YEARLY STATUS REPORT - 2021-2022

Part A

Data of the Institution

1.Name of the Institution	**Indian Institute of Space Science and Technology (IIST)**
• Name of the Head of the institution	**Dr Unnikrishnan Nair S**
• Designation	**Director**
• Does the institution function from its own campus?	**Yes**
• Phone no./Alternate phone no.	**04712568402**
• Mobile no	**9446550650**
• Registered e-mail	**registrar@iist.ac.in**
• Alternate e-mail address	**director@iist.ac.in**
• City/Town	**Thiruvananthapuram**
• State/UT	**Kerala**
• Pin Code	**695547**

2.Institutional status

• University	**Deemed**
• Type of Institution	**Co-education**
• Location	**Rural**

- Name of the IQAC Co-ordinator/Director **Prof. Selvaganesan**

- Phone no./Alternate phone no **04712568456**

- Mobile **9446060698**

- IQAC e-mail address **iqac@iist.ac.in**

- Alternate Email address **n_selvag@iist.ac.in**

3.Website address (Web link of the AQAR (Previous Academic Year) https://www.iist.ac.in/iqac

4.Whether Academic Calendar prepared during the year? **Yes**

- if yes, whether it is uploaded in the Institutional website Web link: https://www.iist.ac.in/academics/calendar

5.Accreditation Details

Cycle	Grade	CGPA	Year of Accreditation	Validity from	Validity to
Cycle 1	**B**	**2.87**	**2013**	**08/07/2013**	**07/07/2018**

6.Date of Establishment of IQAC **16/02/2012**

7.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**	**NA**	**00**

8.Whether composition of IQAC as per latest NAAC guidelines **Yes**

- Upload latest notification of formation of IQAC View File

9.No. of IQAC meetings held during the year **1**

- The minutes of IQAC meeting and compliance to the decisions have been uploaded on the institutional website. (Please upload, minutes of meetings and action taken report) **Yes**

- (Please upload, minutes of meetings and action taken report)   <u>View File</u>

10.Whether IQAC received funding from any of the funding agency to support its activities during the year?   No

- If yes, mention the amount   00

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

• Proposed to increase in intake of 10 PG programmes from 10 to 18, starting from the academic year 2022-23. The application for the same was submitted to AICTE by Institute. • In order to enhance research collaboration with Industries and Institutes, IQAC has encouraged the signing of more MoUs. Five MoUs were signed with L& T (March 2022), IISU (April 2022), Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST) (May 2022), HSFC (May 2022) and Danish Aerospace Company-Denmark (May 2022). • Proposed, Student Satisfaction Survey (SSS), which can be taken along with regular course feedback of students and implemented. • Instrumental in the inauguration of the Space Technology Innovation and Incubation Centre (STIIC) office complex at IIST (12-1-2022) • Proposed Curriculum Revision in line with Outcome Based Output is initiated as per the directions of IQAC.

12.Plan of action chalked out by the IQAC in the beginning of the Academic year towards Quality Enhancement and the outcome achieved by the end of the Academic year

Plan of Action	Achievements/Outcomes
Syllabus revision for B.Tech/M.Tech Programmes for Implementing it during the academic year 2022-23	Completed for B.Tech Programmes.
NAAC-IQAC webpage in IIST website	Hosted
Completion of Student Satisfaction Survey	Completed for the year, 2021-22 and planned for every year.
Signing of MoUs with premier institutions/industries across the world	L&T , IISU, SCTIMST, HSFC, NDA with Danish Aerospace Company-Denmark
Encourage & Ensure filing of patents	1 Granted and Published.
Housing of Space Technology Innovation and Incubation Centre (STIIC) complex at IIST.	STIIC was inaugurated
Enhancing of Placements	Measures are taken

13.Whether the AQAR was placed before statutory body?   Yes

- Name of the statutory body

Name	Date of meeting(s)
Board of Management Meeting (25th)	25/07/2023

14.Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to Assess the functioning?   No

15.Whether institutional data submitted to AISHE

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15.Whether institutional data submitted to AISHE

Year	Date of Submission
2021	16/01/2023

16.Multidisciplinary / interdisciplinary

The programmes, core and elective courses, and research offered by the seven academic departments of the Indian Institute of Space Science and Technology (IIST) span engineering, Science, and humanities disciplines and demonstrate a strong multidisciplinary and interdisciplinary nature. Overall, IIST provides a diverse and comprehensive range of programs for undergraduate, master, and doctoral students, enabling them to explore various fields related to aerospace engineering, electronics and communication, engineering physics, physics, chemistry, Mathematics, and humanities. Here's an overview of how this aspect is reflected in the curriculum of various programmes, the syllabus of courses, and the other activities of IIST.

- The B.Tech in Aerospace Engineering focuses on aerospace engineering principles, experiments, and applications, including aircraft and spacecraft design, aerodynamics, propulsion, robotics, and more. The programme is an inherently multidisciplinary field that involves the application of principles from various disciplines. The students of IIST gain knowledge in the areas of *Mechanics and Structures*, where the students learn about the principles of mechanics and structural analysis, which draw from disciplines such as physics and mechanical engineering; *Aerodynamics,* where the syllabus includes the principles of fluid mechanics and the application of mathematical models, and it draws on knowledge from physics and mathematics; *Propulsion Systems* dealing the understanding of propulsion systems which requires knowledge of thermodynamics, fluid mechanics, and materials science; Materials, Manufacturing and Industrial Engineering covers the processes and precision of manufacturing.

By integrating knowledge from disciplines like physics, mathematics, mechanical engineering, electrical engineering, and computer science, the Aerospace Engineering program equips students with a multidisciplinary skill set necessary for addressing the challenges in the aerospace industry.

- B.Tech in Electronics and Communication covers the fundamentals of electronics and communication engineering, including electronic circuits, communication systems, signal processing, and related topics, VLSI, power electronics, and electrical engineering. Through this programme, students at IIST gain knowledge in the areas

Avionics and Control Systems, which deals avionics and control systems encompass the integration of electronics, electrical engineering, and computer science with aerospace applications, and students learn about flight control systems, navigation systems, and electronic communication systems. The curriculum also includes *Electronics*, where the students learn about electronic circuits, semiconductor devices, digital and analogue electronics, and microprocessors. This knowledge is essential for designing and analyzing electronic systems. The other courses are *Communication Systems* which involves understanding various communication techniques, signal processing, modulation and demodulation techniques, and transmission of data; *Electromagnetics*, where the students learn about the principles of electromagnetics, including electromagnetic wave propagation, antenna theory, and electromagnetic compatibility; *Digital Signal Processing* focuses on processing and analysis of signals using digital techniques, drawing from mathematics, computer science, and electrical engineering. The Electronics and Communication program combines electronics, electrical engineering, computer science, and mathematics knowledge to equip students with skills related to the design, analysis, and implementation of communication systems and electronic devices.

- The IIST's Aerospace Engineering and Electronics and Communication undergraduate programmes incorporate multidisciplinary aspects by integrating principles and knowledge from various fields. This interdisciplinary approach enables students to develop a holistic understanding and skill set essential to addressing the complex challenges in aerospace engineering and communication technology.

- The Dual Degree Program in Engineering Physics, later it will be branched out into 4 major post-graduate programmes at the end of the 3rd year of students, exemplifies the interdisciplinary approach by offering specializations in solid state physics, earth systems and science, astronomy, and astrophysics, and optical engineering. Students can explore multiple fields within physics, engineering, space science, and astronomy fostering interdisciplinary knowledge and research. This programme in Engineering

Physics offers a dual degree, a B.Tech at the end of 4th year and an M.Tec/Ms at the end of 5th year in Engineering Physics with specializations in the following areas:

Solid State Physics: Concentrating on the study of properties and applications of solid materials.

Earth Systems and Science: Focusing on studying Earth's systems, including geology, climate, and environmental science.

Astronomy and Astrophysics: Concentrating on the study of celestial objects, their properties, and the universe.

Optical Engineering: Covering the principles and applications of optics and photonics.

- IIST offers 14 M.Tech programmes spanning six departments, promoting multidisciplinary research and learning, as seen from the curriculum, which will be meticulously revised once in three years. The programmes offered in the six departments, such as Aerospace Engineering, Avionics, Earth Science and Systems, Physics, Chemistry, and Mathematics, and the courses offered in Humanities allow students to delve into diverse fields of study. This interdisciplinary exposure enables students to gain a broader perspective and encourages cross-disciplinary collaboration. This is reflected in their placements and admissions in higher learning education globally. Specifically, the Master of Science in Astronomy and Astrophysics bridges the fields of astronomy, astrophysics, and space science, encouraging students to explore interdisciplinary research areas within these domains and enabling them to find a placement in the space industry. The programmes are coordinated by the departments as follows:

The Department of Aerospace Engineering: Aerodynamics and Flight Mechanics, Structures and Design, Thermal and Propulsion, Control Systems.

The Department of Avionics: Digital Signal Processing, Power Electronics, RF and Microwave Engineering, VLSI, and Microsystems.

The Department of Earth Science and Systems: Earth System Science, Geoinformatics.

Physics: Astronomy and Astrophysics.

The Department of Chemistry: Materials Science and Technology.

The Department of Mathematics: Machine Learning and Computing.

- Apart from the above, IIST's emphasis on offering electives from all departments, including the Humanities, further enhances the multidisciplinary nature of the programs. Students could choose courses from different disciplines, expanding their knowledge base and encouraging interdisciplinary connections.
- IIST offers PhD programs in all disciplines, encouraging multidisciplinary research. Students pursuing a PhD can engage in advanced research in their respective fields and contribute to the scientific community. Doctoral students are encouraged to collaborate across departments, fostering interdisciplinary research and innovation.

By offering programs that span diverse areas of study, providing electives from various departments, and facilitating interdisciplinary research through PhD programs, IIST creates an environment where students can explore and contribute to multidisciplinary approaches in science, engineering, and technology. This interdisciplinary focus allows for integrating knowledge, ideas, and methodologies from different fields, leading to innovative research and problem-solving in complex real-world challenges.

17.Academic bank of credits (ABC):

Planned to initiate from the Academic year 2022-23.

18.Skill development:

Interested students at the Indian Institute of Space Science and Technology (IIST) get chances to participate in designing and developing satellites through experimental learning, through which IIST students will learn all the skills required to make satellites/payloads. The training in this area and hands-on experience and experiments make the students confident in making the payloads. IIST made history by sending two scientific payloads to space on-board PSLV C55 recently. The payloads, ARIS 201F and PiLOT101F, were put into the approximately 600 km lower earth orbit on board the POEM 2 (PSLV Experimental Orbital Module 2) platform of the PSLV C55 on 22nd April 2023. ARIS 201F is the second prototype of the Advanced Retarding-potential-analyse for

Ionospheric Studies (ARIS) project of IIST, aimed at studying the space plasmas, including planetary ionospheres and solar flares. These payloads were designed, fabricated, tested, and qualified by the professors and students of IIST with the help of various ISRO entities across Thiruvananthapuram. ARIS measured the energy and quantity of charged particles in the Earth's ionosphere. The ARIS payload is an essential tool for assessing space weather. Any fluctuations in the ionosphere of Earth indicate possible adverse effects on day-to-day life. These effects are primarily due to geomagnetic storms caused by dangerous solar activity.

19.Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course)

Faculty members are encouraged in communicating in the local language of the students wherever necessary, especially for the first-year students. In addition, all Nationally important days are being celebrated in IIST during the year 2021-22. Some of them are:

- Constitution Day was celebrated on 26th November 2021 to commemorate the adoption of the Indian Constitution.
- The birth anniversary of Dr. B. R. Ambedkar was celebrated on 30th November 2021
- Swatch Bharat Program was organized, and competitions were held to identify the best-kept rooms in IIST. All the Administrative Sections, Department Offices, Academic blocks, and hostels were inspected, and prizes were awarded to the best-kept rooms.
- Independence Day 2021 and Republic Day 2022 were celebrated in all its grandeur.
- The vibrant and joyous festival of Onam on 28th September to familiarize the culture of the land and its people and inculcate the profound spirit of oneness and equality is celebrated virtually, which is associated with Onam 2021.
- An online panel discussion on 'Women and Spaceflight: Charting the Future', is conducted by IIST alumni in connection with International Women's Day 2022, on 27th March 2022.
- Hindi Day was celebrated from 10-15, January 2022.
- Rashtriya Ekta Diwas (National Unity Day) on 31st October 2021 along with the activities of Azadi Ka Amrith Mahotsav was organized in IIST.

20.Focus on Outcome based education (OBE):Focus on Outcome based education (OBE):

IIST decided to move to Outcome Based Education (OBE) along with

revising the curriculum for every programme. The Institute
started practising (OBE) for the NBA in the UG and PG
programmes, for which the revision will be completed in the
academic year 2021-2022. The faculty members handling different
courses prepare the course outcomes (CO) for lectures at the
beginning of each semester. The prepared COs are mapped with
program outcomes (PO), program specific outcomes (PSO) and mapped
to form the articulation matrix. The department offering their
programme at their department-level meetings reviews the results.
The Course Outcome, Course Plan, Mapping between PO/CO/PSO,
Course assessment methodology, and Mapping between course
assessment and CO/PO/PSO are done simultaneously. Periodically,
the schedule of activities for practising OBE is implemented by
mapping CO with Quiz questions, conducting course exit surveys,
and course attainments. Finally, course attainments must be
computed and reviewed at the end of each semester. We will move
to accreditation of OBE once the exercise is completed for every
semester of a particular programme.

21.Distance education/online education:

IIST does not offer distance/online education

Extended Profile

1.Programme

1.1 Number of programmes offered during the year:	19

File Description	Documents
Data Template	[View File](#)

1.2 Number of departments offering academic programmes	7

2.Student

2.1 Number of students during the year	1097

File Description	Documents
Data Template	[View File](#)

2.2	**273**
Number of outgoing / final year students during the year:	

File Description	Documents
Data Template	[View File](#)

2.3	**1097**
Number of students appeared in the University examination during the year	

File Description	Documents
Data Template	[View File](#)

2.4	**00**
Number of revaluation applications during the year	

3.Academic

3.1	**240**
Number of courses in all Programmes during the year	

File Description	Documents
Data Template	[View File](#)

3.2	**101**
Number of full time teachers during the year	

File Description	Documents
Data Template	[View File](#)

3.3	**123**
Number of sanctioned posts during the year	

File Description	Documents
Data Template	[View File](#)

4.Institution

4.1	**18169**

Number of eligible applications received for admissions to all the Programmes during the year	

File Description	Documents
Data Template	View File

4.2 Number of seats earmarked for reserved category as per GOI/ State Govt. rule during the year	**161**

File Description	Documents
Data Template	View File

4.3 Total number of classrooms and seminar halls	**36**
4.4 Total number of computers in the campus for academic purpose	**867**
4.5 Total expenditure excluding salary during the year (INR in lakhs)	**5320.81**

Part B

CURRICULAR ASPECTS

1.1 - Curriculum Design and Development

1.1.1 - Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which is reflected in Programme outcomes (POs), Programme Specific Outcomes(PSOs) and Course Outcomes(COs) of the Programmes offered by the University

One of the important missions of the institute is to advance research in space science and technology. Hence the syllabus of each department is revised and updated so as to incorporate the latest research being carried out in the area. During the curriculum revision workshop, each department collects feedback & inputs from ISRO/DoS centres, other universities, researchers, and from industries. Each faculty member has the autonomy to design his/her own courses based on the inputs received from the stakeholders, subject to approval from the BoS, as well as to teach and evaluate the students on the basis of experiential learning. Emerging issues are incorporated in the curriculum with

real-life situations and theory is often linked with practice. The different research problems selected by the students address local, national, and global developmental needs. The courses offered by the Departments of Humanities, Chemistry, and Earth and Space Science ensure socially-relevant outcomes through various aspects of its curriculum like understanding the socio-economic realities of the society, imparting managerial and communication skills, ethics, and relevance of environment and conservation practice in society, critical for the country's future ecological security.

