Yearly Status Report - 2018-2019

Part A	
Data of the Institution	
1. Name of the Institution	**INDIAN INSTITUTE OF SPACE SCIENCE AND TECHNOLOGY**
Name of the head of the Institution	**Dr V K Dadhwal**
Designation	**Director**
Does the Institution function from own campus	**Yes**
Phone no/Alternate Phone no.	**04712568402**
Mobile no.	**7022267122**
Registered Email	**registrar@iist.ac.in**
Alternate Email	**director@iist.ac.in**
Address	**Valiamala Post**
City/Town	**Thiruvananthapuram**
State/UT	**Kerala**
Pincode	**695547**

2. Institutional Status

University	**Deemed**
Type of Institution	**Co-education**
Location	**Rural**
Financial Status	**central**
Name of the IQAC co-ordinator/Director	**Dr K S Subrahamanian Moosath**
Phone no/Alternate Phone no.	**04712568538**
Mobile no.	**9495743148**
Registered Email	**smoosath@iist.ac.in**
Alternate Email	**smoosath@gmail.com**

3. Website Address

Web-link of the AQAR: (Previous Academic Year)	https://www.iist.ac.in/aboutus/institute

4. Whether Academic Calendar prepared during the year	**Yes**
if yes,whether it is uploaded in the institutional website: Weblink :	https://www.iist.ac.in/academics/calendar

5. Accrediation Details

Cycle	Grade	CGPA	Year of Accrediation	Validity	
				Period From	Period To
1	B	2.87	2013	08-Jul-2013	07-Jul-2018

6. Date of Establishment of IQAC	**16-Feb-2012**

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

No Data Entered/Not Applicable!!!	
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8. Provide the list of Special Status conferred by Central/ State Government-UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.

Institution/Department/Faculty	Scheme	Funding Agency	Year of award with duration	Amount
Nil	Nil	Nil	2019 0	0
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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 :	0
The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website	No
Upload the minutes of meeting and action taken report	No Files Uploaded !!!
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)

• Implemented the Choice Based Credit System from July 2018 session • Implemented the Auditing of a course without writing the End Semester examination from July 2018 session • Implemented the PhD Admission Test from July 2018 session for aspiring candidates (both sponsored and nonsponsored) from Engineering disciplines who do not possess a National Eligibility Test for PhD • The PhD Admission test for July 2018 and January 2019 sessions were conducted in the offline mode by calling the eligible students to one of the following nearest venues: any one of the six ISRO/DoS centers at Chennai, Thiruvananthapuram, Hyderabad, Mumbai/Ahmedabad, New Delhi and Kolkata. The above enabled students to travel, at best, short distances to write the PhD Admission test. The students who qualified the PhD Admission test were called for interview at IIST. • The institute successfully completed the AICTE Approval process and the MTech students who joined the institute from July 2018 onwards received their MTech fellowship from AICTE

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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
The institute offers postgraduate admission based on GATE score only for some programmes while other programmes had seat allotment for PG based on both GATE score and interview. Till the academic year 20182019, the above mentioned PG interviews were held at IIST, Thiruvananthapuram. In order to have wider cross section of PG students joining IIST from all across the country and keeping the interests of aspiring PG students in mind, the institute decided to conduct the PG interviews online (from 20192020 academic year onwards) with aspiring PG candidates showing up to the nearest venues in any one of the six ISRO/DoS centers at Chennai, Thiruvananthapuram, Hyderabad, Mumbai/Ahmedabad, New Delhi and Kolkata.	Proposed and accepted
The institute discussed the matter and decided to implement Government of India order to reserve 10 % of seats in undergraduate and postgraduate programmes for the "Economically Weaker Section"(EWS) category from the academic year 2019-2020 onwards	Proposed and accepted
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14. Whether AQAR was placed before statutory body ?	No
15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?	No
16. Whether institutional data submitted to AISHE:	Yes
Year of Submission	2018
Date of Submission	19-Dec-2018
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)	IIST does have the information system (iCampus) that assist the complete

Part B

CRITERION I – CURRICULAR ASPECTS

1.1 – Curriculum Design and Development

1.1.1 – Programmes for which syllabus revision was carried out during the Academic year

Name of Programme	Programme Code	Programme Specialization	Date of Revision
Mtech	MMA01	Machine Learning and Computing	23/07/2018
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1.1.2 – Programmes/ courses focussed on employability/ entrepreneurship/ skill development during the Academic year

Programme with Code	Programme Specialization	Date of Introduction	Course with Code	Date of Introduction
Mtech	MAV05	23/07/2018	AVP632 Digital Control and Embedded Systems	23/07/2018
Mtech	MAV05	23/07/2018	AVP855 Engineering Design Project	23/07/2018
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1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the Academic year

Programme/Course	Programme Specialization	Dates of Introduction
BTech	All UG Programme	23/07/2018
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1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective Course System implemented at the University level during the Academic year.

Name of programmes adopting CBCS	Programme Specialization	Date of implementation of CBCS/Elective Course System
BTech	Aerospace Engineering	23/07/2018
BTech	Electronics and Communication Engieering(Avionics)	23/07/2018
BTech	Engineering Physics	23/07/2018

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
Emerging and Selected Topics in Power Electronics	02/01/2019	6
Digital Signal Processing for Real Time Applications	02/01/2019	5
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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	Aerospace Engineering	58
BTech	Electronics and Communication Engineering (Avionics)	59
Mtech	Materials Science and Technology	6
Mtech	Digital Signal Processing	2
Mtech	VLSI and Microsystems	6
Mtech	Control Systems	7
Mtech	Power Electronics	6
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1.4 – Feedback System

1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	No
Employers	No
Alumni	No
Parents	No

