YEARLY STATUS REPORT - 2023-2024

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	Prof. Dipankar Banerjee
• Designation	Director
• Does the institution function from its own campus?	Yes
• Phone no./Alternate phone no.	04712568402
• Mobile no	9448908461
• Registered e-mail	registrar@iist.ac.in
• Alternate e-mail address	director@iist.ac.in
• City/Town	Valiamala 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. Kuruvilla Joseph**
• Phone no./Alternate phone no	**04712568403**
• Mobile	**9447366479**
• IQAC e-mail address	**iqac@iist.ac.in**
• Alternate Email address	**iqac-office@iist.ac.in**
3.Website address (Web link of the AQAR (Previous Academic Year)	https://events.iist.ac.in/IQAC/pdf/aqar/aqar2023.pdf
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/sites/default/files/academic/calendar/ar/Academic%20Calendar%202023-24.pdf

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**	**Nil**	**Nil**

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	**16**	
• The minutes of IQAC meeting and compliance to the decisions have been uploaded on the institutional website. (Please upload, minutes of meetings and	**Yes**	

action taken report)		
• (Please upload, minutes of meetings and action taken report)	View File	
10.Whether IQAC received funding from any of the funding agency to support its activities during the year?	**No**	
• If yes, mention the amount		

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

Task Teams for preparation of SSR for 2018-2023 formed and initiated the work

A data portal (for data collection) and a webpage (for IQAC) are developed for institute data collection and uploading

IQAC @ IIST has initiated bringing state of art 5G/6G Testbeds facility through national initiative

IQAC @IIST is active in conducting seminars, workshops, invited lectures, and other interactions.

Energy ,Green and Gender Audit are initiated and conducted

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
To Initiate more MoUs	Signed 6 National and 2 International MoUs
To initiate Green, Gender,Energy, and Academic Audits	Completed green, Gender and Energy audits and report submitted. Academic Audits in progress
Initiated formalities for approval of new BTech Computer Science Programme	Board of Management approval obtained
To expediate formalities for new patent filing and processing	7 application filed and 9 patents granted
To initiate more academic and personal development support for diverse categories of students	Strengthened the academic environment through buddy mentoring system
Digital Data Portal created and data uploading to be initiated	Data Portal completed and updating of relevant data in progress
Syllabus for courses of Indian Knowledge System (IKS)	Syllabus framed and course on Introduction to IKS offered
Completion of the curriculum revision for B.Tech Aerospace Engineering, B.Tech Electronics and Communication Engineering (Avionics) and B.Tech in Engineering Physics, in-line with NEP	Curriculum revision completed and will be implemented in the AY 2024-2025
SSR (2018-2023) to be prepared for NAAC	SSR preparation in progress
To establish advanced research facilities under national initiatives	Received approval to establish state of the art 5G/6G Testbeds facility through national initiative

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

- Name of the statutory body

Name	Date of meeting(s)
IQAC	21/01/2025

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

Year	Date of Submission
2023-2024	21/01/2025

16.Multidisciplinary / interdisciplinary

The programs, 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. In 2023, the curriculum committee for both the Undergraduate program and the dual degree program was re-constituted to revise the curriculum in line with NEP-2020. Here's an overview of how this aspect is reflected in the curriculum of various programs, 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 program 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 Engineering 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 program, 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 analog 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 programs 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 programs 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 program 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: (1) Solid State Physics -Concentrating on the study of properties

and applications of solid materials, (2) Earth Systems, and Science- Focusing on studying Earth's systems, including geology, climate, and environmental science. (3) Astronomy and Astrophysics- Concentrating on the study of celestial objects, their properties, and the universe, and (4) Optical Engineering: Covering the principles and applications of optics and photonics. IIST offers 15 M.Tech programs spanning six departments, promoting multidisciplinary research and learning, as seen from the curriculum, which will be meticulously revised once in three years. The programs 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 programs are coordinated by the departments as follows: The Department of Aerospace Engineering: Aerodynamics and Flight Mechanics, Structures and Design, Thermal and Propulsion, Manufacturing Technology The Department of Avionics: Digital Signal Processing, Power Electronics, RF and Microwave Engineering, VLSI and Microsystems, Control Systems, The Department of Earth and Space Sciences: Earth System Science, Geoinformatics, Astronomy and Astrophysics. The Department of Chemistry: Materials Science and Technology. The Department of Mathematics: Machine Learning and Computing. The Department of Physics: Optical Engineering, Quantum Technology. 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):