File Description	Documents
Upload relevant supporting document	[View File](#)

1.1.2 - Number of Programmes where syllabus revision was carried out during the year

6

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

1.1.3 - Total number of courses having focus on employability/ entrepreneurship/ skill development offered by the University during the year

1.1.3.1 - Number of courses having focus on employability/ entrepreneurship/ skill development during the year

75

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

1.2 - Academic Flexibility

1.2.1 - Number of new courses introduced of the total number of courses across all programs offered during the year

55

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

1.2.2 - Number of Programmes in which Choice Based Credit System (CBCS)/elective course system has been implemented during the year

6

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

1.3 - Curriculum Enrichment

1.3.1 - Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

Core/Elective Courses offered by the institute such as Introduction to Economics, Social Science and Ethics, Principles of Management, Visual Communication, Cultural Studies, Science Fiction cover several aspects related to gender, issues faced by women, children, transgender, disabled, marginalized communities, racial and sustainable development and also cover values related to personal and professional life. Environmental science and engineering is a compulsory course offered to all UG students.

The courses encourage and empower students to debate on the current issues. Projects, Field visits and Tribal studies are undertaken by students to understand the issues faced by different groups of people in the society. The institute also tries to concentrate on programmes that are of relevance to national progress and development. A conscious effort has been made to observe days of importance and thus promote ideas of national integration, secularism, scientific outlook, cosmopolitan and humanistic approach towards life. The Institute tries to inculcate in the students the concept of social responsibility and commitment towards society through its outreach programs conducted among the marginalized and disadvantaged sections of the society.

File Description	Documents
Upload relevant supporting document	**No File Uploaded**

1.3.2 - Number of value-added courses for imparting transferable and life skills offered during the year

16

File Description	Documents
Upload the data template	<u>View File</u>
Upload relevant supporting document	<u>View File</u>

1.3.3 - Total number of students enrolled in the courses under 1.3.2 above

1.3.3.1 - Number of students enrolled in value-added courses imparting transferable and life skills offered during the year

935

File Description	Documents
Upload the data template	<u>View File</u>
Upload relevant supporting document	<u>View File</u>

1.3.4 - Number of students undertaking field projects / research projects / internships during the year

264

File Description	Documents
Upload the data template	<u>View File</u>
Upload relevant supporting document	<u>View File</u>

1.4 - Feedback System

1.4.1 - Structured feedback for design and review of syllabus – semester wise / is received from Students Teachers Employers Alumni

- **Any 1 of the above**

File Description	Documents
Upload relevant supporting document	[View File](#)

1.4.2 - Feedback processes of the institution may be classified as follows

- **Feedback collected, analysed and action has been taken**

File Description	Documents
Upload relevant supporting document	[View File](#)

TEACHING-LEARNING AND EVALUATION

2.1 - Student Enrollment and Profile

2.1.1 - Demand Ratio

2.1.1.1 - Number of seats available during the year

337

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

2.1.2 - Total number of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc.) as per applicable reservation policy during the year (Excluding Supernumerary Seats)

2.1.2.1 - Number of actual students admitted from the reserved categories during the year

127

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

2.2 - Catering to Student Diversity

2.2.1 - The institution assesses the learning levels of the studentsand organises special Programmes for advanced learners and slow learners

IIST has students from different parts of India, with different economic and social backgrounds. The pedagogy adopted by the faculty members is innovative so as to enable the students from

all backgrounds to follow the classes well. Based on performance, the departments arrange remedial courses, tutorials and also communicate to the respective mentors. Peer group learning and buddy mentoring systems are also encouraged. Slow learners are provided with personal support and the institute counsellor will also provide necessary guidance.The Class Committeemeets(with students representives and course teachers)twice a semester to assess the progressand suggest corrective measures.

Students who fail in semester examinations have the option of appearing in a supplementary examination.The Department of Humanities equips students with communication skills, where separate modules are prepared for different levels of learners.

Advanced learners, based on their CGPA, are permitted to audit up to two courses during the entire duration of their UG programme. They are motivated to present and publish their research carried during the program. The toppers of B.Tech programs are provided an opportunity to pursue Master programme in CalTech sponsored by DoS and also undergo Internship during sixth semester in CalTech(USA) and ANU(Australia).

File Description	Documents
Upload relevant supporting document	[View File](#)
Link For Additional Information	Nil

2.2.2 - Student - Full time teacher ratio during the year

Number of Students	Number of Teachers
818	101

File Description	Documents
Upload relevant supporting document	[View File](#)

2.3 - Teaching- Learning Process

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

Laboratory courses areoffered to complement the theory courses. Some courses are taggedwith course projects, and certain long term

projects, such as satellite development, ground station andinstrumentation. While students are encouraged to take up internships during their semester breaks, a credited summer internship is mandatory for all UG students at the end of their 6th semester. Students are required to give seminars, make presentations and are encouraged to lead discussions in graduate courses, helping them to enhance their critical thinking skills. In keeping with the larger goals of the Department of Space, several students actively participate in projects on satellite payload development, launch vehicles and related subsystems in the different ISRO/DoS centres. This helps them to get accustomed with the ISRO culture and with the latest research happening there. Students, as part of the social science and economics papers have compulsory field visits which helps them to understand the real life situation of people in society. The different clubs in IIST provide a forum for students to discuss ideas and research in a critical yet constructive manner. PhD students are often encouraged to take classes for the undergraduate courses.

File Description	Documents
Upload relevant supporting document	[View File](#)

2.3.2 - Teachers use ICT enabled tools including online resources for effective teaching and learning processes during the year

The institute is equipped with 4 smart class rooms with interactive screens, while all 35 class rooms in the institute have multimedia support and internet connectivity. In addition, students and teachers have easy access to laptops/desktops, printers, e-mail, etc. Institute also has an active subscription to Microsoft's Office-365 that covers all students, research scholars and faculty members. Teachers use scientific computing and visualization software such as Python, Matlab, Mathematica, Maple, Synopsis, CAMSOL, etc. Multimedia Computing labs are also available. Use of pod casts; online platforms; web-based libraries and online statistical data sets are also promoted.

During the online semesters, teachers used Microsoft Teams conferencing platforms to deliver online lectures and to conduct tutorials. Lectures delivered were recorded and the videosmade available to the students . These were useful for those students without high-bandwidth internet connectivity when they attended classes from their home. Lab courses were reconfigured and were managed with virtual lab simulations and recorded videos. The courses were managed through moodle based customized platform,

which provides study materials, assignments, class testsand
evaluation ofstudents' progress. Even during the pandemic period
there was nodelay in conducting lectures, exams and declarations
of results.

File Description	Documents
Upload relevant supporting document	View File

2.3.3 - Ratio of students to mentor for academic and other related issues during the year

2.3.3.1 - Number of mentors

54

File Description	Documents
Upload relevant supporting document	View File

2.4 - Teacher Profile and Quality

2.4.1 - Total Number of full time teachers against sanctioned posts during the year

101

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

2.4.2 - Total Number of full time teachers withPh.D./D.M/M.Ch./D.N.B Superspeciality/D.Sc./D'Lit. during the year

101

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

2.4.3 - Total teaching experience of full time teachers in the same institution during the year

2.4.3.1 - Total experience of full-time teachers

11323

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

2.4.4 - Total number of full time teachers who received awards, recognition, fellowships at State, National, International level from Government/Govt. recognised bodies during the year

35

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

2.5 - Evaluation Process and Reforms

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

20

2.5.1.1 - Number of days from the date of last semester-end/ year- end examination till the declaration of results year wise during the year

20

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

2.5.2 - Total number of student complaints/grievances about evaluation against total number appeared in the examinations during the year

0

File Description	Documents
Upload relevant supporting document	View File

2.5.3 - IT integration and reforms in the examination procedures and processes (continuous internal assessment and end-semester assessment) have brought in considerable improvement in examination management system of the institution

The institute uses a web based application "iCampus" for Registration, recording continuous assessment, exam management, attendance management and result processing. Faculty members set their evaluation pattern, grade setting in the iCampusResults are also published online through iCampus. Students have access to their internal marks and end semester results through the iCampus student's portal. As part of the Academic response to Covid-19 pandemic, all courses, internals and exams were delivered online and managed through MOODLE Lecture Management System. Each moodle page hasthe complete interface of a course page, course related material, tutorials and assignments submitted. Course projects, Internships and Final Year B.Tech Projects were successfully managed through hybrid online/offline mode. IIST also has adopted the online mode for pre synopsis presentation and thesis submission for PhD students. The viva-voce examination was also carried out online using the Teams platform.

File Description	Documents
Upload relevant supporting document	[View File](#)

2.5.4 - Status of automation of Examination division along with approved Examination Manual

A. 100% automation of entire division & implementation of Examination Management System (EMS)

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

2.6 - Student Performance and Learning Outcomes

2.6.1 - The institution has stated learning outcomes (generic and programme specific)/graduate attributes which are integrated into the assessment process and widely publicized through the website and other documents

The institute has defined Programme outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the Programmes offered by departments from the academic year 2021-22, for the two UG programmes BTech (AE) and BTech (ECE). Currently, outcome based education is being initiated and followed in BTech (AE) and BTech (ECE) and related MTech programmes. The learning outcomes of individual courses of these programmes are integrated into the assessment process via Quiz 1&2, internals which include

assignments, quizzes, seminars, projects and finally the end semester exams. All course evaluations for BTech are based on a combination of the above evaluation approaches, which give the student a fair opportunity for evaluation. Additionally, the students are required to carry out internship and research projects which are couple of months in duration. Each project is done under the supervision of a Faculty member. Committees of faculty members evaluate all projects in terms of reports and seminars. All these are uploaded in the iCampus portal in the website of IIST

File Description	Documents
Upload relevant supporting document	View File

2.6.2 - Attainment of Programme outcomes, Programme specific outcomes and course outcomes are evaluated by the institution during the year

The institute has defined Programme outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the Programmes offered by departments from the academic year 2021-22, for the two UG programmes BTech (AE) and BTech (ECE).Currently, outcome based education is being initiated and followed in BTech (AE) and BTech (ECE) and related MTech programmes. For the BTech, the courses on basic subjects are assessed via continuous internal assessments. The lab experiments are continuously assessed by the lab instructor and ensure the attainment of outcome as envisaged and framed for the lab course through lab report and viva. In addtion to this, the students design and conduct their own experiments and present the results with analysis. The project work carried out under the supervision of a faculty member is evaluated in terms of a written report and oral presentation by the committee set up by the Subject Board. At the end of each semester, the department evaluates Attainment of Programme outcomes, Programme specific outcomes and course outcomes of each course. The PhD students, after completing the coursework have to undertake a comprehensive exam for completing the PhD registration The PhD student's performance is evaluated through annual presentations to the doctoral committee at the end of every academic year.

File Description	Documents
Upload relevant supporting document	View File

2.6.3 - Number of students passed during the year

2.6.3.1 - Total number of final year students who passed the university examination during the year

236

File Description	Documents
Upload the data template	[View File]()
Upload relevant supporting document	[View File]()

2.7 - Student Satisfaction Survey

2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design its own questionnaire) (results and details need to be provided as a web link)

https://events.iist.ac.in//OSFB/

RESEARCH, INNOVATIONS AND EXTENSION

3.1 - Promotion of Research and Facilities

3.1.1 - The institution Research facilities are frequently updated and there is well defined policy for promotion of research which is uploaded on the institutional website and implemented

The institute has set up state-of-the-art facilities in all departments to support its research activities. The research facilities are frequently augmented with funding from DoS and extramural research projects. The research policy of the institute is framed so as to encourage faculty members to take up fundamental as well as applied research to benefit the society. Research Council (RC) chaired by Dean (R & D) promotes and nurtures research activities, and oversees progress and academic matters of the research scholars. An advanced Space Research Group(ASRG) headed by Chief Technology Officer has been established for all collaborative research activities of IIST with ISRO. An empowered overseeing committee comprising members from all the research centres of ISRO is the apex body which realises the coordination and implementation of the projects in the concerned centres. IIST also ensures protection of intellectual property created by its stakeholders. Towards this IPR cell is established to fulfil Institute's commitment to endorse academic freedom and provide a conducive environment for research, innovation and advancement. The research culture at IIST has enabled the generation of skilled manpower in cutting edge research fields specifically in Space Science and Technology.

File Description	Documents
Upload relevant supporting document	View File

3.1.2 - The institution provides seed money to its teachers for research (amount INR in Lakhs)

`00`

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.1.3 - Number of teachers receiving national/ international fellowship/financial support by various agencies for advanced studies/ research during the year

`30`

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.1.4 - Number of JRFs, SRFs, Post-Doctoral Fellows, Research Associates and other research fellows enrolled in the institution during the year

`127`

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.1.5 - Institution has the following facilities to support research Central Instrumentation Centre Animal House/Green House Museum Media laboratory/Studios Business Lab Research/Statistical Databases Moot court Theatre Art Gallery

`A. Any 4 or more of the above`

File Description	Documents
Upload relevant supporting document	View File

3.1.6 - Number of departments with UGC-SAP, CAS, DST-FIST, DBT, ICSSR and other recognitions by national and international agencies during the year

1

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.2 - Resource Mobilization for Research

3.2.1 - Extramural funding for Research (Grants sponsored by the non-government sources such as industry, corporate houses, international bodies for research projects) endowments, Chairs in the University during the year (INR in Lakhs)

1

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.2.2 - Grants for research projects sponsored by the government agencies during the year (INR in Lakhs)

430.55

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.2.3 - Number of research projects per teacher funded by government and non-government agencies during the year

76

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.3 - Innovation Ecosystem

3.3.1 - Institution has created an eco-system for innovations including Incubation centre and other initiatives for creation and transfer of knowledge

With a mission to foster the spirit of innovation and mould successful entrepreneurs, IIST has established a Space Technology Innovation and Incubation Centre(STIIC) in the campus. STIIC promotes (i) Innovation and entrepreneurship by converting and translating technology ideas (ii) transitions of results in various disciplines of science and engineering into products, processes and services for commercial exploitation (ii) integrating teaching, learning, research and innovation with real world needs and (iii) efforts to accelerate our nation's ability to innovate and lead a knowledge driven economy for the larger benefit of humanity.

To protect the intellectual property of the stakeholders, IIST has established an IPR cell. With well-defined policies and procedures, the cell guides and processes the applications for obtaining IPR protection such as patents and copyrights.

STIIC provides the incubatees, physical, technical and networking support and services to assist product innovations and development. Currently five companies are incubated with STIIC, viz; Vashishtha Research Pvt. Ltd., SPACETIME 4D printing solutions LLP, BhuhPramaan PVT Ltd., InterCosmos Space Exploration Technologies Pvt. Ltd and Specrule Scientific Pvt Ltd. These companies work in diverse fields from robotics assisted NDT, custom built 3D printers, geospatial technologies, novel propellants to the development of laser diagnostic tools.

File Description	Documents
Upload relevant supporting document	View File

3.3.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year

38

3.3.2.1 - Total number of workshops/seminars conducted on Research methodology, Intellectual Property Rights (IPR), entrepreneurship, skill development year wise during the year

38

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.3.3 - Number of awards / recognitions received for research/innovations by the institution/teachers/research scholars/students during the year

3.3.3.1 - Total number of awards / recognitions received for research/innovations won by institution/teachers/research scholars/students year wise during the year

35

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.4 - Research Publications and Awards

3.4.1 - The institution ensures implementation of its stated Code of Ethics for research

3.4.1.1 - The institution has a stated Code of Ethics for research and the implementation of which is ensured through the following   A. All of the above

1. Inclusion of research ethics in the research methodology course work
2. Presence of institutional Ethics committees (Animal, chemical, bio-ethics etc)
3. Plagiarism check
4. Research Advisory Committee

File Description	Documents
Upload relevant supporting document	View File

3.4.2 - The institution provides incentives to   D. Any 1 of the above

teachers who receive state, national and international recognitions/awards Commendation and monetary incentive at a University function Commendation and medal at a University function Certificate of honor Announcement in the Newsletter / website

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.4.3 - Number of Patents published/awarded during the year

3.4.3.1 - Total number of Patents published/awarded year wise during the year

`1`

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.4.4 - Number of Ph.D's awarded per teacher during the year

3.4.4.1 - How many Ph.D's are awarded during the year

`46`

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.4.5 - Number of research papers per teacher in the Journals notified on UGC website during the year

`227`

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.4.6 - Number of books and chapters in edited volumes published per teacher during the year

3.4.6.1 - Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings during the year

116

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.4.7 - E-content is developed by teachers For e-PG-Pathshala For CEC (Under Graduate) For SWAYAM For other MOOCs platform For NPTEL/NMEICT/any other Government Initiatives For Institutional LMS   **D. Any 2 of the above**

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.4.8 - Bibliometrics of the publications during the year based on average Citation Index in Scopus/ Web of Science/PubMed

Scopus	Web of Science
Nil	**2.34**

File Description	Documents
Any additional information	[View File](#)
Bibliometrics of the publications during the year	[View File](#)

3.4.9 - Bibliometrics of the publications during the year based on Scopus/ Web of Science – h-Index of the University

Scopus	Web of Science
NA	**13**

File Description	Documents
Bibliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	View File
Any additional information	View File

3.5 - Consultancy

3.5.1 - Institution has a policy on consultancy including revenue sharing between the institution and the individual and encourages its faculty to undertake consultancy

Policy preparation is in progress

File Description	Documents
Upload relevant supporting document	View File

3.5.2 - Revenue generated from consultancy and corporate training during the year (INR in Lakhs)

3.5.2.1 - Total amount generated from consultancy and corporate training during the year (INR in lakhs)

0

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.6 - Extension Activities

3.6.1 - Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the year

Nirmaan, the social outreach club of IIST is manned by the department of Humanities. It provided online classes on Space Science, Technology, Values and Career Guidance to the students of an NGO - KAP during the Jan-Mar 2022 session. Masks and sanitizers were distributed to the students.