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

Feedback Obtained
All the academic programmes and curricula are designed based on extensive feedback given by academic peers, engineers/scientists from various ISRO centers, other research organizations, and industry experts. We also take the parents into confidence regarding our academic programmes at the time of student counselling when parents visit the campus. The input from all the stakeholders is considered at the time of curriculum revisions. In IIST, we have a formal mechanism to obtain student feedback on all the courses. Students give anonymous feedback on the course they have attended at the end of each semester. Students play an important role in providing the detailed feedback about the course content, and delivery methodology adopted by the instructor. The feedbacks are collected, evaluated and discussed in the department level meetings. These inputs are taken into consideration while revising the

curriculum. We also collect feedback from alumni for getting useful suggestions for improving the curriculum. Informal feedbacks are also collected from students on the courses and curriculum during discussions in the respective class committee meetings which we regularly conduct after each quiz. We use indigenously developed iCampus portal to collect the feedback from students. They are asked to give their feedback with respect to reading material provided, reference books, examination pattern, teaching method, doubt clearing, quality of question papers/ assignments, etc. A summary report is then generated and forwarded to the respective faculty. Suitable corrective action if necessary is taken by the faculty in consultation with Head of the department.

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
No Data Entered/Not Applicable !!!				
View File				

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	464	249	5	5	95

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
No Data Entered/Not Applicable !!!					
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)

The mentoring system at IIST nurtures the very goal, and is initiated to help student grow into self sufficient individuals within the 4-5 years of academic life. Institute has an actively functioning mentors committee under the Students Activity (SA) board since 2014. This is a voluntary service rendered by the faculty members of IIST focusing primarily the first year B. Tech. students. The aim is to provide a friendly guidance to the newly joined teen-age students who are possibly going to stay outside of their parents umbrella for the first time. Many students find the transition difficult and mentoring provides extra support for them in finding footing in the institute. Mentoring system at IIST assist the first year students in adapting to the new system, helping them solve multiple issues be it administration, language issues, logistics, personal problems, academics and so on. Each volunteered faculty have been assigned 4-5 students each year. The students are advised to meet the assigned faculty once a week and discuss their difficulty at various levels. Mentors also make sure that the assigned students meet them regularly on a one to one basis. In fact mentors bridges between the mentees, first

year teaching faculty, counsellors, and parents in case a situation arises. During the time of counselling, opportunities are provided for the parents of the mentees to interact with the mentors. Personal contact numbers of the mentors are given to the students as well as parents for any further interaction in the future. Mentors meet once a month along with the teaching faculty to discuss the issues of their mentees and collectively take quality decisions and develop strategies to further help the students. Mentors continue to support the students in the following years too in case they are in need. Committee of mentors is chaired by Dean - Student Affairs and based on the input given by mentors, possible changes are implemented in the hostel, administration etc. and suggestions were forwarded to academics for addressing in a timely manner.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
713	105	1:7

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
123	91	3	3	3

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
No Data Entered/Not Applicable !!!			
View File			

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
No Data Entered/Not Applicable !!!				
View File				

2.5.2 – Average percentage of Student complaints/grievances about evaluation against total number appeared in the examinations during the year

Number of complaints or grievances about evaluation	Total number of students appeared in the examination	Percentage
0	0	0

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)

Nil

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the	Number of students passed in final year	Pass Percentage

			final year examination	examination	
		No Data Entered/Not Applicable !!!			
			View File		

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)

We have not carried out any formal Student Satisfaction Survey during the academic year 2018-19. However, informal discussions were held on various platforms and in general students are found to be satisfied by the overall institutional performance.

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

3.1 – Promotion of Research and Facilities

3.1.1 – Teachers awarded National/International fellowship for advanced studies/ research during the year

Type	Name of the teacher awarded the fellowship	Name of the award	Date of award	Awarding agency
No Data Entered/Not Applicable !!!				
View File				

3.1.2 – Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other fellows in the Institution enrolled during the year

Name of Research fellowship	Duration of the fellowship	Funding Agency
No Data Entered/Not Applicable !!!		
View File		

3.2 – Resource Mobilization for Research

3.2.1 – 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
No Data Entered/Not Applicable !!!				
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3.3 – Innovation Ecosystem

3.3.1 – 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
No Data Entered/Not Applicable !!!		
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3.3.2 – 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
No Data Entered/Not Applicable !!!				
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3.3.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation	Name	Sponsored By	Name of the	Nature of Start-	Date of

Center			Start-up	up	Commencement
Nil	Nil	Nil	Nil	Nil	Nill
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3.4 – Research Publications and Awards

3.4.1 – Ph. Ds awarded during the year

Name of the Department	Number of PhD's Awarded
Physics	1
Chemistry	4
Aerospace Engineering	2
Earth and Space Sciences	1
Avionics	1
Mathematics	2
Humanities	1

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

Type	Department	Number of Publication	Average Impact Factor (if any)
No Data Entered/Not Applicable !!!			
View File			

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

Department	Number of Publication
No Data Entered/Not Applicable !!!	
View File	

3.4.4 – Patents published/awarded/applied during the year

Patent Details	Patent status	Patent Number	Date of Award
No Data Entered/Not Applicable !!!			
View File			

3.4.5 – 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
No Data Entered/Not Applicable !!!						
View File						

3.4.6 – 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
No Data Entered/Not Applicable !!!						
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3.4.7 – Faculty participation in Seminars/Conferences and Symposia during the year				
Number of Faculty	International	National	State	Local
Attended/Seminars/Workshops	0	1	0	0
Presented papers	0	0	0	0
Resource persons	15	31	58	0
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3.5 – Consultancy

3.5.1 – Revenue generated from Consultancy during the year

Name of the Consultan(s) department	Name of consultancy project	Consulting/Sponsoring Agency	Revenue generated (amount in rupees)
No Data Entered/Not Applicable !!!			
View File			

3.5.2 – Revenue generated from Corporate Training by the institution during the year

Name of the Consultan(s) department	Title of the programme	Agency seeking / training	Revenue generated (amount in rupees)	Number of trainees
Dr R V Ramanan : Depart of Aerospace Engineering	Introduction to Space Technology for EME Officers	Defence	150000	12
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3.6 – Extension Activities

3.6.1 – 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
No Data Entered/Not Applicable !!!			
View File			

3.6.2 – 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
Nil	Nil	Nil	0
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3.6.3 – 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

Nil	Nil	Nil	0	0
No file uploaded.				

