07/2019	Achievement
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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	Nill
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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	Nill

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	9	3.06
International	Computer Science Engineering	10	2.95
International	Electrical Electronics Engineering	3	2.04
International	Electronics Communication Engineering	5	3.24
International	Mechanical Engineering	8	1.13
International	Basic Science Humanities	5	7.86
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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	6
Computer Science Engineering	1
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	Number of citations excluding self

| Secure Brain to Brain Communication with Edge Computing for Assisting Post-Stroke Paralyzed Patients | Sreeja Rajesh | IEEE Internet of Things Journal | 2020 | 0 | SCMS School of Engineering and Technology | 14 |
| Artificial Muscle Intelligence System with Deep Learning for Post-Stroke Assistance and Rehabilitation | Vinoj P G | IEEE Access | 2019 | 0 | SCMS School of Engineering and Technology | 22 |

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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
Microstructural evolution and microhardness response of H11 hot forging dies	Dr. Sam Joshy	World Journal of Engineering	2019	Nill	2	Government Engineering college Thrissur
Blockchain For Intelligent Transport System	Dr.Varun G Menon	IETE Technical Review	2020	Nill	7	SCMS School of Engineering 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/Seminars/Workshops	12	12	5	Nill
Presented	4	4	Nill	1

papers				
Resource persons	5	5	1	16

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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
Bio farming	NSS	2	100
Orientation on group dynamics	NSS	2	100

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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
Top Scorer Award	Top Scorer Award for Ms. Heleena Joy	NSS Technical Cell	1
Flood mapping and response plan development	Special Appreciation	Meloor Gram Panchayat	25

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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 activites	Number of students participated in such activites
Clean Ernakulam	Ernalakulam District Administration Anbodu Kochi	Clean Ernakulam	2	50
Mapathon survey training	Kerala IT Mission	Mapathon survey training	2	30
Green Protocol Execution	Ernalakulam District Administration Suchitwa Mission	Green Protocol Execution @ Thiruvairanikulam Mahadeva Temple Nadaturappu Mahostav	2	100
Thaiveru	Kerala Forest Department	Thaiveru	2	50

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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
Dr. Pradeep P. Thevannoor Innovation Awards (PPTIA) 2019	Hungkuang University Taiwan,	SCMS School of Engineering Technology	2
Dr. Pradeep P. Thevannoor Innovation Awards (PPTIA) 2019	Daffodil International University Bangladesh	SCMS School of Engineering Technology	2

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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	Students Training and Placements	ICT Academy of Kerala, Contact: Mr. Sreekumar K V, Head - Academic Relations, 81118 40022	01/07/2020	01/07/2021	0
MoU	Student and Faculty Exchange	Hung Kung University, Taiwan, Prof. Tiger Tien Head of International Relations, Hungkuang University, Taiwan Email: tigert@hk.edu.tw	14/11/2019	17/11/2019	MING-TZU TSAI, YU-CHIEH CHENG, EN LIN, CHUN-MIN WANG, RUI-TING HONG, CHENG-LIN LEE
MoU	Student and Faculty Exchange	Daffodil International University (DIU), Dhaka, Bangladesh, Mr. Syed Raihan-Ul-Islam, Assistant Director, International Affairs Daffodil Int	14/11/2019	17/11/2019	Mr. Nimai Chandra Das, Mr. Elias Hossain

MoU	Campus Connect Program	Infosys Limited, Mr. Hari S, Lead-Education and Training Infosys Trivandrum Center, Contact: Hari_S@infosys.com	05/01/2019	04/01/2020	Ms. Asha S, Ms. Shilpa P C

| ernational University Daffodil Tower-4,102/1 Shukrabad, Dhanmondi, Dhaka-1207, Bangladesh. Email: int@daffod |

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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
Project Management Unit - Rebuild Kerala Initiative	13/08/2019	The institution associated with PMU-RKI for assessment of damage caused by floods.	44
Suchitwa Mission, Local Self Government Department	04/02/2020	M. Tech EE - Student Internships	2