Implementation of Academic Bank of Credits is Initiated in the institute in 2022. This was deliberated and approved in the IIST Board of Management meeting held in July 2023. Degree certificates (UG, PG, PhD) of 2021,2022,2023 passed out batches are uploaded in the Digilocker. Uploading of transcripts is in progress.

18.Skill development:

IIST students 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 PILOT(Pslv-orbital Obc and Thermals), successfully in April 2024. The PILOT is a technology demonstration student payload designed for PSLV Orbital Experimental Module (PEOM) which is indigenously developed in IIST. The sub system- Onboard Computer for the future missions such as AHAN (IIST student satellite) was also tested in the PS4 stage. It is again 'unique' to specify the establishment of a Satellite Ground Station (probably one of its kind in academic community), which is successfully managing telecommand, telemetry, and data reception for various missions. It is used for IIST's own missions such as INSPIRESat-1 etc., as well as to support some of the external missions including some start-up initiatives.The design, development and commissioning phase of the ground station was a true learning experience for the student- faculty research team. All these activities enrich the technical skills for the students.

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

The institute introduced a new elective course on Indian Knowledge Systems (IKS) for final-year BTech students across all branches in the academic year 2023-24. The course is organized into four modules. The first module provides an introduction and overview of Indian Knowledge Systems. Modules two and three focus on the remarkable advancements of ancient India in science and technology, particularly in the areas of astronomy, mathematics, and the ingenious design and development of Indian musical instruments. The fourth module explores Indic perspectives on universal human values. By connecting the scientific and technological achievements

discussed in Modules 2 and 3 with the traditional value systems covered in Module 4, the course fosters a comprehensive understanding of the Indian Knowledge System. In addition to this course, the institute promotes wellness and holistic development through its Yoga Club. Yoga classes are offered as part of the induction program for new students and are conducted regularly under the guidance of trained yoga instructors. These sessions enhance physical and mental well-being and provide students with practical tools for stress management and self-discipline, aligning with the core principles of Indian Knowledge Systems.

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

IIST has moved 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, from the academic year 2021- 2022, and it is continuing. 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:	**18**

File Description	Documents
Data Template	View File

1.2	**7**

Number of departments offering academic programmes	

2.Student

2.1 Number of students during the year	**883**

File Description	Documents
Data Template	View File

2.2 Number of outgoing / final year students during the year:	**264**

File Description	Documents
Data Template	View File

2.3 Number of students appeared in the University examination during the year	**883**

File Description	Documents
Data Template	View File

2.4 Number of revaluation applications during the year	**0**

3.Academic

3.1 Number of courses in all Programmes during the year	**272**

File Description	Documents
Data Template	View File

3.2 Number of full time teachers during the year	**96**

File Description	Documents
Data Template	View File

3.3 Number of sanctioned posts during the year	**0**

File Description	Documents
Data Template	No File Uploaded

4.Institution

4.1 Number of eligible applications received for admissions to all the Programmes during the year	**32088**

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	**234**

File Description	Documents
Data Template	View File

4.3 Total number of classrooms and seminar halls	**44**
4.4 Total number of computers in the campus for academic purpose	**833**
4.5 Total expenditure excluding salary during the year (INR in lakhs)	**7331.25**

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

The curriculms@IIST has been systematically developed by kepping importanceof fundamental knowledge in STEM courses, where students get an option to choose elective courses in interdisciplinary fields, space-related topics. It provides a multi-track option with hands-on experience through internships, field-works, and projects at space research centres.The curriculum of allundergraduate/graduate programs is developed/updated/reviewed by the

department curriculum committee, consists of experts from ISRO/DoS centres and other stakeholders. This is vetted by BoS and the academic Council. While meeting the national needs it ensures alignment with international standards and practices by fostering international collaborations and facilitating knowledge exchange on a global scale.