3.7 – Collaborations

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

Nature of activity	Participant	Source of financial support	Duration
Nil	0	Nil	0
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3.7.2 – 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
No Data Entered/Not Applicable !!!					
View File					

3.7.3 – 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
NTU and IIST	21/11/2018	To discuss the possibility of internship and PhD for IIST students as part of activities	Nill
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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
350000000	181529349

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
No Data Entered/Not Applicable !!!	
View File	

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
Koha	Fully	3.02.05.000	2011

4.2.2 – Library Services

Library Service Type	Existing	Newly Added	Total
No Data Entered/Not Applicable !!!			
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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
Nil	Nil	Nil	Nill
No file uploaded.			

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	907	335	840	14	179	150	229	1	0
Added	42	11	40	0	28	1	2	0	0
Total	949	346	880	14	207	151	231	1	0

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

1 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
Audio Visual Lab	https://www.iist.ac.in/departments/humanities-lab#22222
Audio Visual Lab	https://drive.google.com/file/d/1e5CUymHIdFInO3M6oixNr8Ty1sQrmOnN/view?usp=sharing

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
18499000	14841991	22900000	24638613

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 physical assets of the Institute, such as the buildings, classrooms,

electrical power, air condition and landscaping, are all maintained by the Construction and Maintenance Division (CMD) Section. The transport department caters to running and maintaining buses, conveyance light vehicles, and ambulance services. The Purchase and Stores Section takes care of purchase and making inventory by following the approved standard procedures. Library staff manages acquisition of print and electronic resources for the academic and research needs of the academic community. The Computer System Group manages the campus network, servers and other infrastructure and handles computer-related maintenance. Software Support Group (SSG), led by a team of IT professional provides various software services and technical assistance in the institute. The finance and accounts department, with its designated head and staff, cater to the financial aspects of the Institute. The institute has a medical clinic, with round the clock presence of a doctor and nurses to cater to any day-to-day medical requirements/emergencies. With its head (Dean Academics) and support staff, the Academic Section caters to the admission to graduate, postgraduate, and Ph.D. courses and conduction of examinations, etc. The hostel department maintain the hostels and manage day-to-day activities with its head and associated staff. A food and canteen committee constituted of faculty, students, and the canteen head addresses various food-related details such as the menu, mess timings, etc. A hostel committee constituted of faculty, students, and the hostel head addresses various hostel-related issues such as water supply, pest control in hostels, etc. Several administrative officers cater to the general administration of the Institute, which includes general upkeep and janitorial maintenance of the Institute. The Institute also employs a full-time counselor to guide students and staff of the Institute to achieve their goals. The counselor also addresses mental health issues and workload issues at a very personal level. The sports facilities and activities of the institute are administered through a sports committee consisting of faculty, students, and physical education instructors. Through the help of the instructors, the committee is also responsible for the maintenance and running of the day-to-day sports-related activities of the Institute and conducting the annual sports day. The cultural and other technical activities carried out by students are monitored and guided by a cultural committee similarly. The tech fest Conscientia, and the cultural fest Dhanak of the Institute, is facilitated by this committee. The Students Activities Center (SAC) caters to these requirements. The classrooms, furniture, seminar halls, and other associated accessories such as projectors, etc., are all attached to the respective academic department heads. The laboratories attached to each department come under an identified faculty coordinator/in charge in the department. The purchase and maintenance of the lab equipment, etc., is facilitated through the purchase and stores department. All the research and development activities of the institute are monitored and facilitated by the deans research and development. Computer Systems Group manages and maintains computer systems, networking, and related electronic infrastructure in IIST for provisioning and facilitating IT and non-IT services.

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	Nill	Nill	Nill
Financial Support from Other Sources			

| a) National | Nil | 0 | 0 |
| b) International | Nil | 0 | 0 |

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

Name of the capability enhancement scheme	Date of implemetation	Number of students enrolled	Agencies involved
No Data Entered/Not Applicable !!!			

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
2018	Nil	0	0	0	0
2019	Nil	0	0	0	0
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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
1	1	90

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
No Data Entered/Not Applicable !!!					

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
No Data Entered/Not Applicable !!!					

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
No Data Entered/Not Applicable !!!	

5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year		
Activity	Level	Number of Participants
No Data Entered/Not Applicable !!!		
View File		

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
No Data Entered/Not Applicable !!!						
View File						

5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

IIST Students activities board is the apex body under the chairmanship of Dean Students Activities, for streamlining the student activities of IIST. There are four sub-committees' functions under the Students Activities Board. Sports Committee – One faculty member heads the committee and students nominate one representative each from all batches of undergraduate, post-graduate and doctoral students. This committee oversee the organization of various sports activities, competitions, selection of students for inter-collegiate events, maintaining the sports infrastructure, organization of Institute Gym etc. The committee reports to SAB periodically with its regular reports. Canteen and Hostel Committee – One faculty member heads the committee and students nominate one representative each from all batches of undergraduate, post-graduate and doctoral degree programs. The committee periodically review the canteen and hostel facilities, canteen menu, housekeeping etc with the help of students and suggest adequate measures for improvement and correction. Technical Committee – One faculty member heads the committee and students nominate one representative each from all batches of undergraduate, post-graduate and doctoral degree programs. The committee encourages and initiates student projects in science and technology areas, facilitates and enhances various science and technology activities like innovation centre, technical clubs etc. The committee oversees the organization of IIST Inter-collegiate national student's technical fest named "Conscientia" every year. It also discusses and recommend students for various inter-collegiate events in India and abroad. Cultural Committee – to promote and encourage the cultural and literary activities of students of IIST, a cultural sub-committee has been constituted under the chairmanship of a faculty member and student representatives from various batches. The committee is responsible for organizing annual inter-collegiate National Cultural Fest named "Dhanak" every year. The committee also plans various cultural events, and literary competitions and select best programs / events for inter-collegiate events. Student Clubs: IIST students organizes various clubs named, Quiz Club, Aero Club, Nano-Satellite Club, FOSS Group, Eco Club, Photography Club, Movie and Performing Arts Club, Astronomy Club, Music Club, Model United Nations Club etc. Social outreach clubs like Nirmaan and Panacea are also functioning under student committees. Student Houses: All extracurricular activities are conducted based on various student houses. Student houses are titled as, Akashganga, Devayani, Kritika, Sharmishta, Hamsadhwani etc. Inter-house competitions are conducted for sports, cultural and literary activities. Academic Bodies: Students are members of class committees of each class along