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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
3065000	2642073

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Number of important equipments purchased (Greater than 1-0 lakh) during the current year	Newly Added
Number of important equipments purchased (Greater than 1-0 lakh) during the current year	Existing

Seminar halls with ICT facilities	Newly Added
Laboratories	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	
Text Books	37582	9209236	257	126605	37839	9335841
Journals	132	310926	Nill	Nill	132	310926
e-Journals	12267	1633209	Nill	Nill	12267	1633209
e-Books	Nill	Nill	4000	70970	4000	70970
Digital Database	4	Nill	Nill	Nill	4	Nill
CD & Video	1827	Nill	Nill	Nill	1827	Nill
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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	Nill
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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	1	0	0	0	0	0	0	0
Total	774	13	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 incurredon maintenance of physical facilites
32190000	32962558	85610000	91263784

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)

The COVID-19 has resulted in schools and colleges shut across the world and as a result, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms. To efficiently manage the online teaching sessions, SCMS School of Engineering and Technology took many proactive steps in terms of the upgradation of its IT Infrastructure. • The Internet Leased Line in the campus was upgraded from 100 to 200 Mbps speed which enabled all the faculty to handle classes without any disruption. • The college took a ZOOM Business account which supported upto 300 participants in online training programs and lectures. • The position of the WiFi points and transmission powers were adjusted to enable maximum coverage in the campus. • 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 • https://www.scmsgroup.org/sset/water_institution

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

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	531	17329500
Financial Support from Other Sources			
a) National	Central State Government schemes	250	19433991
b)International	0	Nill	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 implemetation	Number of students enrolled	Agencies involved

Language Lab	22/07/2019	266	In-house
Bhavishya	23/07/2020	259	ICTAK, Kerala
Induction Programme	01/08/2019	259	Sharp Skills
Internship	01/10/2019	120	Soti Global Team

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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	Aptitude Training Program by Konfidence Group	325	325	Nill	167
2020	TCS NINJA	35	Nill	35	Nill

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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
2	2	10

5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Nameof organizations visited	Number of students participated	Number of stduents placed	Nameof organizations visited	Number of students participated	Number of stduents placed
INFOSYS LIMITED	311	100	QUEST GLOBAL	125	12

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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	Depratment graduated from	Name of institution joined	Name of programme admitted to
2020	1	B. Tech	Civil Engineering (PFA remaining details)	University of West of England	M. Sc. in Civil Engineering
2020	1	B. Tech	Automobile Engineering	Govt Engineering	Advanced Diploma in

College, Barton Hill, TVM	Automotive Mechatronics

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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
GATE	7
GMAT	2
CAT	2
Any Other	10

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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
Kabaddi (Mens Womens)	University Zone Tournament)	448
Intra SCMS Sports Fest	Inter Collegiate	255
Cricket Tournament	Inter Class	256
Badminton Tournament	Singles Doubles(Intramural)	210
Football Tournament	Inter Class	192

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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/ Internaional	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
2019	Intercollegiate University level - details attached	National	Nill	Nill	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. Some of the programmes are: 1. 06-09-2019: Onam celebration 2. 17-07-2019: PPTIA Curtain Raiser 3. 16th 17th Nov 2019: PPTIA 2019 4. 20-12-2019: Christmas Celebration 5. NSS Camp: 9-15 Jan 2020 6. Hackathon :28-Jan-20 7. University Athletic Meet: Jan 30 - Feb 1, 2020

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

SSET has always taken pride in the wide network of alumni who are occupying coveted positions in various esteemed organisations in India and abroad. Since the inception of the institution, the role of alumni through its growth and development is quite significant. As the institution prospered, the association also grew in size with a formal structure. 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. SSET has always taken pride in the wide network of alumni who are occupying coveted positions in various esteemed organisations in India and abroad. Since the inception of the institution, the role of alumni through its growth and development is quite significant. As the institution prospered, the association also grew in size with a formal structure. SCMS Alumni Association is established with various chapters at Bangalore, Chennai, Delhi, Dubai, Hyderabad, Kochi and Mumbai where alumni meets are conducted regularly. Such meets provide a great opportunity for alumni to reconnect with classmates, network with fellow alumni and meet their faculty members which in turn strengthen the ties between SCMS and alumni across different parts of the globe.