The curricula @ IIST is developed and implemented in a structured manner aligning with vision and mission of the institute. This is reflected in Program Outcomes (POs), Programme Specific Outcomes (PSOs), Course Outcomes (COs). A holistic development via co curricular /extracurricular activities at different levels are envisaged in the curriculum. The POs and PSOs, Course Outcomes (COs) mappings, stakeholder-feedback, Practical-Applications, Interdisciplinary-Approach, Performance-Metrics, Quality-Assurance, flexibility in selecting electives and specializations, Integration of Research components, and the possibility of Industry Collaboration are reflected in the curriculum.

File Description	Documents
Upload relevant supporting document	View File

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

0

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

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

152

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

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

0

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

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

18

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

1.3 - Curriculum Enrichment

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

Four courses offered as part of the undergraduate programs, cover various aspects related to gender, gender equality, issues faced by marginalized communities, environmental issues and solutions, and sustainable development. Specifically, courses like Introduction to Economics, Social Science and Ethics, Principles of Management offered by the department of Humanities and social Sciences, and Environmental Science and Engineering offered by the department of Chemistry incorporate these topics into their curriculum.

• A course on Research methodology is offered and is mandatory to all the doctoral students of IIST.It covers certain methods that a researcher needs to know to ensure reliable, valid results that address the objectives. It encompasses the details of the data they're going to collect and the methods to analyse the data. It also gives the utmost ethics to be followed by a scientific community.

• The projects, field visits and tribal studies undertaken by students provide opportunities to collect empirical data from

society and filed of study, enabling them to understand the challenges to be faced by different groups, including women, children, transgender individuals, disabled individuals, and marginalized communities. It also covers the difficulties to be encountered, while doing field visits for data collection, especially in the filed of Geology, remote sensing, and geoinformatics.

File Description	Documents
Upload relevant supporting document	View File

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

9

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

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

745

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

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

296

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

1.4 - Feedback System

1.4.1 - Structured feedback for design and review of syllabus – semester wise / is received from Students Teachers Employers Alumni	• All 4 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 taken and feedback available on website

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

429

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

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

271

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

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 adopts a continuous evaluation scheme for assessing academic performance.**
- **Continuous assessment accounts for 50% (two quizzes- 15% each, and assignments, class tests/seminars/mini-projects – 20%).**
- **The remaining 50% is determined by an end-semester examination.**
- **Underperformers in the first year are offered summer courses, which include lectures and tutorials for assisting them for examination.**
- **A class Committee -comprising head of the department, all course instructors and student representatives- meets to assess the progress, and address students' concerns/grievances related to the ongoing classes , if any.**
- **At the commencement of each programme, faculty mentors a group of three/four students and meets them frequently. This helps students to communicate difficulties they face. The mentor takes necessary steps to address the same, identifies slow learners and the same is brought to the notice of the course-instructor.**
- **Peer group learning and buddy mentoring systems are also in place to support students.**
- **The professional counselors appointed by IIST give necessary support and guidance to needy students.**
- **The Humanities Department helps students in improving communication skills by designing tailored modules for different levels of learners.**
- **Advanced learners can do projects at Small-spacecraft Systems and PAyload CEntre (SSPACE) instituted by IIST. SSPACE is involved in manufacturing payloads, small satellites, related electronics, their testing and integration.**

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
883	96

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

The curriculum for all programmes has laboratory courses to provide students with practical experience applying the concepts and theoretical content they have learned in their theory courses. Several courses are associated with specific, extensive initiatives, such as satellite development, ground station data handling, and instrumentation. Students are encouraged to take up internships during their semester breaks, and a credited summer internship is mandatory for all UG students at the end of their 6th semester. Students are required to give seminars and make presentations and are encouraged to lead discussions in graduate courses, which helps them 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 centers. This helps them to get accustomed to the latest research and technological development happening in ISRO. Students, as part of the social science and economics papers, have compulsory field visits, which help 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 critically yet constructively.