Dhwani, a program to audio record the text books was also done to help the visually challenged students of Jagathy Blind School.

Faculty members have delivered quite a good number of talks in the

form of keynote addresses and had handled plenary sessions for conferences/ workshops/ seminars/ webinars and FDPs.

Contributed as motivational speakers in various forums at schools, colleges and universities.

Actively engaged in the print, visual and social media panel discussions on international and socioeconomic and cultural topics.

Conducted various outreach/training programmes to school and college students such as Geoconnect, Astronomy School, STORM etc. Also contribute actively to various outreach activities for school/ college students initiated by Student Activity Board of IIST.

File Description	Documents
Upload relevant supporting document	[View File](#)

3.6.2 - Number of awards received by the Institution, its teachers and students from Government /Government recognised bodies in recognition of the extension activities carried out during the year

3.6.2.1 - Total number of awards and recognition received for extension activities from Government / Government recognised bodies during the year

00

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.6.3 - Number of extension and outreach programs conducted by the institution including those through NSS/NCC/Red cross/YRC during the year(including Government initiated programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. and those organised in collaboration with industry, community and NGOs)

13

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.6.4 - Total number of students participating in extension activities listed at 3.6.3 above during the year

565

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.7 - Collaboration

3.7.1 - Number of collaborative activities with other institutions/ research establishment/industry for research and academic development of faculty and students during the year

3.7.1.1 - Total number of Collaborative activities with other institutions/ research establishment/industry for research and academic development of faculty and students during the year

38

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.7.2 - Number of functional MoUs with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the year

12

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

INFRASTRUCTURE AND LEARNING RESOURCES

4.1 - Physical Facilities

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

IIST offers 2 undergraduate, 1 dual-degree, 15 masters, doctoral

and post-doctoral programmes, hosted in Aerospace, Avionics, Interdisciplinary, and Science blocks. There are 30 ITC enabled classrooms, 3 seminar-halls, 2 council rooms, and a conference hall. Four classrooms and four 'Swayamprabha' halls are air conditioned.

The average seating capacity of each classroom is sixty, and it is equipped with desks, chairs, writing board, and public address system. Every day, a wellness team maintains the cleanliness of all classrooms. Hands-on experience for students is given in theory, and instructional laboratory courses.

Hundred instructional/research labs including high-end equipment are spread across the seven academic departments. Trained lab-staffs upkeep each lab/ equipment. IIST's Multi-Disciplinary Computing Centre (MCC) has 25 teraflops, 40 workstations, GPU Servers, and 100 TB Storage. MCC caters to the entire institute's scientific computing.

State-of-the-art laboratories such as Manufacturing Process Lab with CNC machines, MEMS Lab, Language Lab, Material Characterisation Lab, Audio-Visual Lab for multimedia feedback, Adaptive Optics Lab, Electric Propulsion Lab, Machine Learning Lab, ESS lab, effectively support the student's project and research-related activities. Small satellite lab (SSPACE), an independent ground station to communicate with IIST, ISRO and other satellites are recent additions and are unique to IIST.

File Description	Documents
Upload relevant supporting document	[View File](#)

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

Physical and mental fitness of each student studying in IIST is the highest priority of the institute.

The Institute has the following facilities for both outdoor and indoor games.

- Open ground for football, and cricket – 110 sq.m.

- An outdoor basketball court, volleyball court, and a net bowling facility for cricket.

- Indoor recreational facilities like unisex Gymnasium (236 sq.m), Badminton (545 sq.m.) and Squash courts(85 sq.m.) are housed in the Student Activities Center (SAC).

- In addition, SAC has a full fledged ITC enabled Multipurpose Hall of capacity 400.

- A recreational hall with a built area of 315 sq.m. which houses games such as chess, table tennis, billiards board, and carrom. In addition, all academic blocks have Table tennis and badminton courts.

- The SAC has an open-air auditorium which can accommodate more than 850 people and is used to host cultural activities, yoga, and Dhanak, the cultural fest of the Institute.

- The Institute also has a dedicated music club. Various musical instruments such as keyboard, guitars, violins, drums, and flutes, are provided by the Institute for general use.

File Description	Documents
Upload relevant supporting document	[View File](#)

4.1.3 - Availability of general campus facilities and overall ambience

IIST has a lush green, vibrant, campus at Valiamala hills. 800 students stays across 11 Hostels (Men=9, Women=2). All hostels have wi-fi (high-bandwidth), reading rooms, TV, drinking water, DG power backup. Laundry Huts are available independently for boys and girls. Residential students mess capacity is 420. Others dine at Staff's mess (70 seats). A tidy kitchen with modern equipment serves hygienic food. Medical bay with two Doctors and four Nurses provides basic health-care and counselling. For specialized treatment, students are referred to outside hospitals (Insurance). A fully-equipped ambulance serves at emergencies.

The counselling service help students make the best of their learning environment and achieve their academic and personal goals. IIST Library facilitates access to accurate and authoritative information from print and electronic resources. Reprographic section helps students in printing, photocopy as well

as binding of study materials.

An incinerator is available for waste management. Union Bank of India's branch and ATM is available. A cafeteria (private) operates on the campus till midnight. Two artificial ponds harvest rain water. The campus is differently-abled friendly.

Campus security is entrusted to CISF personnel and home-guards. 141 cameras are in-operation for video- surveillance of IIST.

File Description	Documents
Upload relevant supporting document	[View File](#)

4.1.4 - Total expenditure excluding salary for infrastructure augmentation during the year (INR in Lakhs)

1051.94

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

4.2 - Library as a Learning Resource

4.2.1 - Library is automated using Integrated Library Management System (ILMS) and has digitisation facility

Library was automated since its inception in 2007 using NewGenLib software. Later, migrated to "Koha" – an open source ILMS. Presently, library uses Koha V.20.11.06.000. Automation undertaken in a full-fledged manner with all functional modules. All library operations, such as acquisition, cataloguing, periodical control, circulation, administration etc., are automated with OPAC facility for users to search and suggest books.

Library provides access to digital content through the intranet and library portal. In addition, IIST Virtual Library (IVL) facilitates remote access to subscribed e-resources from anywhere at any time. Three multi-functional production printing cum scanner machines (one black & white and two colours) are available to meet the digitisation requirements. In addition, a tabletop scanner is also available for users to scan their materials.

The Graphic Design Facility helps in making various digital

documents such as Newsletter, Annual Report, Conference Proceedings etc. Library hosts the full text of PhD theses and digital copies of conference papers/posters by faculty/students on the institute website. Library archives digital photographs of various events at the institute. It manages the social media pages of the institute by uploading and updating digital content of various events and programmes of the institute.

File Description	Documents
Upload relevant supporting document	View File

4.2.2 - Institution has subscription for e-Library resources Library has regular subscription for the following: e – journals e-books e-ShodhSindhu Shodhganga Databases

A. Any 4 or all of the above

File Description	Documents
Upload relevant supporting document	View File

4.2.3 - Annual expenditure for purchase of books/ e-books and subscription to journals/e-journals during the year (INR in Lakhs)

260.07

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

4.2.4 - Number of usage of library by teachers and students per day (foot falls and login data for online access)

344

File Description	Documents
Upload relevant supporting document	View File

4.3 - IT Infrastructure

4.3.1 - Number of classrooms and seminar halls with ICT - enabled facilities such as LCD, smart board, Wi-Fi/LAN, audio video recording facilities during the year

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

4.3.2 - Institution has an IT policy, makes appropriate budgetary provision and updates its IT facilities including Wi-Fi facility

Computer Services Group operates and maintains the information technology(IT) infrastructure. The institute enabled privileged intranet/ internet access to all IISTians through WiFi and Ethernet (1 GBPS+100 MBPS). All digital resources such as Web-portals, attendance-grading-feedback (ICAMPUS), OPAC (library portal), webmail, online food booking, leave application, UG/PG admission, thesis submission/ evaluation portal, E-procurement, TEAMS meeting, digital payment, Short-messaging services, are available for authorized access. Central computing server (120 Teraflops) caters to all the academic research demands. Biometric punching provides conditional access to research facilities. IIST also permits 'bring-your-own-devices' (BYOD) of all IISTians to connect to the institution's computing resources on a roaming basis within or outside the campus. Institute spends 10% of its annual budget (~8.25 crores) for workstations/ server/ parallel computing/ administrative/ research software upgradation and AMC of IT infrastructure. 210 CCTV cameras across the institute safeguards the students/ staff. Anyone found misusing IT resources that affects social harmony of the institute are warned/ penalised. Authentic antivirus/ firewalls software is mandatory for all computers to improve security and privacy. Regular training for students/ staff to promote awareness on copyrighted/ open source software. Grammar/ plagiarism checking tools are available across the institute to promote positive and quality research articles.

File Description	Documents
Upload relevant supporting document	[View File](#)

4.3.3 - Student - Computer ratio during the year

Number of students	Number of Computers available to students for academic purposes
1097	**867**

4.3.4 - Available bandwidth of internet connection in the Institution (Leased line)

- **?1 GBPS**

File Description	Documents
Upload relevant supporting document	[View File](#)

4.3.5 - Institution has the following Facilities for e-content development Media centre Audio visual centre Lecture Capturing System(LCS) Mixing equipment's and softwares for editing

A. All of the above

File Description	Documents
Upload relevant supporting document	[View File](#)
Upload the data template	[View File](#)

4.4 - Maintenance of Campus Infrastructure

4.4.1 - Total expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component during the year

328.66

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

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

The construction and Maintenance Division upkeep all the buildings, classrooms, laboratories, and essential services like electrical, plumbing, air-conditioning, etc. Each of the 100 academics/ research labs has a faculty in charge and a lab personnel, who coordinates the lab activities and repair/ upgradation of equipment/ apparatuses. IIST allocates a budget for each department to take care of the costs involved in day-to-day

operation, repairs, and maintenance of equipment. Annual maintenance contracts with OEM cater to the repair/ maintenance of all high-value equipment. On-demand research devices procured by a faculty are responsible for their maintenance through department/ project funds. IIST encourages sharing of appropriate research tools across the lab. IIST's clean and healthy ambiance is entrusted to a group of janitors who look after the cleanliness of the classrooms, washrooms, buildings, and gardens. A lab tutor is responsible for maintaining the audio-visual equipment in the classrooms. Computer maintenance is carried out by a contract personnel team. A central committee performs computer upgrades and also purchases/ renews different educational software on demand. A dedicated sports instructor looks after the sports facility/ activities. The transport and maintenance department handles the transportation needs of all the day scholars.

File Description	Documents
Upload relevant supporting document	[View File](#)

STUDENT SUPPORT AND PROGRESSION

5.1 - Student Support

5.1.1 - Total number of students benefited by scholarships and free ships provided by the institution, Government and non-government agencies (NGOs) during the year (other than the students receiving scholarships under the government schemes for reserved categories)

803

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.1.2 - Total number of students benefited by career counselling and guidance for competitive examinations offered by the Institution during the year

487

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.1.3 - Following Capacity development and skills enhancement initiatives are taken by the institution Soft skills Language and communication skills Life skills (Yoga, physical fitness, health and hygiene) Awareness of trends in technology

A. All of the above

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

5.1.4 - The Institution adopts the following for redressal of student grievances including sexual harassment and ragging cases Implementation of guidelines of statutory/regulatory bodies Organisation wide awareness and undertakings on policies with zero tolerance Mechanisms for submission of online/offline students' grievances Timely redressal of the grievances through appropriate committees

- All of the above

File Description	Documents
Upload relevant supporting document	View File

5.2 - Student Progression

5.2.1 - Number of students qualifying in state/ national/ international level examinations during the year (eg:NET/SLET/GATE/GMAT/CAT/ GRE/TOEFL/Civil Services/State government examinations)

5.2.1.1 - Number of students who qualified in state/ national/ international examinations (e.g.: IIT-JAM/NET/SET/JRF/ GATE /GMAT /CAT/ GRE/ TOEFL/Civil Services/State government examinations) during the year

24

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

5.2.2 - Total number of placement of outgoing students during the year

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.2.3 - Number of recently graduated students who have progressed to higher education (previous graduating batch) during the year

18

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.3 - Student Participation and Activities

5.3.1 - Number of awards/medals won by students for outstanding performance in sports/cultural activities at inter -university/state/national/international events (award for a team event should be counted as one) during the year

0

File Description	Documents
Upload the data template	No File Uploaded
Upload relevant supporting document	No File Uploaded

5.3.2 - Presence of Student Council and its activities for institutional development and student welfare

The Student Activity Board (SAB)supervises all student activities and ensures the well-being of students on campus.. Dean (Student Activities, Student Welfare and Outreach) heads the SAB with Registrar, IIST; Heads of all Department, Chairpersons of various student committees and student representatives as members. The different student committees, - Sports, Technical, Cultural, Hostel and Canteen, are chaired by a senior faculty member and consist of faculty members and student representatives. The student representatives provide feedback and suggestions on all aspects concerning student issues on campus (curricular and co-curricular) to the committee. The SAB meets once a month or as and

when needs arise. The different committees with the support of SAB organize and coordinate Dhanak, the intercollegiate cultural fest, Conscientia, the inter-collegiate Tech Fest, the Annual Sports Day of IIST and all other student's activities in IIST. The 17 student's clubs, the mentoring programme, a voluntary service rendered by the faculty members of IIST and the counselling services functioned actively under the Students Activity Board during the period. This provided friendly guidance and academic support to the students. Online induction programmes were organized by the SAB at the beginning of the academic sessions.

File Description	Documents
Upload relevant supporting document	[View File](#)

5.3.3 - Number of sports and cultural events / competitions organised by the institution during the year

7

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.4 - Alumni Engagement

5.4.1 - The Alumni Association/Chapters (registered and functional)contributes significantly to the development of the institution through financial and other support services during the year

The IIST Alumni Association (IISTAA) contributed to the following areas during the year 2021-2022:

Alumni for Students: IISTAA organized an interaction with the alumni to provide insights on life in campus and Trivandrum, courses, opportunities for higher studies and importance of skill development. IISTAA also used the money raised (via fundraiser from alumni) to purchase laptops for a few students of IIST.

Competitions: On the occasion of 75 years of India's Independence and 15 years of IIST, IISTAA organized a contest for students and alumni of IIST, regarding IIST's impact over the past 15 years and their vision in building the future of Indian Space ecosystem. As part of Hindi Day celebrations, IISTAA organized an online quiz for the students of IIST.

Lecture Series & Webinars: Webinars on following topics were conducted:

- **3D printing**

- **Mapping the universe in 3D**

- **Guide to MBA**

- **Save Soil**

- **Women & Spaceflights**

Feedback: Based on a request by the Department of Mathematics, IISTAA shared their inputs on improvements required in the MA122 course at IIST.

Outreach Programmes: Programmes related to Art & Science were also continued.