5.4.2 – No. of enrolled Alumni:

1526

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

0

5.4.4 – Meetings/activities organized by Alumni Association :

Whether it's involvement in various committees, interaction with students, final placements, support on projects, or returning as faculty, SSET alumni has always played a key role to play in the development of the institution. Alumni Meets: 1. ASSET Pookkalam 2019 on Oct 4, 2019 at Ajman Beach Hotel, Ajman 2. Alumni meet on December 14, 2019 at Hyderabad 3. Enosis 2019 on Jan 12, 2019 at SCMS 4. Enosis 2020 Jan 18, 2020 at SCMS Alumni Interactions: 1. Webinar - Mr. Rahul Raj (2004-2008 B. Tech ME)- 22/5/2020 2. Webinar - Dr. Deepak Hari (2004-2008 B. Tech AU)- 8/5/2020 3. Webinar - Er. Madhu Sethumadhavan (2002-2006 B. Tech CE)- 2/5/2020 4. Webinar - Mr. Arjun Sethumadhavan (2011-2015 B. Tech AU)- 29/4/2020 5. Webinar - Mr.Vishnu Moorthy (2011-2015 B. Tech AU)- 29/4/2020 6. Webinar - Mr. Gireesh Mohan (2008-2012 B. Tech AU)- 27/4/2020 7. Webinar - Mr.Telbin Thomas C. (2013-2017 B. Tech AU)- 24/4/2020 8.

Webinar - Ms. Meera R Nair. (2003-2007 B. Tech CE)- 31/1/2020 9. Webinar - Er. Arun Mathews. (2005-2009 B. Tech CE)- 30/1/2020 10. Expert Talk - Mr.Rakesh .Rajan (2004-2008 B. Tech CSE) - 28/1/2020 11. Expert Talk - Ms.Meers S (2006-2010 B. Tech ECE) - 20/1/2020 12. Hands-On Session - Mr. Nihal Pradeep (2013-2017 B. Tech CSE) - 10/10/2019 13. Video conference - launching of ASSET Radiance19 - SSET ASSET Radiance - 6/9/2019 On 6/9/2019, ASSET RADIANCE, an initiative of the Alumni Association of SSET was inaugurated (webcast) to provide exposure for students into the bigger global market and trigger thoughts on career specializations to choose. Through ASSET RADIANCE it is envisioned to support the future professionals and assist them to get industry ready after graduation. Emphasis will be laid on skill (technical personal) development, guidance by way of sharing personal career journeys and experience gained, to our students with an objective to help future professionals relate the knowledge gained in the institution to the market. Alumni experts will be delivering multiple sessions mostly as webcasts on career paths and on emerging trends in the engineering sector. 14. Induction Programme - Ms. Ayisha Jalal, Mr.Ajay Reghuwarrier, Ms.Malavika Prakash (2015-2019 B. Tech CSE) - 1/9/2019 15. Expert Talk - Mr.Arun Valiyaparambil (2003-2007 B. Tech CSE) - 4/8/2019 16. Induction Programme - Mr.Nihil Pradeep Mr.Sreeram. S.Kammath (2013-2017 B. Tech CSE) - 1/8/2019 17. Expert Talk -Mr.Aravind Anilkumar (2007-2011 B. Tech CSE) - 8/3/2018

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)