with those teachers who take classes during that semester. The class committees meet twice a semester and discuss about the performance of the students and the progress of lectures. Internal Complaints Committee: Internal Complaints Committee (ICC) is re-constituted (Office Order No. 449 dated 05.08.2016) as under to deal with the complaints relating to Sexual harassment at work place. Three student's nominees are representing different batches in the committee along with few members from faculty and staff of IIST Women Cell: Students are members of the women cell of IIST Anti-Ragging committee: Students are members of the anti-ragging committee of IIST.

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

No

5.4.2 – No. of registered Alumni:

0

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

0

5.4.4 – Meetings/activities organized by Alumni Association :

Annual Alumni Meet held on 14.09.2018 at the campus.

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 organizational structure of IIST is truly decentralized in nature. The vision of the Indian Institute of Space Science and Technology is to establish a world-class institute offering Space Technology and Space Science educational programs which are integrated with basic and applied research for meeting the requirements of the Indian Space Programme. Research forms a significant part of this vision. The main aim is to seamlessly integrate Research and Development with academics and encourage excellence in the Institutes research activity in areas relevant to space science, space technology and space applications. Towards achieving this Research goal, IIST is creating its own full-fledged infrastructure to develop a vibrant research atmosphere. It is also encouraging and promoting faculty in research activities to offer post-doctoral, doctoral programs and wherever necessary, draw upon research the rich expertise already available with the Indian Space Research Organization. The Director provides overall guidance to academic programs and takes strategic administrative decisions of the institute. The Director sets up necessary committees to conduct academic programs and to get the administrative activities done. The Academics section of the institute is headed by Dean (Academics). This section undertakes all decisions related to admission of students, preparing the academic calendar, the conduct of exams, publishing of results, convocation-related activities, etc. Dean (RD) is responsible for Research and Development activities at the institute level. Research Council (RC) chaired by Dean (RD) monitors the research progress and other academic matters of Faculty members and research scholars. Technical Review Committee (TRC) has the mandate to review the program of research projects in the institute funded by IIST and other external agencies. Faculty members coming up with project proposals is discussed here. IIST Research Board is formed to enable, promote and nurture innovative research activity meeting the

requirements and challenges of the Indian Space Programme. The Dean (Students activities) is responsible for overseeing the activities of students. The institute has many clubs as Aero Club, Avionics club, etc., which this office guides. In addition, this office oversees Conscientia, the annual technology and astronomy festival of the institute. Annual cultural festival Dhanak is also organized by this office. Faculty members who come with innovative technologies are encouraged to apply for patents from Dean (IPR) office. Decentralization of selection of IIST-ISRO projects and decentralization of PhD selection of institute funded research scholars is followed in our institute. All the departments are involved in projects and research of national and international importance. Research in departments is through funded projects by IIST as well as government agencies such as the Department of Science and Technology (DST), apart from the regular Ph.D. programs. IIST funds research projects of the faculty members while encouraging active collaborations with ISRO units and institutes and research laboratories of national importance. The research projects implemented in IIST campus are: (i) IIST Research Projects (i) IIST-ISRO Projects and (ii) IIST Fast-Track Research Projects for newly jointed faculty (iv) Externally Funded Projects and (v) Individual Award/ Scheme Research Funds (INSPIRE Programme, NPDF, Young Scientist Award etc.)

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	? Admission of Students A meritocratic admission policy with predefined minimum standards is formulated for admitting students into IIST at UG, PG, Doctorate, Post-Doctorate levels. UG admission: Candidates desiring to obtain admission in IIST should register their application through online portal http://www.admission.iist.ac.in. IIST Admission Rank list will be generated for those candidates who register online for admission to IIST and satisfy all the eligibility criteria as prescribed in the Information Brochure. IIST Admission Rank list is prepared based on their aggregate marks scored in JEE(Advanced) examination. For PG admissions in Engineering/Science departments, a GATE score is mandatory. Applications are shortlisted depending upon the GATE Score and students are admitted based on the interview/rank list. A hybrid policy is followed by respective departments. For engineering/science department's admission to Ph.D. are based on departmental norms/interview. For Humanities Department, admission to Ph.D. are based on score in UGC/JRF score. Admission of post-doctoral