File Description	Documents
Upload relevant supporting document	View File

5.4.2 - Alumni contribution during the year (INR in Lakhs)　　　**E. <1Lakhs**

File Description	Documents
Upload relevant supporting document	View File

GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 - Institutional Vision and Leadership

6.1.1 - The institution has a clearly stated vision and mission which are reflected in its academic and administrative governance

IIST has a clearly stated vision and mission which are reflected in its academic and administrative governance.

Vision:

To be a world-class educational and research institution contributing significantly to Space endeavours.

Mission:

- Create a unique learning environment enriched by the challenges of the Space Programme.
- Nurture the spirit of innovation and creativity.
- Establish centres of Excellence in niche areas.
- Provide ethical and value-based education.
- Promote activities to address societal needs.
- Network with national and international institutions of repute.

It is envisioned to create a distinctive teaching-learning ecosystem that could amply nurture young minds. IIST enriches the spirit of inquisitiveness, instills social sensitivity, and provides ethical and value-based education. It inculcates entrepreneurial skills and ensures social responsibility. It provides opportunities for academic and research collaborations with nationally/internationally reputed universities/institutes. Students do projects/internships at CalTech and ANU- FRT, NTU, Boulder Colorado etc., to get better exposure. Besides, it has MoUs with several institutes and universities of repute. It has set up various monitoring/facilitating bodies. They are Research Council (RC) headed by Dean (R & D), Advanced Space Research Group (ASRG) headed by Chief Technology Officer, Space Technology and Industrial Incubation Centre (STIIC) headed by a senior faculty for incubating start-up companies.

File Description	Documents
Upload relevant supporting document	[View File](#)

6.1.2 - The effective leadership is reflected in various institutional practices such as decentralization and participative management

The Institute's executive bodies include the Governing Body chaired by the Secretary-DoS, the Additional Secretary-DoS, the Joint Secretary-DoS (Personnel), and the Scientific Secretary-DoS as members and the Joint Secretary-DoS (Finance)as an invitee, and the Director, IIST as member secretary. This is followed by the Board of Management and the Academic Council. The Director IIST heads the institute, under whom Deans, Registrar, department heads, faculty members, officers, and staff remit their duties. Dean (Academics) manages academic activities; Dean (R&D and IPR) R&D, handles projects, and patent-related activities, and Dean (Student Activity, Student Welfare, and Outreach) leads student support activities. Registrar heads the administration and is

supported by deputy registrars. Deputy Registrar (Academics) takes care of exams, admissions, and other academic responsibilities. Deputy Registrar (Finance) monitors accounts and financial matters; the procurement of various equipment/ facilities is managed by Deputy Registrar (Purchase) and Deputy Registrar (Stores), and the administration is by the Deputy Registrar (Administration). The recruitment and review are handled by the Deputy Registrar (Recruitment and Review). A Senior Administrative Officer monitors the Establishment/Public Relations/Transport Operation and Maintenance Division (TOMD).

Other sections include Canteen, CMD, IT& software, official language, Hostel, Library, Sports, Medical, Transport, and CISF teams are overseen by different committees.

File Description	Documents
Upload relevant supporting document	[View File](#)

6.2 - Strategy Development and Deployment

6.2.1 - The institutional Strategic plan is effectively deployed

The institute offers cutting-edge courses focusing on the integration of all the programmes. The institute follows a Credit-Based Semester System (CBSS) ensuring effective time utilization and course selection. It also facilitates internships/projects at IIST and internationally reputed institutes. Core and elective courses are offered to encourage knowledge in interdisciplinary areas. The institute has an in-house developed Moodle-based Learning Management System, for online learning. Apart from the instructed courses, students are allowed to take SWAYAM, and NPTEL, courses offered by MHRD.

Our students and faculty members are deeply involved in developing indigenous systems and subsystems of various payloads/nanosatellites/sounding rockets. In order to cater to and facilitate the inquisitiveness of the students in developing the above systems, IIST established the Small Spacecraft System and PAyload CEntre (SSPACE) which gives an opportunity for the institutes in India and abroad. It develops onboard Computers, Electrical Power, Communication, Attitude Determination, and Control Systems. It developed a student satellite INSPIRESat-1 in collaboration with the Laboratory of Space Physics, University of Colorado, NTU Singapore, and National Central University, Taiwan.

IIST has a Space Technology Innovation and Incubation Cell (STIIC) and an Advanced Space Research Group (ASRG) for developing infrastructure, innovators, and entrepreneurs, and for collaborative research.

File Description	Documents
Upload relevant supporting document	[View File](#)

6.2.2 - The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures, etc.

The Director, in consultation with senior officials, and Deans, formulates various Committees and administrative policies for the smooth functioning of the Institute. The annual budget, finance, and audit queries are overseen by Director, Registrar, and Deputy Registrar (Finance) in conformity with DoS rules and regulations. Registrar and Director oversees civil works and Dean (Academics), ensures that academic policies are uniform and in accordance with the UGC rules.

The IQAC ensures various programmes for institutional functioning towards quality enhancement as per NAAC Guidelines and prepares AQAR annually. Apart from that faculty members, officers, and staff, should submit Annual Performance Report for assessing their performance every year.

The manpower requirement of the institute for various academic, administrative, and research activities are monitored, assessed, and vacancies are notified in leading print media/ IIST website (https://www.iist.ac.in/career/opportunity). The project fellows, SPF and JPF are recruited and paid as per UGC mandate.

The administrative ladder of IIST consists of Director, Registrar, and Deans followed by faculty, officers, and staff. IIST has 95 faculty members, to conduct lectures, tutorials, and practical sessions; 25 technical officers/staff to support lab and research activities, 10 permanent administrative officers and 10 office assistants, and 341 contract employees to support various activities.

File Description	Documents
Upload relevant supporting document	[View File](#)

6.2.3 - Institution Implements e-governance in its areas of operations

6.2.3.1 - e-governance is implemented covering following areas of operation

                               A. All of the above

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

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

6.3 - Faculty Empowerment Strategies

6.3.1 - The institution has a performance appraisal system, promotional avenues and effective welfare measures for teaching and non-teaching staff

The Annual Performance Assessment Report (APAR) of all permanent employees is submitted to the reporting officer and a three-tier reviewing system is in place. The head of the department/controlling officer reviews the report and forwards it to the next levels for assessment and approval. A copy of the graded APAR will be communicated to the concerned faculty/employee from the office of the registrar, IIST. Grievances can be represented within 15 days from the date of their receipt. IIST follows a Merit Promotion Scheme (MPS) for permanent faculty members and Limited Flexible Complement Scheme (LFCS) for its permanent Administrative Staff. Other welfare programmes include:

- Organizational (@ 10 to 16 %) and Group (@ 7 to 9.5%) Performance Relative Incentive Scheme of basic salary.
- Medical Welfare Program
- CHSS (1% of their basic pay monthly)
- 24X7 Health centre and Polyclinic facility
- In-house counseling center
- LTC scheme
- SAFE (Scheme for Assistance to Families in Exigency)
- Vikram A. Sarabhai Trust (VAST)
- Financial Assistance in Exigency (FAE)
- Financial support for purchasing computers
- Housing loan Scheme
- Transport allowance/conveyance facility
- Financial support for membership in scientific and professional bodies

- **Professional update allowance/Space technology allowance**
- **Reimbursement of telephone/internet bill**
- **Pension scheme**
- **Earned leave encashment/Sabbatical Leave/Maternity Leave/Paternity Leave/Child care Leave**

File Description	Documents
Upload relevant supporting document	[View File]

6.3.2 - Total number of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

32

File Description	Documents
Upload the data template	[View File]
Upload relevant supporting document	[View File]

6.3.3 - Number of professional development / administrative training Programmes organized by the institution for teaching and non-teaching staff during the year

15

File Description	Documents
Upload the data template	[View File]
Upload relevant supporting document	[View File]

6.3.4 - Total number of teachers undergoing online/ face-to-face Faculty Development Programmes (FDP)during the year(Professional Development Programmes, Orientation / Induction Programmes Refresher Course, Short Term Course)

11

File Description	Documents
Upload the data template	[View File]
Upload relevant supporting document	[View File]

6.4 - Financial Management and Resource Mobilization

6.4.1 - Institutional strategies for mobilisation of funds and the optimal utilisation of resources

The major funding is from DoS for recurring and non-recurring expenses. It comes in the form of an annual Grant-in-Aid for meeting Capital, General, and Salary expenditure. In addition, IIST receives funds from other ISRO centers through the projects approved under ASRG. The other incomes are from extramural funds (DST-SERB, ICSSR, MoES, DBT, Ministry of Electronics and Information Technology -MeitY), tuition fees, application fees, etc.

For optimizing resources, IIST follows the biannual model BE (Budget Estimate)-RE (Revised Estimate). We consolidate and review budget requirements from the departments/sections and recommendations are made to DoS. On receipt of the budget, the expenditure is incurred as per the approved budget/line item under the management of the budget coordinators at department/section/institute levels. A higher-level committee led by the Director takes care to achieve the expenditure targets by conducting reviews regularly. Based on the review of the expenditure, by DoS, it releases the fund on a quarterly basis (22%,23%,25%,30%).

Each financial year the institute prepares a road map for completing the technical reviews and financial appraisals of major technology development programmes, facilities, research labs, and projects. Funds generated through other resources like Extramural Grants etc. are utilized as per applicable guidelines of IIST and Funding Agencies.

File Description	Documents
Upload relevant supporting document	View File

6.4.2 - Funds / Grants received from government bodies during the year for development and maintenance of infrastructure (not covered under Criteria III and V) (INR in Lakhs)

3500

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

6.4.3 - Funds / Grants received from non-government bodies, individuals,philanthropists during the year for development and maintenance of infrastructure (not covered under Criteria III and V)(INR in Lakhs)

0

File Description	Documents
Upload the data template	**No File Uploaded**
Upload relevant supporting document	**No File Uploaded**

6.4.4 - Institution conducts internal and external financial audits regularly

IIST has a well-framed financial auditing system with expertise and guidance provided on a timely basis by DoS. The institution has three different audits. The finances are audited with respect to purchases, academics, and accounts. The detailed audited statements are tabled in the parliament regularly along with the Annual Report.

A. Statutory Audit:- It is carried out on a yearly basis by CAG-empaneled Chartered Accountants. Financial statements are certified by Chartered Accountants and financial compliance is ensured.

B. Internal Audit: - It is carried out by the Department of Space on a regular basis. Procedural compliances in finance, purchase, and administrative areas are reviewed. Audit queries raised are replied and corrective actions wherever necessary are taken in accordance with the advice of the internal auditors.

C. CAG Audit: - It is carried out every few years with an emphasis on propriety and efficiency. Audit objections raised are clarified and corrective measures are adopted wherever necessary.

Audited Financial Statements are uploaded on the Institute's website. The link for the statement for the year 2021-22 is given below:-

https://www.iist.ac.in/sites/default/files/library/IISTAnnualReport2021-22English.pd

File Description	Documents
Upload relevant supporting document	[View File](#)

6.5 - Internal Quality Assurance System

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing

the quality assurance strategies and processes by constantly reviewing the teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals

The IQAC committee meets periodically, reviews the institute's activities, and recommends and implements corrective measures. IIST customised Moodle Learning Management System (LMS) during the Covid-19 Pandemic for use in the odd semester of 2021-2022. The platform permits students to submit their assignments, give quizzes and examinations and allows faculty to evaluate. Even if the classes for the first semester of the 2021 batch were in online mode, there was an online induction programme for B. Tech, M. Tech and Ph D scholars, giving orientation regarding the course structure, and communication skills. An interactive session with the alumni who have excelled in various fields was also arranged to motivate them. All these were initiated as per the advice from IQAC. There were Class Committees and Course Committees that regularly met and monitored the feedback of students on classes offered. They gave inputs regarding the delivery of lectures, assessment and evaluation and also report anomalies of any kind.

The other initiatives include Outcome Based Education, National Education Policy, Start-ups and an Incubation Centre, and Faculty Development Programmes. In 2021-2022 five startups were established and two Faculty Development Programmes were conducted.

File Description	Documents
Upload relevant supporting document	[View File](#)

6.5.2 - Institution has adopted the following for Quality assurance Academic Administrative Audit (AAA) and follow up action taken Confernces, Seminars, Workshops on quality conducted Collaborative quality initiatives with other institution(s) Orientation programme on quality issues for teachers and studens Participation in NIRF Any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)

B. Any 4 of the above

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting documnent	[View File](#)

6.5.3 - Incremental improvements made for the preceding during the year with regard to quality (in case of first cycle) Post accreditation quality initiatives(second and subsequent cycles)

In 2022, in line with the recommendations of the NAAC exit report 2013, a new PG programme on Quantum Technology was started. Inter-departmental collaborations and inter-disciplinary courses were also offered and tutorials were made mandatory. All classrooms were equipped with audiovisual facilities to suit the hybrid mode of teaching. During the Pandemic period, the institute successfully finished the academic activities via online mode, incorporating all the variants of courses including theory courses, lab courses (virtual lab simulation/recorded), internships, projects, etc. Courses were managed, and internal assessments and exams were conducted through MOODLE. Projects and Internships of all students were completed through hybrid mode. MoUs were signed with The Delft Technical University (TU Delft), The Netherlands, on July 22, 2021, for carrying out Academic programs and Joint Research activities, including students and faculty exchange programs. This is in addition to the already existing MoUs with national and international institutes.IIST has a Space Technology Innovation and Incubation Cell (STIIC) andan Advanced Space Research Group (ASRG) for developing infrastructure, for innovators and entrepreneurs, and for collaborative research. New hostels, canteen buildings, gymnasium, indoor stadium (badminton and squash courts), student activity centre, Multipurpose hall, Underpath with a new entrance are constructed.

File Description	Documents
Upload relevant supporting document	[View File](#)

INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 - Institutional Values and Social Responsibilities

7.1.1 - Measures initiated by the Institution for the promotion of gender equity during the year

- **Gender Sensitization Committee with representatives from**

both genders is active in IIST

- International Women's Day Celebration at IIST was celebrated in hybrid mode on 9th March 2022. Dr. Vinitha V. Nair, Cardio Thoracic Surgeon, Medical College-Thiruvananthapuram was the Chief Guest for the function. Her talk was highly motivational and sensitized the women in IIST.An exhibition cum sale by IIST students and the women staff members showcasing their talents was organized on the day.

- The students of IIST organized a cultural evening on the day asa tribute to the Late Smt Lata Mangeshkar, the Queen of Melody: Nightingale of India.

- The Internal Complaints Committee (ICC), IIST gives awareness to the employees and students about ICC and gives confidence to the women coming/working on the campus.

  An online seminar on the act of Sexual Harassment at the workplace is conducted on 9th December 2021, to commemorate the 8th anniversary of the notification of the landmark legislation and to sensitize the IIST community on the Prevention, Prohibition, Redressal Act 2013, (POSH-2013). Prof. Bismi Gopalakrishnan, Dean, Faculty of Law, MG University, spoke on the subject. On 10th December2021, the ICC organized an awareness talk on SHIS-2013 for the first-year B.Tech students (2021 Batch) by Ms. Ishani, Campaigns Manager, Gender & Sexuality team & Ms. Margaret Johnson, Youth Engagement Strategist, Jhatkaa.org.

File Description	Documents
Upload relevant supporting document	View File
Annual gender sensitization action plan(s)	https://www.iist.ac.in/sites/default/files/Internal-Complaints-Committee/Gender%20sensitization%20action%20plan%202021-22.pdf
Specific facilities provided for women in terms of: a. Safety and security b. Counseling c. Common rooms d. Daycare Centre e. Any other relevant information	https://www.iist.ac.in/sites/default/files/Internal-Complaints-Committee/Gender%20sensitization%20action%20plan%202021-22.pdf

7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation Solar energy   Biogas plant Wheeling to the Grid   Sensor-based energy conservation Use of LED bulbs/ power-efficient equipment

B. Any 3 of the above

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.3 - Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 200 words) Solid waste management Liquid waste management Biomedical waste management E-waste management Waste recycling system Hazardous chemicals and radioactive waste management

A no-waste incinerator is maintained on the campus for proper waste disposal. Napkin Incinerators are also installed in all ladies' hostels and one ladies' toilet each in all academic buildings. A Bio Gas plant is operated and maintained by Canteen Services and the byproducts of biogas are used as fertilizer. A compost pit has been made where dry leaves are collected and disposed of and used for gardening purposes. Food waste, plastic waste, and paper waste are collected separately and disposed of. For collecting these, separate dust bins are provided on each floor of all buildings. The campus has banned the use of plastic. Still, it comes to the campus along with some purchases by the students staying in hostels. Plastic bottles, disposed of by students are reused for planting. As part of the Green Kerala Mission policy, the plastic waste generated on the campus is also disposed of through Haritha Karma Sena, an authorized/registered recycler. Paper waste generated is shredded using Paper Shredders within the campus and disposed of through authorized recyclers. Water treatment plants are installed inside the campus for recycling used water which is later used for gardening purposes. E-waste is condemned through an outside authorized agency for the purpose.