Head of the Institution is assisted by Deans and HODs with specific role functions for the assisting the Principal and other functionaries in their respective domain. Administration: The overall administration is carried out by the Principal with the assistance of office assistants as who are in-charge of affairs related to hostels, transportation, admissions, establishments, scholarships etc. The principal, Deans, HODs and staff members are involved in defining the policies and procedures, framing guidelines and rules regulations pertaining to admission, placement, discipline, grievance, counseling, training development, and library services etc., and effectively implementing the same to ensure smooth and systematic functioning of the institute. Finances are handled by accounts section of the office. Academics: The heads of various departments have been delegated the authority to take administrative decisions for their respective department after consulting the Principal and Dean Academic Affairs for smooth functioning of the Institution. For the various programs to be conducted by the institute all the staff members will meet, discuss, share their opinion and plan for the event and form various committees involving students and coordinate with others. Staff members are also involved in deciding academic activities and examinations to be conducted by the college.

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	Publicity in the admission process is ensured by the following ways: ? Advertisements of the courses offered

	in regional dailies in local language Malayalam as well as in English. ? SCMS SSET website. ? SSET prospectus which will also be published in the website and application form is made available for download. ? Commissioner of Entrance Examination website and prospectus. For Management and NRI seats prospective students can apply online. College has an admission committee to counsel and guide the students during the admission process. The admission committee oversees certificate verification, allotment of seats, fee collection, admission to hostel, availing bus facility etc., interaction with faculty members etc. on the day of admission. All fee transactions are undertaken online.
Industry Interaction / Collaboration	Industry Institute Interaction cell (IIIC) organises guest lectures, industrial visits for the benefit of the students and faculty. Experts from industry are invited to the institution to interact with students on emerging engineering practices. IIIC also provides students with internship opportunities and is responsible for bringing in industrial linkages, promoting consultancy activities and signing of MoUs with industries. 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. External agencies are also brought in to offer soft skills development, personality development programmes, values added programmes etc.
Human Resource Management	The institution has well defined HR policies incorporating progressive and transparent approach systems and procedures for recruitment, training, At the end of each semester the Heads of Departments submits requirement of new faculty or staff if any required. Newly appointed faculty members are given orientation programs as well as induction programs. FDP on quality teaching is also organised by ICT

	Academy of Kerala with which the SSET has MoU for training of students as well as faculty. Technical staff/administrative staff are also imparted necessary professional development programmes.
Library, ICT and Physical Infrastructure / Instrumentation	Library committee plans and holds regular orientation program for students to promote and educate students and faculty in accessing the e resources. Faculty and students have access to e-journal subscriptions of IEEE, ASME, ASCE, J Gate etc. Infrastructure and ICT facility requirements are analysed and addressed based on need.
Research and Development	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. Incentive for research has been instituted and faculty who received incentive in Oct 2019 are: Dr. Sheeja Janardhanan – Rs. 70000/-, Dr. Sunil Jacob – Rs. 1,00,000/- and Dr. Varun G Menon – Rs. 30,000/-.
Curriculum Development	The college is affiliated to A P J Abdul Kalam Technological University (APJAKTU), Thiruvanathapuram established in 2015, Prior to this the college was affiliated to Mahatma Gandhi University. Currently 2015 scheme and 2019 scheme of syllabus of APJAKTU is being followed. SSET takes conscious efforts to enrich and organize the curriculum provided by the affiliating university to promote holistic development of our students and to make them readily employable. Skill development programmes, value added programmes, Personality Development Programmes entrepreneurial