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 classrooms having interactive screens, while all 35 classrooms in the institute have multimedia support and internet connectivity. In addition, students and teachers have easy access to laptops/desktops, printers, e-mail, etc. The 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 ofpod casts; online platforms; web-based libraries and online statistical data sets are also promoted. The courses are also managing through Moodle, a customized learning platform, which provides study materials, assignments, class tests and evaluation of students' progress.

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

96

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

96

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

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

15

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

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

50

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

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

15

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

15

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

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

1

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 namely, "iCampus" for the purpose of maintaining examination related activities like Students' course registration, continuous assessment record, exam management and result processing and annoucement. Faculty members who offer courses related to various programmes set the evaluation pattern and grade setting in iCampus in line with IIST academic guideline . Results are published online through this platform. Students can login to their accounts and see their internal marks and end semester results. This system helps students to know their results, by logging into their accounts. Students who do internship or course projects outside the institute are being evaluated through hybrid online/offline mode. Also, for conducting annual review of doctoral and project students the institute adopts the hybrid mode, if required. By taking into consideration of the convenience of the outside doctoral committee members of PhD students, sometimes their pre-synopsis presentations are also conducted on hybrid mode over Microsoft Teams platform configured for IIST. Assignment submission, class test, etc. are being conducted using Moodle 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

For the academic year 2023–2024, the institute has established the Programme Outcomes (POs), Programme Specific Outcomes (PSOs), and Course Outcomes (COs) of the programmes offered by the various departments. Quizzes 1 and 2, the end semester examination andinternal assessments, which comprise homework/assignments, viva, seminars, and projects, are used to bring the learning objectives of the different courses in these programmes into the continuous evaluation process. All undergraduate (UG) and postgraduate (PG) course evaluations are built on a combination of components mentioned earlier to provide students with a fair chance for evaluation. The teacher regularly evaluates the laboratory tasks to ensure the lab course's goals and objectives are met through the lab report and viva. Furthermore, the students plan, carry out, and analyse their experiments and present the findings. In addition, undergraduate students must complete a two-month-long research internship programme. Both IIST faculty members and outside researchers oversee the completion of each project. The committee appointed by the Subject Board evaluates the UG and PG project work through an oral presentation and written report. They are all uploaded on the IIST website using the iCampus interface. After finishing their coursework, PhD students must pass a comprehensive examination to complete the registration process. After each academic year, the PhD student's performance is assessed by yearly presentations to the doctoral committee. The department assesses the attainment of PO,, PSOs, and COs for each course after each semester. Details are available in https://www.iist.ac.in/iqac

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 all the departments during the academic year 2023-24. Currently, outcome based education is being initiated and followed in various programmes offered by different departments. For the UG programmes, 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 coursesthrough lab report and viva. In addition 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, attainment of the COs , POs and PSOs are evaluated. 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

257

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

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/IQAC/sss.php

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)

NIL

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

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

3

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

55

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)

56.8

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)

2271.86

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

0.76

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 nine 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, Zeroing in, Fluxx Ev Electric Pvt Ltd., Space Curve India Pvt Ltd, Hathor Rockets . These companies work in diverse fields from robotics assisted NDT, custom built 3D printers, geospatial technologies, novel propellants to the development oflaser diagnostic tools, Science popularisation, electric vehicles and rocket engines.