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.4 - Water conservation facilities available in the Institution: Rain water harvesting Bore well /Open well recharge Construction

A. Any 4 or all of the above

of tanks and bunds Waste water recycling Maintenance of water bodies and distribution system in the campus

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.5 - Green campus initiatives include

7.1.5.1 - The institutional initiatives for greening the campus are as follows:

1. **Restricted entry of automobiles**
2. **Use of bicycles/ Battery-powered vehicles**
3. **Pedestrian-friendly pathways**
4. **Ban on use of plastic**
5. **Landscaping**

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.6 - Quality audits on environment and energy are regularly undertaken by the institution

7.1.6.1 - The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following:

D. Any 1 of the above

1. **Green audit**
2. **Energy audit**
3. **Environment audit**
4. **Clean and green campus recognitions/awards**
5. **Beyond the campus environmental promotional activities**

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.7 - The Institution has a disabled-friendly and barrier-free environment Ramps/lifts for easy access to classrooms and centres.

A. Any 4 or all of the above

Disabled-friendly washrooms Signage including tactile path lights, display boards and signposts Assistive technology and facilities for persons with disabilities: accessible website, screen-reading software,mechanized equipment, etc. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading materials, screen reading, etc.

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e. tolerance and harmony towards cultural, regional, linguistic, communal, socio-economic and other diversities (within a maximum of 200 words)

In September 2021, IIST organized the IIST@Schools online program for 250 students from Kumari Arivial Peravai NGO, aiming to create awareness about space science and technology and uncover hidden talents. NIRMAAN, the social outreach club of IIST, conducted online classes from January to March 2022, covering topics like personality development and astronomy for Kumari Arivial Peravai students. NIRMAAN volunteers also engaged in community service, assisting in community kitchens in Kerala and distributing masks, books, and sanitizers to children in an orphanage. IIST celebrated Onam virtually in September 2021, focusing on cultural significance and promoting unity. Induction programs were conducted for newly joined B.Tech., M.Tech., and Ph.D. students to facilitate their transition into IIST life. IIST supported Muslim scholars and colleagues by providing food as per their timing during the fasting period of Ramzan. The institute also celebrated the 75th Independence Day with various events, including music performances, dance, acting, and comedy. The Movie and Performing Arts Club of IIST promoted performing arts and stagecraft. Antarish Dhaaraayen, the in-house Hindi journal, featured articles, poems, reports, and technical content. World Hindi Day celebrations in 2022 included competitions for students and activities for employees. IIST observed the International Day of Yoga in 2021, bringing students and staff together for a virtual session.

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.9 - Sensitization of students and employees of the institution to constitutional obligations: values, rights, duties and responsibilities of citizens:

IIST actively participated in the Azadi Ka Amrit Mahotsav initiative, celebrating 75 years of independence. Rashtriya Ekta Diwas (National Unity Day) and Constitution Day were observed, honoring the Indian Constitution and promoting unity. Induction programs were conducted for BTech and MTech scholars, focusing on the institute's environment, ethical conduct, and sexual harassment prevention. The Humanities department offered courses on social science, ethics, and economics, covering citizens' rights and responsibilities.

Swachhta Pakhwada 2021 aimed to fulfill Mahatma Gandhi's vision of a clean society. The Universal Human Value course, sponsored by AICTE, was implemented. National Engineer's Day paid tribute to Bharat Ratna Sri Moksha Gundam Visvesvaraya. Vigilance Awareness Week highlighted self-reliance with integrity.

Due to the pandemic, Dr. B. R. Ambedkar's birth anniversary involved distributing sweet packets instead of arranging lunch. Independence Day and Republic Day were celebrated with dignity, commemorating the spirit of freedom fighters. Grand celebrations at IIST included a message from the Registrar and a guest of honor inspection.

7.1.10 - The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard. The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff Annual awareness programmes on Code of Conduct are organized

Any 3 of the above

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

- Constitution Day was celebrated on 26th November 2021 in IIST to commemorate the adoption of the Indian Constitution.

- Swatch Bharat Program in IIST was organized and competitions were held to identify the best-kept rooms in IIST. All the Administrative Sections, Department Offices, Academic blocks and hostels were inspected and prizes awarded to best kept rooms.

- IIST celebrated Independence day 2021 and Republic day 2022 were celebrated in all its grandeur inIIST celebrated virtually the vibrant and joyous festival of Onam on 28th September to familiarize the culture of the land and its people and inculcate the profound spirit of oneness and equality, which is associated with Onam 2021.

- IISTAA conducted an online panel discussion on 'Women and Spaceflight : Charting the Future', in connection with International Women's Day 2022, on 27th March 2022.

- Hindi Day was celebrated from 10th to 15th January 2022.

- The birth anniversary celebration of Dr. B. R. Ambedkar was celebrated on 30th November, 2021.

- Rashtriya Ekta Diwas (National Unity Day) on 31st October, 2021 with the activities of Azadi Ka Amrith Mahotsav was organized in IIST.

Part B

CURRICULAR ASPECTS

1.1 - Curriculum Design and Development

1.1.1 - Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which is reflected in Programme outcomes (POs), Programme Specific Outcomes(PSOs) and Course Outcomes(COs) of the Programmes offered by the University

One of the important missions of the institute is to advance research in space science and technology. Hence the syllabus of each department is revised and updated so as to incorporate the latest research being carried out in the area. During the curriculum revision workshop, each department collects feedback & inputs from ISRO/DoS centres, other universities, researchers, and from industries. Each faculty member has the autonomy to design his/her own courses based on the inputs received from the stakeholders, subject to approval from the BoS, as well as to teach and evaluate the students on the basis of experiential learning. Emerging issues are incorporated in the curriculum with real-life situations and theory is often linked with practice. The different research problems selected by the students address local, national, and global developmental needs. The courses offered by the Departments of Humanities, Chemistry, and Earth and Space Science ensure socially-relevant outcomes through various aspects of its curriculum like understanding the socio-economic realities of the society, imparting managerial and communication skills, ethics, and relevance of environment and conservation practice in society, critical for the country's future ecological security.

File Description	Documents
Upload relevant supporting document	[View File]()

1.1.2 - Number of Programmes where syllabus revision was carried out during the year

6

File Description	Documents
Upload the data template	[View File]()
Upload relevant supporting document	[View File]()

1.1.3 - Total number of courses having focus on employability/ entrepreneurship/ skill development offered by the University during the year

1.1.3.1 - Number of courses having focus on employability/ entrepreneurship/ skill development during the year

75

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

1.2 - Academic Flexibility

1.2.1 - Number of new courses introduced of the total number of courses across all programs offered during the year

55

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

1.2.2 - Number of Programmes in which Choice Based Credit System (CBCS)/elective course system has been implemented during the year

6

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

1.3 - Curriculum Enrichment

1.3.1 - Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

Core/Elective Courses offered by the institute such as Introduction to Economics, Social Science and Ethics, Principles of Management, Visual Communication, Cultural Studies, Science Fiction cover several aspects related to gender, issues faced by women, children, transgender, disabled,

marginalized communities, racial and sustainable development and also cover values related to personal and professional life. Environmental science and engineering is a compulsory course offered to all UG students.

The courses encourage and empower students to debate on the current issues. Projects, Field visits and Tribal studies are undertaken by students to understand the issues faced by different groups of people in the society. The institute also tries to concentrate on programmes that are of relevance to national progress and development. A conscious effort has been made to observe days of importance and thus promote ideas of national integration, secularism, scientific outlook, cosmopolitan and humanistic approach towards life. The Institute tries to inculcate in the students the concept of social responsibility and commitment towards society through its outreach programs conducted among the marginalized and disadvantaged sections of the society.

File Description	Documents
Upload relevant supporting document	**No File Uploaded**

1.3.2 - Number of value-added courses for imparting transferable and life skills offered during the year

16

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

1.3.3 - Total number of students enrolled in the courses under 1.3.2 above

1.3.3.1 - Number of students enrolled in value-added courses imparting transferable and life skills offered during the year

935

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

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1.3.4 - Number of students undertaking field projects / research projects / internships during the year	
264	

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

1.4 - Feedback System

1.4.1 - Structured feedback for design and review of syllabus – semester wise / is received from Students Teachers Employers Alumni	• **Any 1 of the above**

File Description	Documents
Upload relevant supporting document	View File

1.4.2 - Feedback processes of the institution may be classified as follows	• **Feedback collected, analysed and action has been taken**

File Description	Documents
Upload relevant supporting document	View File

TEACHING-LEARNING AND EVALUATION

2.1 - Student Enrollment and Profile

2.1.1 - Demand Ratio

2.1.1.1 - Number of seats available during the year

337

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

2.1.2 - Total number of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc.) as per applicable reservation policy during the year (Excluding Supernumerary

Seats)

2.1.2.1 - Number of actual students admitted from the reserved categories during the year

`127`

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

2.2 - Catering to Student Diversity

2.2.1 - The institution assesses the learning levels of the studentsand organises special Programmes for advanced learners and slow learners

IIST has students from different parts of India, with different economic and social backgrounds. The pedagogy adopted by the faculty members is innovative so as to enable the students from all backgrounds to follow the classes well. Based on performance, the departments arrange remedial courses, tutorials and also communicate to the respective mentors. Peer group learning and buddy mentoring systems are also encouraged. Slow learners are provided with personal support and the institute counsellor will also provide necessary guidance.The Class Committeemeets(with students representives and course teachers)twice a semester to assess the progressand suggest corrective measures.

Students who fail in semester examinations have the option of appearing in a supplementary examination.The Department of Humanities equips students with communication skills, where separate modules are prepared for different levels of learners.

Advanced learners, based on their CGPA, are permitted to audit up to two courses during the entire duration of their UG programme. They are motivated to present and publish their research carried during the program. The toppers of B.Tech programs are provided an opportunity to pursue Master programme in CalTech sponsored by DoS and also undergo Internship during sixth semester in CalTech(USA) and ANU(Australia).

File Description	Documents
Upload relevant supporting document	[View File](#)
Link For Additional Information	**Nil**

2.2.2 - Student - Full time teacher ratio during the year

Number of Students	Number of Teachers
818	**101**

File Description	Documents
Upload relevant supporting document	[View File](#)

2.3 - Teaching- Learning Process

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

Laboratory courses areoffered to complement the theory courses. Some courses are taggedwith course projects, and certain long term projects, such as satellite development, ground station andinstrumentation. While students are encouraged to take up internships during their semester breaks, a credited summer internship is mandatory for all UG students at the end of their 6th semester. Students are required to give seminars, make presentations and are encouraged to lead discussions in graduate courses, helping them to enhance their critical thinking skills. In keeping with the larger goals of the Department of Space, several students actively participate in projects on satellite payload development, launch vehicles and related subsystems in the different ISRO/DoS centres. This helps them to get accustomed with the ISRO culture and with the latest research happening there. Students, as part of the social science and economics papers have compulsory field visits which helps them to understand the real life situation of people in society. The different clubs in IIST provide a forum for students to discuss ideas and research in a critical yet constructive manner. PhD students are often encouraged to take classes for the undergraduate courses.

File Description	Documents
Upload relevant supporting document	View File

2.3.2 - Teachers use ICT enabled tools including online resources for effective teaching and learning processes during the year

The institute is equipped with 4 smart class rooms with interactive screens, while all 35 class rooms in the institute have multimedia support and internet connectivity. In addition, students and teachers have easy access to laptops/desktops, printers, e-mail, etc. Institute also has an active subscription to Microsoft's Office-365 that covers all students, research scholars and faculty members. Teachers use scientific computing and visualization software such as Python, Matlab, Mathematica, Maple, Synopsis, CAMSOL, etc. Multimedia Computing labs are also available. Use of pod casts; online platforms; web-based libraries and online statistical data sets are also promoted.

During the online semesters, teachers used Microsoft Teams conferencing platforms to deliver online lectures and to conduct tutorials. Lectures delivered were recorded and the videosmade available to the students . These were useful for those students without high-bandwidth internet connectivity when they attended classes from their home. Lab courses were reconfigured and were managed with virtual lab simulations and recorded videos. The courses were managed through moodle based customized platform, which provides study materials, assignments, class testsand evaluation ofstudents' progress. Even during the pandemic period there was nodelay in conducting lectures, exams and declarations of results.

File Description	Documents
Upload relevant supporting document	View File

2.3.3 - Ratio of students to mentor for academic and other related issues during the year

2.3.3.1 - Number of mentors

54

File Description	Documents
Upload relevant supporting document	View File

2.4 - Teacher Profile and Quality

2.4.1 - Total Number of full time teachers against sanctioned posts during the year

101

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

2.4.2 - Total Number of full time teachers withPh.D./D.M/M.Ch./D.N.B Superspeciality/D.Sc./D'Lit. during the year

101

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

2.4.3 - Total teaching experience of full time teachers in the same institution during the year

2.4.3.1 - Total experience of full-time teachers

11323

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

2.4.4 - Total number of full time teachers who received awards, recognition, fellowships at State, National, International level from Government/Govt. recognised bodies during the year

35

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

2.5 - Evaluation Process and Reforms

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

20

2.5.1.1 - Number of days from the date of last semester-end/ year- end examination till the declaration of results year wise during the year

20

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

2.5.2 - Total number of student complaints/grievances about evaluation against total number appeared in the examinations during the year

0

File Description	Documents
Upload relevant supporting document	[View File](#)

2.5.3 - IT integration and reforms in the examination procedures and processes (continuous internal assessment and end-semester assessment) have brought in considerable improvement in examination management system of the institution

The institute uses a web based application "iCampus" for Registration, recording continuous assessment, exam management, attendance management and result processing. Faculty members set their evaluation pattern, grade setting in the iCampusResults are also published online through iCampus. Students have access to their internal marks and end semester results through the iCampus student's portal. As part of the Academic response to Covid-19 pandemic, all courses, internals and exams were delivered online and managed through MOODLE Lecture Management System. Each moodle page hasthe complete interface of a course page, course related material, tutorials and assignments submitted. Course projects, Internships and Final Year B.Tech Projects were successfully managed through hybrid online/offline mode. IIST also has adopted the online mode for pre synopsis presentation and thesis submission for PhD students. The viva-voce examination was also carried out online using the Teams platform.

File Description	Documents
Upload relevant supporting document	[View File](#)

2.5.4 - Status of automation of Examination division along with approved Examination Manual	A. 100% automation of entire division & implementation of Examination Management System (EMS)

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

2.6 - Student Performance and Learning Outcomes

2.6.1 - The institution has stated learning outcomes (generic and programme specific)/graduate attributes which are integrated into the assessment process and widely publicized through the website and other documents

The institute has defined Programme outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the Programmes offered by departments from the academic year 2021-22, for the two UG programmes BTech (AE) and BTech (ECE). Currently, outcome based education is being initiated and followed in BTech (AE) and BTech (ECE) and related MTech programmes. The learning outcomes of individual courses of these programmes are integrated into the assessment process via Quiz 1&2, internals which include assignments, quizzes, seminars, projects and finally the end semester exams. All course evaluations for BTech are based on a combination of the above evaluation approaches, which give the student a fair opportunity for evaluation. Additionally, the students are required to carry out internship and research projects which are couple of months in duration. Each project is done under the supervision of a Faculty member. Committees of faculty members evaluate all projects in terms of reports and seminars. All these are uploaded in the iCampus portal in the website of IIST

File Description	Documents
Upload relevant supporting document	[View File](#)

2.6.2 - Attainment of Programme outcomes, Programme specific outcomes and course outcomes are evaluated by the institution during the year

The institute has defined Programme outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the Programmes offered by departments from the academic year 2021-22, for the two UG programmes BTech (AE) and BTech (ECE).Currently, outcome based education is being initiated and followed in BTech (AE) and BTech (ECE) and related MTech programmes. For the BTech, the courses on basic subjects are assessed via continuous internal assessments. The lab experiments are continuously assessed by the lab instructor and ensure the attainment of outcome as envisaged and framed for the lab course through lab report and viva. In addtion to this, the students design and conduct their own experiments and present the results with analysis. The project work carried out under the supervision of a faculty member is evaluated in terms of a written report and oral presentation by the committee set up by the Subject Board. At the end of each semester, the department evaluates Attainment of Programme outcomes, Programme specific outcomes and course outcomes of each course. The PhD students, after completing the coursework have to undertake a comprehensive exam for completing the PhD registration The PhD student's performance is evaluated through annual presentations to the doctoral committee at the end of every academic year.