	activities etc. are organized to transform the students from mere engineering graduates to engineers. SSET also has taken every effort to integrate the cross-cutting issues such as gender, climate change environmental education, Human rights, ICT etc. wherever possible into the curriculum and more often by other indirect means.
Teaching and Learning	In addition to conventional chalk and board teaching learning process group discussions, field visits, quizzes, case studies, Industrial Visits, students' Paper presentations, use of ICT, experiential learning, service learning etc. are adopted to enrich the learning process and to improve upon the PO, PSO attainment. Lectures by experts from various fields are also conducted in addition to bridge courses, value added courses etc.
Examination and Evaluation	The Examination Cell at SSET ensures the smooth functioning of both Internal Examination and End Semester Examinations (theory). The Examination Cell is headed by Chief Superintendent of Examinations and supported by faculty from each department as well as office assistants. The Prime responsibility of Examination Cell is conducting of all examinations (both internal and end semester exams) in a fair and systematic manner under the directions of the Chief Superintendent of Examinations. After the pandemic outbreak the ESE of final semester students were conducted online by the examination cell as per the directives of the University and monitored by the IQAC.

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

E-governace area	Details
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
Planning and Development	E-governance not yet executed fully, provision to access e- journals and e

	-books.
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.**

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
2020	**Sonal Ayyappan**	**Nil**	**IEEE**	**7500**
2019	**Dr Manoj Kumar B, Dr Sheeja Janardhanan, Ms Reenu Bose, Mr Koshy P Joseph, Mr Haridas V K**	**EVOLVE 2019 - E MOBILITY CONFERENCE EXPO**	**Government of Kerala Pricewaterhouse Coopers**	**2500**
2019	**Dr. Sheeja Janardhanan**	**International Conference on Advanced Computational Engineering and Experimenting 2019 at Greece**	**Nil**	**62080**
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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)
2019	**FDP- Information and Network Security Challenges**	**Nil**	**01/07/2019**	**05/07/2019**	**25**	**Nill**
2019	**FDP - Emerging challenges**	**Nil**	**10/07/2019**	**12/07/2019**	**25**	**Nill**

	in sustainable urban development					
2019	Worshop on Research perspective in Power Energy and Instrumentation System 2019	Nil	25/06/2019	27/06/2019	16	3
2019	Training on Efficient Water Use – Waste and Waste Water Management	Nil	09/10/2019	15/10/2019	4	Nill
2020	Introduction to Google platforms for online sessions	Nil	17/03/2020	17/03/2020	53	Nill
2019	Nil	Getting Started with Google Spreadsheet	18/07/2019	19/07/2019	Nill	35
2020	Nil	Introduction to MS office tools	11/03/2020	12/03/2020	Nill	7
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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
FDP on Machine Learning and Deep Learning by TCS	25	18/05/2020	20/05/2020	25
Recent Advances in Metals Casting and Joining Techniques	1	06/01/2020	10/01/2020	5

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

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
15	15	1	1

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 180 days Maternity Leave with pay	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
ST. Jude Cement Projects, Koraty East. Mepilly Builders , Chalakkudy Management	150461	Consultancy, Research Development

6.4.3 – Total corpus fund generated

285538536

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. 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. They also participated in the NBA accreditation processes, where they contributed by giving feedbacks to the peer team.

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

• Staff Development Programme • Use of MS office tools • Participation of technical staff in online seminars/workshops for knowledge upgrading • Providing technical knowhow and developing working models in laboratories

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

• Activities under Unnat Bharat Abhiyan • Establishment Ideation and Prototyping Centre • Active Local Chapter certificate of NPTEL July-October 2019 semester • Significant Funding obtained for R D projects including funding from the Federal Ministry of Higher Education Research, Germany for German Academic Exchange Programme (DAAD) for conducting their Alumni Seminar on Efficient Water Use - Water Waste Water Management in collaboration with SCMS Water Institute.