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

25

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

25

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

55

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

9

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

33

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

3

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

219

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
5.36	1.64

File Description	Documents
Any additional information	View File
Bibliometrics of the publications during the year	No File Uploaded

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
16	34

File Description	Documents
Bibliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	View File
Any additional information	No File Uploaded

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

Institute is under the process of framing the consultancy policy

File Description	Documents
Upload relevant supporting document	No File Uploaded

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)

NIL

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

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

The Social Outreach Club, Nirmaan, IIST, is pivotal in fostering community development through various initiatives. The club organizes science camps and remedial classes for students in government schools and tribal communities. The lecture and demo sessions explain the science behind everyday activities, astronomy, optics, rocket science, value education, and career guidance. Dhwani, a program to audio record textbooks, was also implemented to help visually challenged students at Jagathy Blind School. These interventions helped raise the confidence levels of children from underprivileged sections and raised their hopes for the future. Some schools benefitted from the activities include Govt Girls High School Nedumangad, Govt. High School, Karippoor, VK Kani Govt. High School Panacode and Govt., Govt. High school Ponmudi, Tribal High School, Meenankal and the tribal communities of Villumala, Njaruneeli and Athirapalli . Details of the activities may be found at https://www.iist.ac.in/administration/nirmaan IIST @ schools is another initiative by the institute to encourage scientific temper amongst the children from the Govt. schools and the underprivileged sections. IIST also provides opportunities for students from colleges and schools to visit the campus, interact with faculty members and visit research labs.

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

0

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

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)

14

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

515

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

36

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

121

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 undergraduates, 1 dual-degree, 15 masters, doctoral, and post-doctoral programmes, hosted in Aerospace, Avionics, Interdisciplinary, and Science blocks. There are 32-classrooms, 3-large seminar-halls, 9-mini conference halls with ICT capabilities, an open amphitheatre for 1000 people and a multipurpose hall for 450 people to enhance the academic and cultural environment. Eight classrooms, and seminar/conference rooms are air-conditioned. The average seating capacity of each classroom is sixty. All classrooms have a longer writing board, mike and speaker system, and a beamer. Also, the recording of video lectures is enabled in Audio/ visual lab using professional video recording/editing software in the interdisciplinary block. The institute uses the open-source MOODLE as an LMS tool to seamlessly interact with students and other stakeholders. IIST's Multidisciplinary Computing Centre (MCC) has a 125-teraflop computing cluster, 37-high-end workstations, three dedicated GPU servers, 3-license servers, 6 CPU servers,1 VDI server, and 400 TB storage. MCC caters to the entire institute’s scientific computing. 92instructional/research labs including high-end equipment are spread across the seven academic departments to provide hands-on experience to students. Trained lab-staff upkeep each lab/equipment. Small-Spacecraft Systems and PAyload CEnter (SSPACE) dedicated to the design and development of different payloads by the students, such as ARIS-101F, 102F, 201F, INSPIRESAT-1, PILOT. Another uniqueness of IIST is the ground station to track its own/ISRO satellites.The IT infrastructure includes a core OFC connecting to a central network room, which ensures WiFi, Ethernet (1 GBPS + 100 MBPS), and dedicated internet access via the One-GBPS National

Knowledge Network (NKN) through BSNL.

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.)

The physical and mental fitness of each student studying at IIST is the highest priority of the institute.

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

- **Open ground (110 sq.m.) for football, and cricket.**
- **Mini-football ground.**
- **200-m track**
- **Flood-litbasketball court, volleyball court.**
- **Cricket-net.**
- **3 gymnasiums (One open and two closed)**
- **Squash courts (85 sq.m.).**
- **Air-conditioned multipurpose Hall (450 persons), and aerospace seminar hall (100 persons) are used for Yoga/ cultural/ Hindi sessions/ workshops/ induction programs.**
- **IQAC used to conduct workshops for all IIST members.**
- **Recreation hall (315 sq. m.) featuring chess, billiards, and carrom.**
- **Badminton courts (two wooden and four cemented).**
- **12 Table Tennis tables.**
- **An open-air auditorium (1000 seating capacity) hosts cultural activities, yoga, and Dhanak, the cultural fest of the Institute.**
- **Music room**
- **A music club with various musical instruments is available.**
- **Hall with mirror-mounted walls for dance practice.**
- **Five rooms for club activities**

Hostels:

IIST has 9 boy’s and 2 girl’s furnished hostels (with 564 rooms) to accommodate all its students andis enabled with WiFi facilities.