	studies is purely based on the interview that respective departments hold.
Curriculum Development	Curriculum development in the institute is framed primarily to mould students with sufficient rigor in the fundamentals and also to meet the student skill requirement for research and work in cutting edge technologies. Curriculum development is progressively carried out typically after three years. Every department prepares a curriculum modification/updation incorporating feedbacks from Alumni, reputed Educationalists, and Industry partners. The departmental committee incorporates the suggestion and implementation through discussions in a BoS (Board of Studies). This is discussed and ratified and approved through an academic council. However, periodic inclusion of any specific electives and minor modification are periodically incorporated into the curriculum through internal departmental discussions and BoS.
Teaching and Learning	Students are asked to do term/mini projects as part of the internal assessment in many courses. The term project can be an understanding of a research paper or demonstrating a concept or modelling and simulations or a combination. The term project enables students to get a broader perspective, which helps to look beyond the classroom examples and apply the concepts learned in the course. Students are taken to visit rocket propulsion facilities in ISRO propulsion center Mahendragiri and aerodynamic test facilities such as wind tunnels and shock tunnel facilities in VSSC, Trivandrum to enhance their exposure and knowledge.
Examination and Evaluation	The evaluation is an integral and important part of the teaching-learning process. In IIST the process of continuous assessment is practiced evaluating the scholars. It is done through quizzes, class tests, home assignments taken periodically, and semester work and course project works taken based on the nature of the course. Few courses also take open book examination which allow students to get the practice of referring books and answering. The complete evaluation is

	purely internal and it is the responsibility of the course teachers teaching the course to evaluate the students perfectly by knowing the students understanding clearly in the topics they taught and to give a fair evaluation. Continuous assessment system for evaluation of students that carries various components like quizzes, assignments, miniprojects and final examination. The unique feature of the evaluation system is that students are allowed to see the evaluated End Semester Answer scripts and if they are not satisfied with the marks or any other manual errors are found the student can contact the faculty members and get it done. So this type of evaluation provides transparency in the evaluation system and reduces the process of revaluation after declaring the results. This is one of the best systems followed in which the students are satisfied with their results and the re-evaluation procedure is avoided.
Research and Development	Research development in various areas of space science, space technology and its applications as well as related areas of basic science and relevant humanities topics is undertaken at IIST through its faculty, visiting researchers and collaborators, postdoctoral fellows and project-funded junior research fellows and project engineers. The RD ecosystem is strongly supported by PhD scholars as well as PG and UG students in their project/internship semesters. While majority of research is funded from the institute, faculty are encouraged to obtain competitive research grants from funding agencies as well as consultancy project funds from ISRO and other industries. This is managed under Dean (RD) through an institute level Research Council. 65 research projects were undergoing during this period. IIST constantly enhances its research facilities, by procuring and developing several innovative and ground breaking technologies. Research scholars and teachers are actively involved in research, and this is evident in the increase in number of patents, publications and in their research output. To nurture a research culture among students and teachers, it

	provides financial support to participate in conferences, workshops, and seminars.
Library, ICT and Physical Infrastructure / Instrumentation	Library provided ICT enabled Library and Information Services. Koha ILMS is used to manage the library and also to provide OPAC in the intranet environment. Provided access to plagiarism checking tool for the user community Library continued to acts as the publishing house of the Institute by providing designing, printing and binding facilities. Library week celebrated with many lectures and other programmes. Read and share programme arranged to support flood affected library to develop their collection. Remote access to e-resources provided through IIST Virtual Library. A new service Books on Desk service provided for faculty to save their time in searching required books. Book fest was conducted to help academic community to select the books for the library. CCTV implemented in library for the security and monitoring purposes. Many training programmes organised on various e-resources and other tools. Content pages of periodicals were scanned and linked with the full text and uploaded to the library portal.
Human Resource Management	Human Resource Management The quality improvement strategies in human resources across the institute are designed to achieve the desired objectives of IIST along with providing quality research output for ISRO and space related activities. Institute has the following in place: Faculty empowerment strategies: All the faculty members of IIST have excellent academic back ground. Faculty members are also having research publication in reputed international journals. Many of them are members and fellows of prestigious academic societies. In addition, the faculty are encouraged to publish in peer reviewed international journals of repute. They are amply funded to attend conferences at national and international level. Also faculty are encouraged to do collaboration with leading national and international institutions with the aim that they can become best known in their area of research. Faculty are also encouraged to participate in international

	collaborative research projects with universities like University of Colorado, University of Singapore, JPL etc. Faculty are also encouraged to pursue research through extramural grants available premier academic and research institutes in the country. The faculty of IIST also serve as members of Doctoral committees in premier institutes of county like IITs, NITs etc. They also serve on governance bodes and other statutory bodies of various educational institutions in different capacities. Research grants are also given to faculty to travel to foreign institutions for presenting their research work in international conferences. This provides an opportunity for faculty to interact and present their ideas to their peer groups at international level. Green living campus facilities: The campus at IIST has all facilities for the students that are eco-friendly. The campus has a well-equipped hospital that gives treatment to faculty, staff and students in case of emergencies. The campus is eco-friendly wherever possible. Technologies of biogas. waste utilization, recycling etc., are adopted. Water from rainfall is efficiently harvested. The campuses are equipped with adequate sports and recreation facilities. Faculty promotion policies: A fair and transparent policy for policy promotion of faculties is followed based on merit. Annual Performance Appraisal Report (APAR) is required to be filled in by the faculty in which they are required to record their achievements every year.
Industry Interaction / Collaboration	Industry Interaction / Collaboration The Placement Cell at IIST continually liaise with industry, RD organizations, and management Institutions, with the vision of Training, Career-Guidance, Internship/Project, and Campus Placements for our post graduate and undergraduate students. The Company/Organization would contact the Placement Office for further details and discussions. In this year, 8 M. Tech students did their project work outside IIST in private companies. 13 companies visited IIST for placements during this year. 12 B.Tech students and 25 M.Tech students were placed in

companies. The Institute furthered its international collaborations significantly this year. There were collaborations for academic cooperation and projects. The AAReST project with Caltech/ JPL and the INSPIRE satellite project with University of Colorado are a few notable steps in this direction. At present the institute is carrying out many activities both in-house and international collaborative projects, viz., 1. ARIS on the PS4 has been successfully flown 2. In-house IIST small satellite 3. RPA payload for ISROs MOM-2 mission 4. RPA and small satellite payload for proposed ISROs Venus Mission 5. Mirror Satellite for Autonomous Assembly of Reconfigurable Space Telescope (AAReST) in collaboration Caltech/JPL, USA and University of Surrey, UK 6. INSPIRE series of satellites starting with InspireSat1 in collaboration with University of Colorado, USA Towards the international collaborative projects IIST has signed, and are in the advanced stage of discussion for entering into, MoUs/Agreements with international partners for carrying out the collaborative projects. IIST has already entered into MoUs with University of Colorado, Boulder, USA, CalTech University, USA, University of Surrey, UK and Nanyang Technical University, Singapore.