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

2020	The Art of Technical Writing and Publishing In the Pursuit of Academic Excellence	11/11/2019	13/01/2020	15/01/2020	52
2019	Outcome Based Education Workshop	08/08/2019	14/10/2019	14/10/2019	75

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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
Journey of a Woman Entrepreneur	09/03/2020	09/03/2020	45	25
AIDS awareness	07/11/2019	07/11/2019	73	65
Health and Wellness : World cancer day - Awareness and Prevention	18/02/2019	18/02/2019	67	56

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
Around 10 of overall requirement. 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	Nill
Ramp/Rails	Yes	Nill
Braille Software/facilities	No	Nill
Scribes for examination	No	Nill
Special skill development for differently abled students	No	Nill

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
2019	Nill	1	01/07/2019	60	Project of surveying 100 acres of unused land ,Kerala State Government for West Koratty Koottukrishi Padasekhara Samithi	Reclamation of waste land for agricultural purpose	20
2019	Nill	1	15/09/2019	1	Thaiveru - Rooting Bamboo trees in Land Slide prone area	Landslide	50
2020	Nill	2	10/12/2019	120	Rebuild Kerala Initiatives - Surveying and preparation of DPR for rehabilitation of flood damaged road infrastructure in various GPs	Assessment of flood damaged houses	44
2019	Nill	1	01/01/2019	365	Feasibility Study on Implementation of Rain Water Har	Water shortage	16

				vesting Systems at Kochi Metro Fac ilities		

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

Title	Date of publication	Follow up(max 100 words)
Service Rules	01/01/2019	All the procedures, rules and privileges relating to the staff have been compiled into a book, titled "Service Rules" for the benefit of the employees. The Service Rules are revisited every year to make necessary amendments or delete outdated content. Any new policy formulated by the Management from time to time is also included. Major additions/amendments during the period – Employee leave holidays policy - 21.07.2019
Manual of policies	22/07/2019	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.

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Birthday A Big Day #Event 1 Spend a full day	15/04/2019	15/04/2019	9
Arike' 19 at Karuna Bhavan	10/06/2019	10/06/2019	6

| Jeevani' 19 (financial support) | 21/07/2019 | 21/07/2021 | 3 |
| PPTIA 2019 curtain Raiser on the theme Save our Mother Earth | 17/07/2019 | 17/07/2019 | 250 |

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

• Water treatment plant of one lakh litre capacity to treat bore well water commissioned. By not drawing water from public water supply strain on same is avoided. Rain water harvesting and ground water replenishment is being done. • Solar power plant • Plantation and Campus Beautification • NSS organized a workshop on paper pen making to create awareness on avoiding use of Single use plastic. • Proper disposal of electronic plastic waste • Composting of food waste

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

1. Title of the Practice: Nurturing the culture of innovation Goal: The aim of the practice followed by the SSET is to be recognized as a leader committed to excellence in innovation that meets the aspirations of the global community. Following this comprehensive need, the priority is to develop a culture within SSET faculty and students to address the paradigm shift needed from learning to innovation. As a result, the institution initiated several activities for reinforcing the culture of innovation. The Practice: The innovation culture at SSET is facilitated through Innovations Entrepreneurship Development Cell (IEDC), Workshops, Research Projects, Project Competitions, Tie-Up with Kerala Start-Up Mission and Development of Fab Lab. The students are encouraged to participate in workshops and idea pitching competitions arranged by the IEDC to cater to the research aptitude of the students. The CREATIVO which is an in-house competition open to all the students from the SCMS group of institutions has been conducted annually to identify, promote and celebrate outstanding talents whose innovative ideas can be demonstrated and commercialized. Library resources beyond the basic requirements are made available to the staff and students to support their innovation efforts and bring life to their ideas. The faculty members are awarded by research incentives considering research projects and publications which has enhanced the morale, productivity and innovation culture of faculty at SSET. The college is all set to start an incubation centre, enabling to build a start-up culture among the students. 2. Title of the Practice: Environment Consciousness and use of green energy • The solar power plant at SCMS School of Engineering Technology (SSET) is 50 KWp (Kilo Watt peak) ON-GRID type installed on roof top area of Administrative block, SSET purchased from TATA power solar systems limited, Bangalore. After installing the solar power plant and obtaining sanction from KSEB (Kerala State Electricity Board) the solar power plant was tied to KSEB grid and started generation from 14th April 2018 onwards. • A 100 KLD sewage treatment plant (STP) has been installed at SCMS School of Engineering Technology (SSET) to treat the waste water from administrative block, two academic blocks, five laboratory blocks, one canteen, two hostels and an auditorium in the campus. Toilets, washbasins and urinals of the two academic blocks, various laboratories, two hostels and the wastewater generated during cooking, dishwashing etc. from the canteen are the major wastewater sources for the STP. Treated waste water is being used for gardening agricultural purposes within the campus. Goal: • To evolve as a green campus reducing the dependence on electricity generated from fossil fuels by promoting the usage of self-