File Description	Documents
Upload relevant supporting document	[View File](#)

2.6.3 - Number of students passed during the year

2.6.3.1 - Total number of final year students who passed the university examination during the year

236

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

2.7 - Student Satisfaction Survey

2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution

may design its own questionnaire) (results and details need to be provided as a web link)

https://events.iist.ac.in//OSFB/

RESEARCH, INNOVATIONS AND EXTENSION

3.1 - Promotion of Research and Facilities

3.1.1 - The institution Research facilities are frequently updated and there is well defined policy for promotion of research which is uploaded on the institutional website and implemented

The institute has set up state-of-the-art facilities in all departments to support its research activities. The research facilities are frequently augmented with funding from DoS and extramural research projects. The research policy of the institute is framed so as to encourage faculty members to take up fundamental as well as applied research to benefit the society. Research Council (RC) chaired by Dean (R & D) promotes and nurtures research activities, and oversees progress and academic matters of the research scholars. An advanced Space Research Group(ASRG) headed by Chief Technology Officer has been established for all collaborative research activities of IIST with ISRO. An empowered overseeing committee comprising members from all the research centres of ISRO is the apex body which realises the coordination and implementation of the projects in the concerned centres. IIST also ensures protection of intellectual property created by its stakeholders. Towards this IPR cell is established to fulfil Institute's commitment to endorse academic freedom and provide a conducive environment for research, innovation and advancement. The research culture at IIST has enabled the generation of skilled manpower in cutting edge research fields specifically in Space Science and Technology.

File Description	Documents
Upload relevant supporting document	View File

3.1.2 - The institution provides seed money to its teachers for research (amount INR in Lakhs)

00

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.1.3 - Number of teachers receiving national/ international fellowship/financial support by various agencies for advanced studies/ research during the year

30

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.1.4 - Number of JRFs, SRFs, Post-Doctoral Fellows, Research Associates and other research fellows enrolled in the institution during the year

127

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.1.5 - Institution has the following facilities to support research Central Instrumentation Centre Animal House/Green House Museum Media laboratory/Studios Business Lab Research/Statistical Databases Moot court Theatre Art Gallery

A. Any 4 or more of the above

File Description	Documents
Upload relevant supporting document	View File

3.1.6 - Number of departments with UGC-SAP, CAS, DST-FIST, DBT, ICSSR and other recognitions by national and international agencies during the year

1

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.2 - Resource Mobilization for Research

3.2.1 - Extramural funding for Research (Grants sponsored by the non-government sources such as industry, corporate houses, international bodies for research projects) endowments, Chairs in the University during the year (INR in Lakhs)

1

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.2.2 - Grants for research projects sponsored by the government agencies during the year (INR in Lakhs)

430.55

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.2.3 - Number of research projects per teacher funded by government and non-government agencies during the year

76

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.3 - Innovation Ecosystem

3.3.1 - Institution has created an eco-system for innovations including Incubation centre and other initiatives for creation and transfer of knowledge

With a mission to foster the spirit of innovation and mould

successful entrepreneurs, IIST has established a Space Technology Innovation and Incubation Centre(STIIC) in the campus. STIIC promotes (i) Innovation and entrepreneurship by converting and translating technology ideas (ii) transitions of results in various disciplines of science and engineering into products, processes and services for commercial exploitation (ii) integrating teaching, learning, research and innovation with real world needs and (iii) efforts to accelerate our nation's ability to innovate and lead a knowledge driven economy for the larger benefit of humanity.

To protect the intellectual property of the stakeholders, IIST has established an IPR cell. With well-defined policies and procedures, the cell guides and processes the applications for obtaining IPR protection such as patents and copyrights.

STIIC provides the incubatees, physical, technical and networking support and services to assist product innovations and development. Currently five companies are incubated with STIIC, viz; Vashishtha Research Pvt. Ltd., SPACETIME 4D printing solutions LLP, BhuhPramaan PVT Ltd., InterCosmos Space Exploration Technologies Pvt. Ltd and Specrule Scientific Pvt Ltd. These companies work in diverse fields from robotics assisted NDT, custom built 3D printers, geospatial technologies, novel propellants to the development of laser diagnostic tools.

File Description	Documents
Upload relevant supporting document	[View File](#)

3.3.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year

38

3.3.2.1 - Total number of workshops/seminars conducted on Research methodology, Intellectual Property Rights (IPR), entrepreneurship, skill development year wise during the year

38

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.3.3 - Number of awards / recognitions received for research/innovations by the institution/teachers/research scholars/students during the year

3.3.3.1 - Total number of awards / recognitions received for research/innovations won by institution/teachers/research scholars/students year wise during the year

35

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.4 - Research Publications and Awards

3.4.1 - The institution ensures implementation of its stated Code of Ethics for research

3.4.1.1 - The institution has a stated Code of Ethics for research and the implementation of which is ensured through the following 1. Inclusion of research ethics in the research methodology course work 2. Presence of institutional Ethics committees (Animal, chemical, bio-ethics etc) 3. Plagiarism check 4. Research Advisory Committee	**A. All of the above**

File Description	Documents
Upload relevant supporting document	[View File](#)

3.4.2 - The institution provides incentives to teachers who receive state, national and international recognitions/awards Commendation and monetary incentive at a University function Commendation and medal at a University function Certificate of honor Announcement in the Newsletter / website	**D. Any 1 of the above**

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.4.3 - Number of Patents published/awarded during the year

3.4.3.1 - Total number of Patents published/awarded year wise during the year

1

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.4.4 - Number of Ph.D's awarded per teacher during the year

3.4.4.1 - How many Ph.D's are awarded during the year

46

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.4.5 - Number of research papers per teacher in the Journals notified on UGC website during the year

227

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.4.6 - Number of books and chapters in edited volumes published per teacher during the year

3.4.6.1 - Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings during the year

116

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.4.7 - E-content is developed by teachers For e-PG-Pathshala For CEC (Under Graduate) For SWAYAM For other MOOCs platform For NPTEL/NMEICT/any other Government Initiatives For Institutional LMS

D. Any 2 of the above

File Description	Documents
Upload the data template	View File
Upload relevant supporting document	View File

3.4.8 - Bibliometrics of the publications during the year based on average Citation Index in Scopus/ Web of Science/PubMed

Scopus	Web of Science
Nil	**2.34**

File Description	Documents
Any additional information	View File
Bibliometrics of the publications during the year	View File

3.4.9 - Bibliometrics of the publications during the year based on Scopus/ Web of Science – h-Index of the University

Scopus	Web of Science
NA	**13**

File Description	Documents
Bibliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	View File
Any additional information	View File

3.5 - Consultancy

3.5.1 - Institution has a policy on consultancy including revenue sharing between the institution and the individual and encourages its faculty to undertake consultancy

Policy preparation is in progress

File Description	Documents
Upload relevant supporting document	[View File](#)

3.5.2 - Revenue generated from consultancy and corporate training during the year (INR in Lakhs)

3.5.2.1 - Total amount generated from consultancy and corporate training during the year (INR in lakhs)

0

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.6 - Extension Activities

3.6.1 - Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the year

Nirmaan, the social outreach club of IIST is manned by the department of Humanities. It provided online classes on Space Science, Technology, Values and Career Guidance to the students of an NGO - KAP during the Jan-Mar 2022 session. Masks and sanitizers were distributed to the students.

Dhwani, a program to audio record the text books was also done to help the visually challenged students of Jagathy Blind School.

Faculty members have delivered quite a good number of talks in the form of keynote addresses and had handled plenary sessions for conferences/ workshops/ seminars/ webinars and FDPs.

Contributed as motivational speakers in various forums at schools, colleges and universities.

Actively engaged in the print, visual and social media panel

discussions on international and socioeconomic and cultural topics.

Conducted various outreach/training programmes to school and college students such as Geoconnect, Astronomy School, STORM etc. Also contribute actively to various outreach activities for school/ college students initiated by Student Activity Board of IIST.

File Description	Documents
Upload relevant supporting document	[View File](#)

3.6.2 - Number of awards received by the Institution, its teachers and students from Government /Government recognised bodies in recognition of the extension activities carried out during the year

3.6.2.1 - Total number of awards and recognition received for extension activities from Government / Government recognised bodies during the year

00

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.6.3 - Number of extension and outreach programs conducted by the institution including those through NSS/NCC/Red cross/YRC during the year(including Government initiated programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. and those organised in collaboration with industry, community and NGOs)

13

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.6.4 - Total number of students participating in extension activities listed at 3.6.3 above during the year

565

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.7 - Collaboration

3.7.1 - Number of collaborative activities with other institutions/ research establishment/industry for research and academic development of faculty and students during the year

3.7.1.1 - Total number of Collaborative activities with other institutions/ research establishment/industry for research and academic development of faculty and students during the year

38

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

3.7.2 - Number of functional MoUs with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the year

12

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

INFRASTRUCTURE AND LEARNING RESOURCES

4.1 - Physical Facilities

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

IIST offers 2 undergraduate, 1 dual-degree, 15 masters, doctoral and post-doctoral programmes, hosted in Aerospace, Avionics, Interdisciplinary, and Science blocks. There are 30 ITC enabled classrooms, 3 seminar-halls, 2 council rooms, and a conference hall. Four classrooms and four 'Swayamprabha' halls

are air conditioned.

The average seating capacity of each classroom is sixty, and it is equipped with desks, chairs, writing board, and public address system. Every day, a wellness team maintains the cleanliness of all classrooms. Hands-on experience for students is given in theory, and instructional laboratory courses.

Hundred instructional/research labs including high-end equipment are spread across the seven academic departments. Trained lab-staffs upkeep each lab/ equipment. IIST's Multi-Disciplinary Computing Centre (MCC) has 25 teraflops, 40 workstations, GPU Servers, and 100 TB Storage. MCC caters to the entire institute's scientific computing.

State-of-the-art laboratories such as Manufacturing Process Lab with CNC machines, MEMS Lab, Language Lab, Material Characterisation Lab, Audio-Visual Lab for multimedia feedback, Adaptive Optics Lab, Electric Propulsion Lab, Machine Learning Lab, ESS lab, effectively support the student's project and research-related activities. Small satellite lab (SSPACE), an independent ground station to communicate with IIST, ISRO and other satellites are recent additions and are unique to IIST.

File Description	Documents
Upload relevant supporting document	[View File](#)

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

Physical and mental fitness of each student studying in IIST is the highest priority of the institute.

The Institute has the following facilities for both outdoor and indoor games.

- Open ground for football, and cricket – 110 sq.m.

- An outdoor basketball court, volleyball court, and a net bowling facility for cricket.

- Indoor recreational facilities like unisex Gymnasium (236 sq.m), Badminton (545 sq.m.) and Squash courts(85 sq.m.) are housed in the Student Activities Center (SAC).

- In addition, SAC has a full fledged ITC enabled Multipurpose Hall of capacity 400.

- A recreational hall with a built area of 315 sq.m. which houses games such as chess, table tennis, billiards board, and carrom. In addition, all academic blocks have Table tennis and badminton courts.

- The SAC has an open-air auditorium which can accommodate more than 850 people and is used to host cultural activities, yoga, and Dhanak, the cultural fest of the Institute.

- The Institute also has a dedicated music club. Various musical instruments such as keyboard, guitars, violins, drums, and flutes, are provided by the Institute for general use.

File Description	Documents
Upload relevant supporting document	View File

4.1.3 - Availability of general campus facilities and overall ambience

IIST has a lush green, vibrant, campus at Valiamala hills. 800 students stays across 11 Hostels (Men=9, Women=2). All hostels have wi-fi (high-bandwidth), reading rooms, TV, drinking water, DG power backup. Laundry Huts are available independently for boys and girls. Residential students mess capacity is 420. Others dine at Staff's mess (70 seats). A tidy kitchen with modern equipment serves hygienic food. Medical bay with two Doctors and four Nurses provides basic health-care and counselling. For specialized treatment, students are referred to outside hospitals (Insurance). A fully-equipped ambulance serves at emergencies.

The counselling service help students make the best of their learning environment and achieve their academic and personal goals. IIST Library facilitates access to accurate and authoritative information from print and electronic resources. Reprographic section helps students in printing, photocopy as well as binding of study materials.

An incinerator is available for waste management. Union Bank of

India's branch and ATM is available. A cafeteria (private) operates on the campus till midnight. Two artificial ponds harvest rain water. The campus is differently-abled friendly.

Campus security is entrusted to CISF personnel and home-guards. 141 cameras are in-operation for video- surveillance of IIST.

File Description	Documents
Upload relevant supporting document	[View File](#)

4.1.4 - Total expenditure excluding salary for infrastructure augmentation during the year (INR in Lakhs)

1051.94

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

4.2 - Library as a Learning Resource

4.2.1 - Library is automated using Integrated Library Management System (ILMS) and has digitisation facility

Library was automated since its inception in 2007 using NewGenLib software. Later, migrated to "Koha" – an open source ILMS. Presently, library uses Koha V.20.11.06.000. Automation undertaken in a full-fledged manner with all functional modules. All library operations, such as acquisition, cataloguing, periodical control, circulation, administration etc., are automated with OPAC facility for users to search and suggest books.

Library provides access to digital content through the intranet and library portal. In addition, IIST Virtual Library (IVL) facilitates remote access to subscribed e-resources from anywhere at any time. Three multi-functional production printing cum scanner machines (one black & white and two colours) are available to meet the digitisation requirements. In addition, a tabletop scanner is also available for users to scan their materials.

The Graphic Design Facility helps in making various digital documents such as Newsletter, Annual Report, Conference

Proceedings etc. Library hosts the full text of PhD theses and digital copies of conference papers/posters by faculty/students on the institute website. Library archives digital photographs of various events at the institute. It manages the social media pages of the institute by uploading and updating digital content of various events and programmes of the institute.

File Description	Documents
Upload relevant supporting document	[View File](#)

4.2.2 - Institution has subscription for e-Library resources Library has regular subscription for the following: e – journals e-books e-ShodhSindhu Shodhganga Databases

A. Any 4 or all of the above

File Description	Documents
Upload relevant supporting document	[View File](#)

4.2.3 - Annual expenditure for purchase of books/ e-books and subscription to journals/e-journals during the year (INR in Lakhs)

260.07

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

4.2.4 - Number of usage of library by teachers and students per day (foot falls and login data for online access)

344

File Description	Documents
Upload relevant supporting document	[View File](#)

4.3 - IT Infrastructure

4.3.1 - Number of classrooms and seminar halls with ICT - enabled facilities such as LCD, smart board, Wi-Fi/LAN, audio video recording facilities during the year

36

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

4.3.2 - Institution has an IT policy, makes appropriate budgetary provision and updates its IT facilities including Wi-Fi facility

Computer Services Group operates and maintains the information technology(IT) infrastructure. The institute enabled privileged intranet/ internet access to all IISTians through WiFi and Ethernet (1 GBPS+100 MBPS). All digital resources such as Web-portals, attendance-grading-feedback (ICAMPUS), OPAC (library portal), webmail, online food booking, leave application, UG/PG admission, thesis submission/ evaluation portal, E-procurement, TEAMS meeting, digital payment, Short-messaging services, are available for authorized access. Central computing server (120 Teraflops) caters to all the academic research demands. Biometric punching provides conditional access to research facilities. IIST also permits 'bring-your-own-devices' (BYOD) of all IISTians to connect to the institution's computing resources on a roaming basis within or outside the campus. Institute spends 10% of its annual budget (~8.25 crores) for workstations/ server/ parallel computing/ administrative/ research software upgradation and AMC of IT infrastructure. 210 CCTV cameras across the institute safeguards the students/ staff. Anyone found misusing IT resources that affects social harmony of the institute are warned/ penalised. Authentic antivirus/ firewalls software is mandatory for all computers to improve security and privacy. Regular training for students/ staff to promote awareness on copyrighted/ open source software. Grammar/ plagiarism checking tools are available across the institute to promote positive and quality research articles.