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

E-governace area	Details
Planning and Development	IIST has in place planned and developed in-house softwares for online payment(ePay) integration with undergraduate admissions, online counselling for UG and PG, online election system for alumni, CHSS monitoring, conference travel management, tracking access control data etc., in addition to the existing software facilities.
Administration	? Administration For administrative purposes the software COWAA (Computerized Working in Administrative Areas) is used by our institute for smooth administrative management. It helps in processes related to Administration, Purchase Stores, Accounts, Finance, Payroll. One of the special features of this software is

		that MIS reports also readily available. Recruitment section utilizes online Application Submission for enabling job opportunities like appointment of people in Short-term Contract Basis. Also appointments of SRFs/JRFs for projects of the institute is done in a similar way. iCampus is a software used in our institute for the students for academics/administrative which include programme details, course registration, faculty course allotment, attendance management, result publishing, grade sheet printing and feedback related to courses. Material Management System is used to manage activities related to Stores, Construction and Maintenance Division.
	Finance and Accounts	? Finance and Accounts The following software are used in IIST for finance and accounting: Tally ERP 9 – This is a standard accounting software used in the Accounts Department for recording day to day transactions and for generation of all related MIS reports. COWAA – This is an ERP software developed in-house (ISRO) which enables processing of indents, accounting and budgetary control. WINMAN – This is a standard software used for processing and filing of TDS / TCS returns. Public Financial Management System (PFMS) – This is a web-based online software application developed and implemented by the Controller General of Accounts (CGA), Department of Expenditure, Ministry of Finance, and Government of India. PFMS provides a real time, reliable and meaningful management information system and an effective decision support system, as part of the Digital India initiative of Government of India. GEM – Government e Marketplace (GeM) is an online platform for public procurement in India. GeM is a contactless, paperless and cashless online marketplace.
	Student Admission and Support	We have dedicated software for managing Admission procedures related to UG, PG, Ph.D., and Post Doc programs that help in Online Counselling, registration. In addition, we also have software to manage absorption of our students to ISRO through counselling. We have also have dedicated academic portal for the students to have quick access to academic and alumni

	activities. iCampus – Software for attendance marking, mark entry, grade setting, result verification and publishing Academic Portal – Software for student view of academic activities like course registration, attendance, results.
Examination	For examination purpose, we have an exclusive software i-campus in our intranet. The marks scored by students in quiz-1, quiz 2, internals, and end-semester exams are entered in icampus software. Examination are managed by the iCampus Software developed in house for attendance marking, mark entry, grade setting, result verification and publishing of results.

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
No Data Entered/Not Applicable !!!				
View File				

6.3.2 – Number of professional development / administrative training programmes organized by the University 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)
No Data Entered/Not Applicable !!!						
View File						

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
No Data Entered/Not Applicable !!!				
View File				

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

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
3	1	0	0

6.3.5 – Welfare schemes for		
Teaching	Non-teaching	Students
There are welfare schemes for medical as per the government regulations. Employee including their family is covered under the Contributory Health Services Scheme. Different welfare schemes like VAST, VISWAS, SAFE, Group Insurance, Leave Travel Concession (LTC), Professional Update allowance are available for teaching members. SAFE (Scheme for Assistance to Families in Exigency) is Vikram A. Sarabhai Trust(VAST) as a welfare measure for the DOS/ISRO community. SAFE is a voluntary, contributory and multi-purpose welfare scheme to provide Financial Assistance in Exigency (FAE) to the beneficiaries. The beneficiaries are the employees (The Contributor) who opt to join this scheme and optionally, their family members (Spouse and Children). The exigencies include: The monthly contribution paid by the employee depends on the type of the scheme they opt for. The exigencies covered include death/permanent disability of contributor, Loss of eyes/limbs of contributor, Loss of salary due to prolonged sickness of contributor, Serious sickness of contributor or family members, Prolonged hospitalization of contributor or family members, Permanent disability of family	There are welfare schemes for medical as per the government regulations. Employees including their family is covered under the Contributory Health Services Scheme. Different welfare schemes like VAST, VISWAS, SAFE, Group Insurance, Leave Travel Concession (LTC), Technical Update allowance are available for non-teaching members.	Medical Insurance, Book grant and Assistantship as per IIST/DOS norms are available for all eligible students.

members, Loss of eyes/limbs of family members. Contributors are also eligible to receive Residual Bonus at the time of superannuation or withdrawal from SAFE. VAST Insurance Scheme Whenever Accident Strikes a voluntary and contributory welfare scheme to provide risk coverage for Death due to Accidents - anytime and anywhere in the world. The scope of coverage, generally includes death due to road / rail / air accidents, fire accidents, civil commotion, riots, natural calamities, accidents in work spots, etc., and excludes death due to intentional self-inflicted injury, suicide, insanity and natural deaths due to any disease / ailments. The scope of coverage, however, will be as prescribed by the terms and conditions of Group Personal Accident Policy taken with a reputed insurance company to cover to risk of Death due to Accident.

6.4 – Financial Management and Resource Mobilization

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

IIST conducts statutory financial audit by CAG empanelled Chartered Accountants. Apart from the financial audit, IIST is having regular audit from CAG and also internal audit conducted by the Department of Space.

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
Nil	0	Nil
No file uploaded.		

6.4.3 – Total corpus fund generated

0

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	No	Nill	No	Nill
Administrative	Yes	CAG (finance related)	Yes	DOS (Dept. OF Space)Internal Auditors, CA.