generated electricity from renewable sources. • To evolve as an environmentally conscious campus by reducing the impact on environment by treating and reusing the waste water produced by the campus activities.

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/AQAR_2019_20/bestpractices2019_20.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

Our institution imparts high-quality education and we promote activities that enable our students to become socially productive and value-oriented citizens. The NSS unit in SSET does several activities that are meant for the upliftment of downtrodden strata in society and nature conservation as well. Punarjjani is a state-wide initiative by the Kerala State Youth Welfare Board and the Technical Cell of the National Service Scheme, aimed at repairing and renovating the damaged and out of use furniture and other health care equipment at government hospitals including hospitals for Leprosy patients across the State. They repaired the damaged medical equipment and changed the outlook of two hospitals in the nearby premises of our institution. In association with the forest department of Athirappally, we gave a helping hand to the hillock behind the cattle breeding farm, Thumburmuzhi, which had about 14 debris flows in the past two years during the devastating flood that happened in Kerala. Students found that planting bamboo saplings in landslide-prone areas can prevent such natural calamities, (Project Tai Veru). Other remarkable projects are Monitoring the green protocol in the nearby temple premise (Thiruvairanikkulam) and making it a plastic-free zone, Flood relief activities such as repairing damaged motors that were used for household purposes and irrigation, repairing and completing the household electrification works after flood etc are tasks that created a long-lasting impression in the budding engineers. Helping hands organisation provide a platform that collectively brings all the students and staffs of SSET for the betterment of society. In the past few years, H2O had done several activities that made a lifelong imprint. Cancer detection camp, Homeo-medicine camp, educational camps for kids, and financial support for the marriages, treatment support, flood relief campaigns etc. Providing monetary support to small kids from poverty-stricken families, Helping the people in the neighbourhood to renovate their damaged houses, Reconstructing the unused spots in college by planting trees and beautification were various activities that helped to develop empathy and compassion towards human beings and surroundings. Volunteers support visually impaired college students to improve their academic as well as social life by associating with Koottu Charitable Trust (7875/2017). Through Donate Your Voice (for supporting the visually impaired students) activity they realised that can be the light in someones life. The project started as a campaign and students started recording textbooks, daily news, motivational recordings, Current affairs questions, audio tuition, literature texts etc for visually impaired college students. The technical proficiency of the volunteers stood as great support to VI learners to rectify doubts and also helps to ease their everyday troubles during the past two years. In the beginning, many of them were not aware of the challenges and problems faced by the differently- abled students. By the direct interaction with visually impaired people, volunteers are going through a transformation in their life. During the Lock period, they put their maximum effort to support people who struggle in society they also dream about creating technical innovations such as applications and devices to assist VI learners.

Provide the weblink of the institution
https://www.scmsgroup.org/sset/

8.Future Plans of Actions for Next Academic Year

• Acquire more funded projects from national and international agencies. • Acquire funds for and organise more national and international conferences • More MOUs with industries and undertake industry relevant projects • Conduct more no. of Faculty Development Programmes • Staff development programs for administrative/ non-teaching/support staff • Introduction of new add on courses / Certificate programs • Set up an Ideation and Prototyping Centre to foster design and development skills among students. • Apply for Research seed money from Centre for Engineering Research Development (CERD) • Obtain APJAKTU funding for FDPs