File Description	Documents
Upload relevant supporting document	[View File](#)

4.3.3 - Student - Computer ratio during the year

Number of students	Number of Computers available to students for academic purposes
1097	867

4.3.4 - **Available bandwidth of internet connection in the Institution (Leased line)**	• **?1 GBPS**

File Description	Documents
Upload relevant supporting document	[View File](#)

4.3.5 - **Institution has the following Facilities for e-content development Media centre Audio visual centre Lecture Capturing System(LCS) Mixing equipment's and softwares for editing**	**A. All of the above**

File Description	Documents
Upload relevant supporting document	[View File](#)
Upload the data template	[View File](#)

4.4 - Maintenance of Campus Infrastructure

4.4.1 - Total expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component during the year

328.66

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

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

The construction and Maintenance Division upkeep all the buildings, classrooms, laboratories, and essential services like electrical, plumbing, air-conditioning, etc. Each of the 100 academics/ research labs has a faculty in charge and a lab personnel, who coordinates the lab activities and repair/ upgradation of equipment/ apparatuses. IIST allocates a budget for each department to take care of the costs involved in day-to-day operation, repairs, and maintenance of equipment. Annual maintenance contracts with OEM cater to the repair/ maintenance of all high-value equipment. On-demand research devices procured by a faculty are responsible for their maintenance

through department/ project funds. IIST encourages sharing of appropriate research tools across the lab. IIST's clean and healthy ambiance is entrusted to a group of janitors who look after the cleanliness of the classrooms, washrooms, buildings, and gardens. A lab tutor is responsible for maintaining the audio-visual equipment in the classrooms. Computer maintenance is carried out by a contract personnel team. A central committee performs computer upgrades and also purchases/ renews different educational software on demand. A dedicated sports instructor looks after the sports facility/ activities. The transport and maintenance department handles the transportation needs of all the day scholars.

File Description	Documents
Upload relevant supporting document	[View File](#)

STUDENT SUPPORT AND PROGRESSION

5.1 - Student Support

5.1.1 - Total number of students benefited by scholarships and free ships provided by the institution, Government and non-government agencies (NGOs) during the year (other than the students receiving scholarships under the government schemes for reserved categories)

803

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.1.2 - Total number of students benefited by career counselling and guidance for competitive examinations offered by the Institution during the year

487

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.1.3 - Following Capacity development and skills enhancement initiatives are taken by	A. All of the above

the institution Soft skills Language and communication skills Life skills (Yoga, physical fitness, health and hygiene) Awareness of trends in technology

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.1.4 - The Institution adopts the following for redressal of student grievances including sexual harassment and ragging cases Implementation of guidelines of statutory/regulatory bodies Organisation wide awareness and undertakings on policies with zero tolerance Mechanisms for submission of online/offline students' grievances Timely redressal of the grievances through appropriate committees	• **All of the above**

File Description	Documents
Upload relevant supporting document	[View File](#)

5.2 - Student Progression

5.2.1 - Number of students qualifying in state/ national/ international level examinations during the year (eg:NET/SLET/GATE/GMAT/CAT/ GRE/TOEFL/Civil Services/State government examinations)

5.2.1.1 - Number of students who qualified in state/ national/ international examinations (e.g.: IIT-JAM/NET/SET/JRF/ GATE /GMAT /CAT/ GRE/ TOEFL/Civil Services/State government examinations) during the year

24

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.2.2 - Total number of placement of outgoing students during the year

197

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.2.3 - Number of recently graduated students who have progressed to higher education (previous graduating batch) during the year

18

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.3 - Student Participation and Activities

5.3.1 - Number of awards/medals won by students for outstanding performance in sports/cultural activities at inter -university/state/national/international events (award for a team event should be counted as one) during the year

0

File Description	Documents
Upload the data template	**No File Uploaded**
Upload relevant supporting document	**No File Uploaded**

5.3.2 - Presence of Student Council and its activities for institutional development and student welfare

The Student Activity Board (SAB)supervises all student activities and ensures the well-being of students on campus.. Dean (Student Activities, Student Welfare and Outreach) heads the SAB with Registrar, IIST; Heads of all Department, Chairpersons of various student committees and student representatives as members. The different student committees, - Sports, Technical, Cultural, Hostel and Canteen, are chaired by a senior faculty member and consist of faculty members and student representatives. The student representatives provide feedback and suggestions on all aspects concerning student issues on campus (curricular and co-curricular) to the committee. The SAB meets once a month or as and when needs arise. The different committees with the support of SAB

organize and coordinate Dhanak, the intercollegiate cultural fest, Conscientia, the inter-collegiate Tech Fest, the Annual Sports Day of IIST and all other student's activities in IIST. The 17 student's clubs, the mentoring programme, a voluntary service rendered by the faculty members of IIST and the counselling services functioned actively under the Students Activity Board during the period. This provided friendly guidance and academic support to the students. Online induction programmes were organized by the SAB at the beginning of the academic sessions.

File Description	Documents
Upload relevant supporting document	[View File](#)

5.3.3 - Number of sports and cultural events / competitions organised by the institution during the year

7

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

5.4 - Alumni Engagement

5.4.1 - The Alumni Association/Chapters (registered and functional)contributes significantly to the development of the institution through financial and other support services during the year

The IIST Alumni Association (IISTAA) contributed to the following areas during the year 2021-2022:

Alumni for Students: IISTAA organized an interaction with the alumni to provide insights on life in campus and Trivandrum, courses, opportunities for higher studies and importance of skill development. IISTAA also used the money raised (via fundraiser from alumni) to purchase laptops for a few students of IIST.

Competitions: On the occasion of 75 years of India's Independence and 15 years of IIST, IISTAA organized a contest for students and alumni of IIST, regarding IIST's impact over the past 15 years and their vision in building the future of Indian Space ecosystem. As part of Hindi Day celebrations, IISTAA organized an online quiz for the students of IIST.

Lecture Series & Webinars: Webinars on following topics were conducted:

- **3D printing**

- **Mapping the universe in 3D**

- **Guide to MBA**

- **Save Soil**

- **Women & Spaceflights**

Feedback: Based on a request by the Department of Mathematics, IISTAA shared their inputs on improvements required in the MA122 course at IIST.

Outreach Programmes: Programmes related to Art & Science were also continued.

File Description	Documents
Upload relevant supporting document	[View File](#)

5.4.2 - Alumni contribution during the year (INR in Lakhs)	**E. <1Lakhs**

File Description	Documents
Upload relevant supporting document	[View File](#)

GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 - Institutional Vision and Leadership

6.1.1 - The institution has a clearly stated vision and mission which are reflected in its academic and administrative governance

IIST has a clearly stated vision and mission which are reflected in its academic and administrative governance.

Vision:

To be a world-class educational and research institution contributing significantly to Space endeavours.

Mission:

- Create a unique learning environment enriched by the challenges of the Space Programme.
- Nurture the spirit of innovation and creativity.
- Establish centres of Excellence in niche areas.
- Provide ethical and value-based education.
- Promote activities to address societal needs.
- Network with national and international institutions of repute.

It is envisioned to create a distinctive teaching-learning ecosystem that could amply nurture young minds. IIST enriches the spirit of inquisitiveness, instills social sensitivity, and provides ethical and value-based education. It inculcates entrepreneurial skills and ensures social responsibility. It provides opportunities for academic and research collaborations with nationally/internationally reputed universities/institutes. Students do projects/internships at CalTech and ANU- FRT, NTU, Boulder Colorado etc., to get better exposure. Besides, it has MoUs with several institutes and universities of repute. It has set up various monitoring/facilitating bodies. They are Research Council (RC) headed by Dean (R & D), Advanced Space Research Group (ASRG) headed by Chief Technology Officer, Space Technology and Industrial Incubation Centre (STIIC) headed by a senior faculty for incubating start-up companies.

File Description	Documents
Upload relevant supporting document	[View File](#)

6.1.2 - The effective leadership is reflected in various institutional practices such as decentralization and participative management

The Institute's executive bodies include the Governing Body chaired by the Secretary-DoS, the Additional Secretary-DoS, the Joint Secretary-DoS (Personnel), and the Scientific Secretary-DoS as members and the Joint Secretary-DoS (Finance)as an invitee, and the Director, IIST as member secretary. This is followed by the Board of Management and the Academic Council. The Director IIST heads the institute, under whom Deans, Registrar, department heads, faculty members, officers, and staff remit their duties. Dean (Academics) manages academic activities; Dean (R&D and IPR) R&D, handles projects, and patent-related activities, and Dean (Student Activity, Student

Welfare, and Outreach) leads student support activities. Registrar heads the administration and is supported by deputy registrars. Deputy Registrar (Academics) takes care of exams, admissions, and other academic responsibilities. Deputy Registrar (Finance) monitors accounts and financial matters; the procurement of various equipment/ facilities is managed by Deputy Registrar (Purchase) and Deputy Registrar (Stores), and the administration is by the Deputy Registrar (Administration). The recruitment and review are handled by the Deputy Registrar (Recruitment and Review). A Senior Administrative Officer monitors the Establishment/Public Relations/Transport Operation and Maintenance Division (TOMD).

Other sections include Canteen, CMD, IT& software, official language, Hostel, Library, Sports, Medical, Transport, and CISF teams are overseen by different committees.

File Description	Documents
Upload relevant supporting document	[View File](#)

6.2 - Strategy Development and Deployment

6.2.1 - The institutional Strategic plan is effectively deployed

The institute offers cutting-edge courses focusing on the integration of all the programmes. The institute follows a Credit-Based Semester System (CBSS) ensuring effective time utilization and course selection. It also facilitates internships/projects at IIST and internationally reputed institutes. Core and elective courses are offered to encourage knowledge in interdisciplinary areas. The institute has an in-house developed Moodle-based Learning Management System, for online learning. Apart from the instructed courses, students are allowed to take SWAYAM, and NPTEL, courses offered by MHRD.

Our students and faculty members are deeply involved in developing indigenous systems and subsystems of various payloads/nanosatellites/sounding rockets. In order to cater to and facilitate the inquisitiveness of the students in developing the above systems, IIST established the Small Spacecraft System and PAyload CEntre (SSPACE) which gives an opportunity for the institutes in India and abroad. It develops onboard Computers, Electrical Power, Communication, Attitude Determination, and Control Systems. It developed a student satellite INSPIRESat-1 in collaboration with the Laboratory of

Space Physics, University of Colorado, NTU Singapore, and National Central University, Taiwan.

IIST has a Space Technology Innovation and Incubation Cell (STIIC) and an Advanced Space Research Group (ASRG) for developing infrastructure, innovators, and entrepreneurs, and for collaborative research.

File Description	Documents
Upload relevant supporting document	[View File](#)

6.2.2 - The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures, etc.

The Director, in consultation with senior officials, and Deans, formulates various Committees and administrative policies for the smooth functioning of the Institute. The annual budget, finance, and audit queries are overseen by Director, Registrar, and Deputy Registrar (Finance) in conformity with DoS rules and regulations. Registrar and Director oversees civil works and Dean (Academics), ensures that academic policies are uniform and in accordance with the UGC rules.

The IQAC ensures various programmes for institutional functioning towards quality enhancement as per NAAC Guidelines and prepares AQAR annually. Apart from that faculty members, officers, and staff, should submit Annual Performance Report for assessing their performance every year.

The manpower requirement of the institute for various academic, administrative, and research activities are monitored, assessed, and vacancies are notified in leading print media/ IIST website (https://www.iist.ac.in/career/opportunity). The project fellows, SPF and JPF are recruited and paid as per UGC mandate.

The administrative ladder of IIST consists of Director, Registrar, and Deans followed by faculty, officers, and staff. IIST has 95 faculty members, to conduct lectures, tutorials, and practical sessions; 25 technical officers/staff to support lab and research activities, 10 permanent administrative officers and 10 office assistants, and 341 contract employees to support various activities.

File Description	Documents
Upload relevant supporting document	[View File](#)

6.2.3 - Institution Implements e-governance in its areas of operations

6.2.3.1 - e-governance is implemented covering following areas of operation 1. Administration 2. Finance and Accounts 3. Student Admission and Support 4. Examination	A. All of the above

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

6.3 - Faculty Empowerment Strategies

6.3.1 - The institution has a performance appraisal system, promotional avenues and effective welfare measures for teaching and non-teaching staff

The Annual Performance Assessment Report (APAR) of all permanent employees is submitted to the reporting officer and a three-tier reviewing system is in place. The head of the department/controlling officer reviews the report and forwards it to the next levels for assessment and approval. A copy of the graded APAR will be communicated to the concerned faculty/employee from the office of the registrar, IIST. Grievances can be represented within 15 days from the date of their receipt. IIST follows a Merit Promotion Scheme (MPS) for permanent faculty members and Limited Flexible Complement Scheme (LFCS) for its permanent Administrative Staff. Other welfare programmes include:

- Organizational (@ 10 to 16 %) and Group (@ 7 to 9.5%) Performance Relative Incentive Scheme of basic salary.
- Medical Welfare Program
- CHSS (1% of their basic pay monthly)
- 24X7 Health centre and Polyclinic facility
- In-house counseling center
- LTC scheme
- SAFE (Scheme for Assistance to Families in Exigency)

- **Vikram A. Sarabhai Trust (VAST)**
- **Financial Assistance in Exigency (FAE)**
- **Financial support for purchasing computers**
- **Housing loan Scheme**
- **Transport allowance/conveyance facility**
- **Financial support for membership in scientific and professional bodies**
- **Professional update allowance/Space technology allowance**
- **Reimbursement of telephone/internet bill**
- **Pension scheme**
- **Earned leave encashment/Sabbatical Leave/Maternity Leave/Paternity Leave/Child care Leave**

File Description	Documents
Upload relevant supporting document	[View File](#)

6.3.2 - Total number of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

32

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

6.3.3 - Number of professional development / administrative training Programmes organized by the institution for teaching and non-teaching staff during the year

15

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

6.3.4 - Total number of teachers undergoing online/ face-to-face Faculty Development Programmes (FDP)during the year(Professional Development Programmes, Orientation / Induction Programmes Refresher Course, Short Term Course)

11

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

6.4 - Financial Management and Resource Mobilization

6.4.1 - Institutional strategies for mobilisation of funds and the optimal utilisation of resources

The major funding is from DoS for recurring and non-recurring expenses. It comes in the form of an annual Grant-in-Aid for meeting Capital, General, and Salary expenditure. In addition, IIST receives funds from other ISRO centers through the projects approved under ASRG. The other incomes are from extramural funds (DST-SERB, ICSSR, MoES, DBT, Ministry of Electronics and Information Technology -MeitY), tuition fees, application fees, etc.

For optimizing resources, IIST follows the biannual model BE (Budget Estimate)-RE (Revised Estimate). We consolidate and review budget requirements from the departments/sections and recommendations are made to DoS. On receipt of the budget, the expenditure is incurred as per the approved budget/line item under the management of the budget coordinators at department/section/institute levels. A higher-level committee led by the Director takes care to achieve the expenditure targets by conducting reviews regularly. Based on the review of the expenditure, by DoS, it releases the fund on a quarterly basis (22%,23%,25%,30%).

Each financial year the institute prepares a road map for completing the technical reviews and financial appraisals of major technology development programmes, facilities, research labs, and projects. Funds generated through other resources like Extramural Grants etc. are utilized as per applicable guidelines of IIST and Funding Agencies.