6.5.2 – What efforts are made by the University to promote autonomy in the affiliated/constituent colleges? (if applicable)

No. IIST doesnt have any affiliated/constituent colleges.

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

The institute is fully residential and all academic and administrative matters pertaining to the functioning of the institute are communicated to parents from time to time. This ensures association with parents and teachers of the institute.

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

1. An awareness programme on Swachh Bharat initiative was organised by Smt.Srividya Parthasarathy, to spread awareness about personal hygiene and cleanliness for the housekeeping staff. The session included awareness about safety in the workplace, benefits of hygiene and cleanliness viz. disease-free environment, asset maintenance, reputation of the Institute etc. Importance of personal hygiene and disease prevention through infection from bacteria or viruses were also discussed 2. Talk on "Feminine hygiene" was delivered by Dr. K G Sreejalekshmi, Associate Professor, Department of Chemistry to cleaning support staff of our institute on 13.02.19 as a part of Swachhta Pakhwada February 2019. 3. Talk on "Waste Management - Current Scenario and Challenges ahead" was delivered by Dr. V Ravi, Associate Professor, Department of Humanities, to faculty and support staff of our institute on 18.02.2019 as part of Swachhta Pakhwada February 2019.

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

1. E-lectures of NPTEL were made accessible to all. 2. Swayam courses were made part of main B.Tech courses. 3. Student were allowed to do internships/projects outside the country at no cost to the institute.

6.5.6 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	Yes
b)Participation in NIRF	Yes
c)ISO certification	No
d)NBA or any other quality audit	No

6.5.7 – 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	Nil	Nill	Nill	Nill	Nill
2019	N	Nill	Nill	Nill	Nill

No file uploaded.

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 Dr. Lalithambika V. R, Director, Human in Space Programme, ISRO Padma Shri Awardee Smt. Lakshmikutty Amma	20/03/2019	20/03/2019	150	30

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
Construction of Water Treatment Plant Initiated

7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Physical facilities	Yes	11
Provision for lift	Yes	11
Ramp/Rails	Yes	11
Braille Software/facilities	Yes	0
Rest Rooms	Yes	11
Scribes for examination	Yes	0
Special skill development for differently abled students	Yes	11
Any other similar facility	No	0

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
No Data Entered/Not Applicable !!!							
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)
Handbook	01/07/2013	A handbook which has all rules, regulations, code of conduct, and details of academic programmes are given to the students at the time of counselling. The same is published in IIST website also

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
No Data Entered/Not Applicable !!!			
View File			

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

7.1.7 Initiatives taken by the institution to make the campus eco-friendly (at least five) • Canteen and cleaning drive was conducted on 4th February 2019 as part of Swachhta Pakhwada February 2019. Canteen cleaning was conducted wherein interior and outdoor areas of canteen were given a new look by the canteen staff. • To increase awareness in IIST about the problems associated with the environment such as open dumping of solid wastes and about healthy practices, posters were made by the students of IIST. • Swachh Bharat Implementation Committee and Sports Committee organized a campus cleaning programme on Mahatma Gandhis birth day i.e 2nd October 2018. • A talk on the topic 'Waste Management – Current Scenario and Challenges ahead' was delivered by Dr. V Ravi, Associate Professor, Department of Humanities, IIST on 13th February, 2019 • Planting saplings. • Eco Club of IIST Observed Earth Hour and undertook several projects which include Statistical Estimation of resources, Bio Gas Plant, classes for cleaning staff, awareness classes for the students of orphanages, frequent monitoring of garbage dump and waste segregation.

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

7.2 Best Practices Describe at least two institutional best practices Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link Best Practice – 1 1. Title of the practice: Scientific research activities using ISRO satellite data 2. The context that required the initiation of the practice: Satellite observations from ISRO has been of immense benefit to weather and climate studies. Using satellite observations hazardous weather events such as Tropical Cyclone and thunderstorms can be studied and forecasted with accuracy. Satellite sensors are continually evolving to provide ever greater imaging capabilities, and researchers continue to develop advanced techniques to identify hazards in satellite imagery. Furthermore, Satellite observations are utilized to improve the initial conditions of the weather models to produce better quality forecast. ISRO's Orbiter missions such as Chandrayaan 1 2 to the Moon and Mangalyaan to Mars have provided an enormous quantity of scientific data to study the origin and evolution of both the planetary bodies. The high-resolution context images from the mission payloads enable the investigation of topography as well as surface morphology. The detection of molecular water signatures on lunar poles and endogenic water linked to primary minerals using Chandrayaan-1and 2 data were milestones in lunar science and set the stage for the next-generation exploration of the Moon. Identification of channels,

glaciers and/or other hydrous deposits on the surface of Mars has been made possible with a combination of topographic, panchromatic, and hyperspectral data from the Mars Orbiter Mission. Advanced data from Chandrayaan-2 payloads, particularly highest-resolution surface images and hyperspectral data at a more comprehensive wavelength range, enhance data utilization for understanding the lunar interior composition and geological history. 3. Objectives of the practice (50 – 60 words) : A sufficiently accurate knowledge of the current state of the atmosphere and a sufficiently accurate knowledge of the laws of nature governing the development of the weather are essential and critical for the prediction of the weather. Hence, the development and improving the network of the meteorological satellite observations are considered as important as the development of weather prediction models. Meteorological satellites provide the atmospheric observations that are vast in coverage, narrowly spaced, representative and more frequent compared to observations from conventional ground based network. It is therefore not surprising that the meteorological satellites have been at the forefront of earth observation. The department currently utilizes satellite observations from ISRO to learn and quantify the improvements in the weather forecasts by incorporating the observations to models via data assimilation. The geological evolution of a planetary body is generally understood from the studies of its compositional diversity and timing of formation of various surface features. The Chandrayaan-2 hyperspectral (at wavelengths ranging from 0.8-5 micrometer) data, covering the absorption regions unique to molecular water or hydroxyl ion, and radar data will provide a better understanding of the occurrence and distribution of diverse crustal rock types and indigenous water signatures on the lunar surface. 4. The Practice (250 – 300 words): Mathematical models are being developed to incorporate the satellite observations to numerical weather prediction models. We also use orbital remote sensing data to generate morphological and spectral maps of the lunar and Martian surfaces. 5. Obstacles faced if any and strategies adopted to overcome them: The scarcity of computational resources is the major obstacle while working with the satellite observations. Collaborations with national level institutes having high performance computational systems has provided us sufficient resources. 6. Impact of the practice: Providing insights into many ambiguities of the Moon (particularly, the occurrence of molecular water, diversity in crustal rocks, and interior composition) and Mars. 7. Resources required: Extensive computational resources Best Practice – 2 1. Title of the practice: Education Beyond the Classrooms – Group projects in IIST 2. The context that required the initiation of the practice (100 - 120 words): Midterm projects initiative for Education Beyond the Classrooms at Dept. of Avionics, IIST Trivandrum includes all those things which are deliberately intended to enhance the educational experience. In this we aim to bring in live projects for various courses where a students gets a hand-on experience on important academic topics. 3. Objectives of the practice (50 - 60 words) • To identify appropriate strategies for teaching and learning outside the classroom • To enhance the educational experience by indulging in innovative and interesting new approaches of building knowledge 4. The Practice (250 - 300 words): At Dept. of Avionics in the education beyond the classroom is achieved through the following ways: • Professional mentoring by faculty • Outbound Learning Programs through various IEEE seminars and guest • Lectures • Internships - Corporate Extension and Community Outreach • Engaging students in live research projects • DISCUSSION, PRESENTATIONS ETC. 5. Obstacles faced if any and strategies adopted to overcome them: • Familiarity with some danced topics is challenge however with one to one mentoring we often overcome this change • We also have collaborative learning environment where a group of student work together for a goal and that was always found to be very useful in enhancing learning. 6. Impact of the practice (100 - 120 words): • Builds the confidence of the students and facilitates smooth transition into the industry • Encourages and facilitates the students to pursue their passions and

make a career out of it • Sensitizes the students to the social problems around them and makes them more conscious about solving them 7. Resources required: • Basic labs and advanced research facilities are needed • High performance computing • Access to research journals and conference proceedings

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

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

The programmes that the Institute is offering in the undergraduate level are Aerospace Engineering, Electronics and Communications Engineering (Avionics) and a dual degree program in Engineering Physics, 15 MTech/Master of Science across 6 departments and doctoral programs. The institute has seven departments to cater to the curriculum – Aerospace, Avionics, Chemistry, Earth and Space Sciences, Humanities, Mathematics and Physics. IIST follows a unique model wherein the education (tuition, boarding, lodging, books) of B Tech students achieving specified GPA are provided Assistance ship by Department of Space. The academic programmes have been tailored to strengthen the fundamentals, experience the realities through practical work, and enhance the knowledge and understanding in the areas relevant and related to space. The academic programs are continuously reviewed by the BoS of each department once in 3 years, the doctoral committee for PhD and also by the academic council. With the institute completing 10 yrs, a peer review Committee was constituted by Dr. K. Sivan, Chairman, ISRO and Secretary DoS, to comprehensively review the academic, research and other areas of the institute. IIST, also created a draft roadmap for the next decade focussing on Basic Research for Space Sciences, Space Technology and Applications, Education, Infrastructure, Governance and Collaboration. This strategic plan identifies the means by which the institute intends to advance in the coming year and establish itself as an Institute of National importance. In the year 2018-19, IIST was ranked as 30th in the Engineering category in year 2019 among all Engineering institutions in the country by the National Institutional Ranking Framework (NIRF) set up by the Ministry of Human Resource Development (MHRD), Government of India. IIST make sure that the theoretical knowledge learnt in class rooms are supported by practical exposure. Students work in projects within IIST, in different ISRO centres and industries. It helps to impart practical training to the students to develop their knowledge and skills applicable to their career. They also participate in faculty projects, the most important among which were ARIS (Advanced Retarding potential analyser for Ionospheric Studies), Autonomous Assembly of Reconfigurable Space Telescope (AAReST), projects as part of the Human Space Flight Program (HSP), ExoWorlds etc which help them to envisage, innovate, design and develop. It also helps them to realize a project within the given time frame and helps to nurture the spirit of innovation and creativity in them. Many projects undertaken by students of the different clubs have given promising results and have been quite innovative. These projects are partially funded by the Club and thoroughly reviewed by the faculty of IIST. Few notable examples are QuadCopter design, 3D Printer, RC Plane and Ornithopter, Two Stage Water Rocket, robotics prototype building, projects on control systems development for robotics, and unmanned aerial vehicle development. The institute has included classes on Humanities and Social Sciences as core subjects in the syllabus so as to ensure that knowledge of space science and technology happen with humanitarian concern and are aware of the socio-economic realities of the society. In the 6th

Provide the weblink of the institution

8.Future Plans of Actions for Next Academic Year

The institute discussed the matter and decided to implement Government of India order to reserve 10 of seats in undergraduate and postgraduate programmes for the "Economically Weaker Section"(EWS) category from the academic year 2019-2020 onwards The institute offers postgraduate admission based on GATE score only for some programmes while other programmes had seat allotment for PG based on both GATE score and interview. Till the academic year 2018-2019, the above mentioned PG interviews were held at IIST, Thiruvananthapuram. In order to have wider cross section of PG students joining IIST from all across the country and keeping the interests of aspiring PG students in mind, the institute decided to conduct the PG interviews online (from 2019-2020 academic year onwards) with aspiring PG candidates showing up to the nearest venues in any one of the six ISRO/DoS centers at Chennai, Thiruvananthapuram, Hyderabad, Mumbai/Ahmedabad, New Delhi and Kolkata