File Description	Documents
Upload relevant supporting document	[View File](#)

6.4.2 - Funds / Grants received from government bodies during the year for development and maintenance of infrastructure (not covered under Criteria III and V) (INR in Lakhs)

3500

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting document	[View File](#)

6.4.3 - Funds / Grants received from non-government bodies, individuals,philanthropists during the year for development and maintenance of infrastructure (not covered under Criteria III and V)(INR in Lakhs)

0

File Description	Documents
Upload the data template	**No File Uploaded**
Upload relevant supporting document	**No File Uploaded**

6.4.4 - Institution conducts internal and external financial audits regularly

IIST has a well-framed financial auditing system with expertise and guidance provided on a timely basis by DoS. The institution has three different audits. The finances are audited with respect to purchases, academics, and accounts. The detailed audited statements are tabled in the parliament regularly along with the Annual Report.

A. Statutory Audit:- It is carried out on a yearly basis by CAG-empaneled Chartered Accountants. Financial statements are certified by Chartered Accountants and financial compliance is ensured.

B. Internal Audit: - It is carried out by the Department of Space on a regular basis. Procedural compliances in finance, purchase, and administrative areas are reviewed. Audit queries raised are replied and corrective actions wherever necessary are taken in accordance with the advice of the internal auditors.

C. CAG Audit: - It is carried out every few years with an emphasis on propriety and efficiency. Audit objections raised are clarified and corrective measures are adopted wherever necessary.

Audited Financial Statements are uploaded on the Institute's website. The link for the statement for the year 2021-22 is

given below:-

https://www.iist.ac.in/sites/default/files/library/IISTAnnualRe
port2021-22English.pd

File Description	Documents
Upload relevant supporting document	[View File](#)

6.5 - Internal Quality Assurance System

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes by constantly reviewing the teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals

The IQAC committee meets periodically, reviews the institute's activities, and recommends and implements corrective measures. IIST customised Moodle Learning Management System (LMS) during the Covid-19 Pandemic for use in the odd semester of 2021-2022. The platform permits students to submit their assignments, give quizzes and examinations and allows faculty to evaluate. Even if the classes for the first semester of the 2021 batch were in online mode, there was an online induction programme for B. Tech, M. Tech and Ph D scholars, giving orientation regarding the course structure, and communication skills. An interactive session with the alumni who have excelled in various fields was also arranged to motivate them. All these were initiated as per the advice from IQAC. There were Class Committees and Course Committees that regularly met and monitored the feedback of students on classes offered. They gave inputs regarding the delivery of lectures, assessment and evaluation and also report anomalies of any kind.

The other initiatives include Outcome Based Education, National Education Policy, Start-ups and an Incubation Centre, and Faculty Development Programmes. In 2021-2022 five startups were established and two Faculty Development Programmes were conducted.

File Description	Documents
Upload relevant supporting document	[View File](#)

6.5.2 - Institution has adopted the following for Quality assurance Academic	B. Any 4 of the above

Administrative Audit (AAA) and follow up action taken Confernces, Seminars, Workshops on quality conducted Collaborative quality initiatives with other institution(s) Orientation programme on quality issues for teachers and studens Participation in NIRF Any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)

File Description	Documents
Upload the data template	[View File](#)
Upload relevant supporting documment	[View File](#)

6.5.3 - Incremental improvements made for the preceding during the year with regard to quality (in case of first cycle) Post accreditation quality initiatives(second and subsequent cycles)

In 2022, in line with the recommendations of the NAAC exit report 2013, a new PG programme on Quantum Technology was started. Inter-departmental collaborations and inter-disciplinary courses were also offered and tutorials were made mandatory. All classrooms were equipped with audiovisual facilities to suit the hybrid mode of teaching. During the Pandemic period, the institute successfully finished the academic activities via online mode, incorporating all the variants of courses including theory courses, lab courses (virtual lab simulation/recorded), internships, projects, etc. Courses were managed, and internal assessments and exams were conducted through MOODLE. Projects and Internships of all students were completed through hybrid mode. MoUs were signed with The Delft Technical University (TU Delft), The Netherlands, on July 22, 2021, for carrying out Academic programs and Joint Research activities, including students and faculty exchange programs. This is in addition to the already existing MoUs with national and international institutes.IIST has a Space Technology Innovation and Incubation Cell (STIIC) andan Advanced Space Research Group (ASRG) for developing infrastructure, for innovators and entrepreneurs, and for collaborative research. New hostels, canteen buildings, gymnasium, indoor stadium (badminton and squash courts), student activity centre, Multipurpose hall, Underpath with a new entrance are constructed.

File Description	Documents
Upload relevant supporting document	[View File](#)

INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 - Institutional Values and Social Responsibilities

7.1.1 - Measures initiated by the Institution for the promotion of gender equity during the year

- **Gender Sensitization Committee with representatives from both genders is active in IIST**

- **International Women's Day Celebration at IIST was celebrated in hybrid mode on 9th March 2022. Dr. Vinitha V. Nair, Cardio Thoracic Surgeon, Medical College-Thiruvananthapuram was the Chief Guest for the function. Her talk was highly motivational and sensitized the women in IIST.An exhibition cum sale by IIST students and the women staff members showcasing their talents was organized on the day.**

- **The students of IIST organized a cultural evening on the day asa tribute to the Late Smt Lata Mangeshkar, the Queen of Melody: Nightingale of India.**

- **The Internal Complaints Committee (ICC), IIST gives awareness to the employees and students about ICC and gives confidence to the women coming/working on the campus.**

  An online seminar on the act of Sexual Harassment at the workplace is conducted on 9th December 2021, to commemorate the 8th anniversary of the notification of the landmark legislation and to sensitize the IIST community on the Prevention, Prohibition, Redressal Act 2013, (POSH-2013). Prof. Bismi Gopalakrishnan, Dean, Faculty of Law, MG University, spoke on the subject. On 10th December2021, the ICC organized an awareness talk on SHIS-2013 for the first-year B.Tech students (2021 Batch) by Ms. Ishani, Campaigns Manager, Gender & Sexuality team & Ms. Margaret Johnson, Youth Engagement Strategist, Jhatkaa.org.

File Description	Documents
Upload relevant supporting document	[View File](#)
Annual gender sensitization action plan(s)	https://www.iist.ac.in/sites/default/files/Internal-Complaints-Committee/Gender%20sensitization%20action%20plan%202021-22.pdf
Specific facilities provided for women in terms of: a. Safety and security b. Counseling c. Common rooms d. Daycare Centre e. Any other relevant information	https://www.iist.ac.in/sites/default/files/Internal-Complaints-Committee/Gender%20sensitization%20action%20plan%202021-22.pdf

7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation Solar energy Biogas plant Wheeling to the Grid Sensor-based energy conservation Use of LED bulbs/ power-efficient equipment	**B. Any 3 of the above**

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.3 - Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 200 words) Solid waste management Liquid waste management Biomedical waste management E-waste management Waste recycling system Hazardous chemicals and radioactive waste management

A no-waste incinerator is maintained on the campus for proper waste disposal. Napkin Incinerators are also installed in all ladies' hostels and one ladies' toilet each in all academic buildings. A Bio Gas plant is operated and maintained by Canteen Services and the byproducts of biogas are used as fertilizer. A compost pit has been made where dry leaves are collected and disposed of and used for gardening purposes. Food waste, plastic waste, and paper waste are collected separately and disposed of. For collecting these, separate dust bins are provided on each floor of all buildings. The campus has banned the use of plastic. Still, it comes to the campus along with some purchases by the students staying in hostels. Plastic bottles, disposed of by students are reused for planting. As

part of the Green Kerala Mission policy, the plastic waste generated on the campus is also disposed of through Haritha Karma Sena, an authorized/registered recycler. Paper waste generated is shredded using Paper Shredders within the campus and disposed of through authorized recyclers. Water treatment plants are installed inside the campus for recycling used water which is later used for gardening purposes. E-waste is condemned through an outside authorized agency for the purpose.

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.4 - Water conservation facilities available in the Institution: Rain water harvesting Bore well /Open well recharge Construction of tanks and bunds Waste water recycling Maintenance of water bodies and distribution system in the campus

A. Any 4 or all of the above

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.5 - Green campus initiatives include

7.1.5.1 - The institutional initiatives for greening the campus are as follows: 1. Restricted entry of automobiles 2. Use of bicycles/ Battery-powered vehicles 3. Pedestrian-friendly pathways 4. Ban on use of plastic 5. Landscaping	A. Any 4 or All of the above

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.6 - Quality audits on environment and energy are regularly undertaken by the institution

7.1.6.1 - The institution's initiatives to preserve and improve the environment and	D. Any 1 of the above

harness energy are confirmed through the following:

1. **Green audit**
2. **Energy audit**
3. **Environment audit**
4. **Clean and green campus recognitions/awards**
5. **Beyond the campus environmental promotional activities**

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.7 - The Institution has a disabled-friendly and barrier-free environment Ramps/lifts for easy access to classrooms and centres. Disabled-friendly washrooms Signage including tactile path lights, display boards and signposts Assistive technology and facilities for persons with disabilities: accessible website, screen-reading software,mechanized equipment, etc. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading materials, screen reading, etc.

A. Any 4 or all of the above

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e. tolerance and harmony towards cultural, regional, linguistic, communal, socio-economic and other diversities (within a maximum of 200 words)

In September 2021, IIST organized the IIST@Schools online program for 250 students from Kumari Arivial Peravai NGO, aiming to create awareness about space science and technology and uncover hidden talents. NIRMAAN, the social outreach club of IIST, conducted online classes from January to March 2022, covering topics like personality development and astronomy for Kumari Arivial Peravai students. NIRMAAN volunteers also engaged in community service, assisting in community kitchens in Kerala and distributing masks, books, and sanitizers to

children in an orphanage. IIST celebrated Onam virtually in September 2021, focusing on cultural significance and promoting unity. Induction programs were conducted for newly joined B.Tech., M.Tech., and Ph.D. students to facilitate their transition into IIST life. IIST supported Muslim scholars and colleagues by providing food as per their timing during the fasting period of Ramzan. The institute also celebrated the 75th Independence Day with various events, including music performances, dance, acting, and comedy. The Movie and Performing Arts Club of IIST promoted performing arts and stagecraft. Antarish Dhaaraayen, the in-house Hindi journal, featured articles, poems, reports, and technical content. World Hindi Day celebrations in 2022 included competitions for students and activities for employees. IIST observed the International Day of Yoga in 2021, bringing students and staff together for a virtual session.

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.9 - Sensitization of students and employees of the institution to constitutional obligations: values, rights, duties and responsibilities of citizens:

IIST actively participated in the Azadi Ka Amrit Mahotsav initiative, celebrating 75 years of independence. Rashtriya Ekta Diwas (National Unity Day) and Constitution Day were observed, honoring the Indian Constitution and promoting unity. Induction programs were conducted for BTech and MTech scholars, focusing on the institute's environment, ethical conduct, and sexual harassment prevention. The Humanities department offered courses on social science, ethics, and economics, covering citizens' rights and responsibilities.

Swachhta Pakhwada 2021 aimed to fulfill Mahatma Gandhi's vision of a clean society. The Universal Human Value course, sponsored by AICTE, was implemented. National Engineer's Day paid tribute to Bharat Ratna Sri Moksha Gundam Visvesvaraya. Vigilance Awareness Week highlighted self-reliance with integrity.

Due to the pandemic, Dr. B. R. Ambedkar's birth anniversary involved distributing sweet packets instead of arranging lunch. Independence Day and Republic Day were celebrated with dignity, commemorating the spirit of freedom fighters. Grand celebrations at IIST included a message from the Registrar and a guest of honor inspection.

7.1.10 - The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard. The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff Annual awareness programmes on Code of Conduct are organized	Any 3 of the above

File Description	Documents
Upload relevant supporting document	[View File](#)

7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

- Constitution Day was celebrated on 26th November 2021 in IIST to commemorate the adoption of the Indian Constitution.

- Swatch Bharat Program in IIST was organized and competitions were held to identify the best-kept rooms in IIST. All the Administrative Sections, Department Offices, Academic blocks and hostels were inspected and prizes awarded to best kept rooms.

- IIST celebrated Independence day 2021 and Republic day 2022 were celebrated in all its grandeur inIIST celebrated virtually the vibrant and joyous festival of Onam on 28th September to familiarize the culture of the land and its people and inculcate the profound spirit of oneness and equality, which is associated with Onam 2021.

- IISTAA conducted an online panel discussion on 'Women and Spaceflight : Charting the Future', in connection with International Women's Day 2022, on 27th March 2022.

- Hindi Day was celebrated from 10th to 15th January 2022.

- **The birth anniversary celebration of Dr. B. R. Ambedkar was celebrated on 30th November, 2021.**

- **Rashtriya Ekta Diwas (National Unity Day) on 31st October, 2021 with the activities of Azadi Ka Amrith Mahotsav was organized in IIST.**

File Description	Documents
Upload relevant supporting document	[View File](#)

7.2 - Best Practices

7.2.1 - Describe one best practice successfully implemented by the Institution as per NAAC format provided in the Manual

1. **Title of the Practice – Hands-on training on Space Technology through Small-spacecraft Systems and PAyload CEntre (SSPACE)**

2. **Objectives of the Practice -The center aims to provide practical experience in spacecraft engineering, create industry-ready professionals, collaborate with industries, and promote indigenous development for the space industry.**

3. **The Context-India aims at excelling in space technology, necessitating hands-on training at the unique space institute to ensure self-reliance.**

4. **The Practice - The Small-spacecraft Systems and PAyload CEntre (SSPACE) at IIST drives small satellite projects with student involvement, promoting interdisciplinary collaboration, specialization in subsystems, and student-to-student learning. Notable initiatives include IIST Cubesat, INSPIRE missions, nanosatellites for the Venus mission, and science payload projects. Students engage in a space mission design contest, credit internships, and projects, fostering skill development and teamwork. Participation from students of other institutes is encouraged as well.**

5. Evidence of Success –

   1. ARIS [PS4 payload, Q2-2019] [Advanced (Retarding Potential Analyser) for Ionosphere Studies]

   2. InspireSat-1 [Q1-2022]

   3. Design and development of small satellite subsystems including OBC, EPS, communication board, ADCS, and cold gas thrusters.

   4. Ground Station

6. Problems Encountered and Resources Required –Student-driven satellite projects face challenges in student commitment (due to other academic work) and knowledge transfer, as well as the interdisciplinary nature of satellite development. Addressing these challenges professionally is crucial for project success at the institute. Resources Required include,

   1. Laboratory space

   2. Design and Simulation Software, Workstations

   3. Satellite Assembly Tools

   4. Test and Measurement Equipment

   5. Cleanroom Facilities

   6. Communication and Tracking Systems

   7. Power and Electrical Systems, Mechanical Fabrication Equipment, Safety Equipments

7.3 - Institutional Distinctiveness

7.3.1 - Highlight the performance of the institution in an area distinct to its priority and thrust (within a maximum of 200 words)

A significant highlight of the academic year 2021-22 for IIST was the successful launch of their first student satellite, INSPIRESat-1, from Sriharikota on February 14, 2022. Developed jointly by Small-spacecraft Systems and PAyload CEntre (SSPACE)

at IIST in India and the Laboratory of Space Physics at the University of Colorado, Boulder, USA, the satellite weighs less than 10 kg. It is a collaborative effort aimed at providing education and space science research opportunities to students from various universities, including NTU in Singapore and NCU in Taiwan.

INSPIRESat-1 serves scientific purposes, with two main objectives. Firstly, it aims to enhance our understanding of ionosphere dynamics by observing ion temperature, composition, density, and velocity, thereby characterizing plasma parameters and irregularities in the low- and mid-latitude ionosphere. Secondly, it seeks to improve our knowledge of the sun's coronal heating processes by measuring the Soft X-Ray spectrum.

The satellite's electronics were constructed using Commercial off-the-shelf (COTS) components, many of which have a space heritage, resulting in a cost-effective system. The spacecraft underwent integration and testing at the Laboratory for Atmospheric and Space Physics (LASP), including thermovac and vibration tests. It was then transported to IIST for ground station integration and further testing. Since its successful launch on February 14, 2022, via PSLV C-52, INSPIRESat-1 has been successfully transmitting scientific data.

7.3.2 - Plan of action for the next academic year

1. More Academic activities:

   - Offer more value-added courses
   - Conduct more invited lectures
   - Plancourses by Industrial experts
   - Revision of Curriculum in line with NEP

2. Introduceinternship with institute fellowship for external students

3. Invite more industries for enhancing placements

4. Start online courses in space-related areas