Counselling and medical facility:

A hospital is inside the campus with dedicated doctors/ nurses/

student counsellor.

File Description	Documents
Upload relevant supporting document	View File

4.1.3 - Availability of general campus facilities and overall ambience

IIST is situated in Valiamala Hills, which is well away from a busy city. Its ambience is calm and serene. It is a fully residential campus for students. The hostels have modern amenities, which provide the best hospitality to the students. Each hostel is maintained by a dedicated hostel manager.IIST has a magnificent library. It has a large collection of technical and general books. It has dedicated reading and study rooms. The reprographic section in the library helps students in printing, photocopying, and binding.

Other facilities include:

- **11 hostels (9 for boys and 2 for girls) with 564 rooms**
- **Four mess halls with varying seating capacity**
- **Kitchen with mechanized food-making equipment**
- **Cafeteria, Coffee shop**
- **24x7 medical facility with doctors, two nurses, and an ambulance service**
- **Counselling centre**
- **Transport Operations and Maintenance Division (TOMD) with automobile service station (Buses/LMV/e-vehicles/traveller), workshop, fuel station and Car wash**
- **Bank with ATM**
- **Courier and postal services**
- **Rainwater-harvesting ponds**
- **Water treatment plant with disinfection and ultrafiltration capabilities**
- **Sewage treatment plant**
- **No-waste incinerator**
- **Biogas plant**
- **Compost pit**
- **Solar panel 500kW @ peak**
- **UPS power backup, 520kVA throughout the campus**
- **Separate parking areas for four-wheelers and two-wheelers**
- **Napkin incinerator**
- **Two 11 kV substations**

- Diesel generator up to 3280 kVA backup power
- 210 CCTV cameras
- Butterfly Garden
- Biodiversity park
- Three CISF-guarded gates

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)

2249.14

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

The IIST library has been automated since its inception in 2007 using NewGenLib software. Later, it was moved to Koha, an open-source ILMS. Presently, the library uses Koha (V. 20.11.06.000). The automation was done in a full-fledged manner with all functional modules. All library operations, such as acquisition, cataloguing, periodical control, circulation, administration, etc. are automated with an OPAC facility for users to search and suggest books. The facility to search the OPAC of other DoS/ISRO libraries to avail books/articles as an interlibrary loan is also available in the library.

The library provides access to digital content through the intranet and library portal. In addition, the IIST Virtual Library (IVL) facilitate 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 table top scanner is also available for users to scan their materials.

TheGraphic Design Facility in the library helps in making various digital documents such as newsletters, Annual Report, Convocation

Speeches, and Conference Proceedings etc. The library hosts the full text of PhD theses and digital copies of conference papers/posters by students in the institute website. The library archives the photographs of various events of the institute. It manages the social media pages of the institute by uploading and updating digital content of various events and programs 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)

275.39

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)

698

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

44

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

At IIST, Internet and Intranet services are the lifeline of students, faculties & staff to conduct academic, research, and administrative activities in a seamless manner. Information Technology (IT) policies of the Dept. of Space, Govt. of India is predominantly followed to administrate the IT infrastructure and services at IIST. All IISTians have privileged access to academic/ administrative information and digital resources made available within the institution and all the research entities of the Dept. of Space, Govt. of India. The institution allows use of privately-owned 'bring-your-own-IT devices' that belong to all students/ permanent employees to access the institution's IT services and Computing resources on a roaming basis within the campus and also remotely. The institution uses IT-enabled equipment and services to aid and facilitate the visualization and digitalization of lectures, conferences, reviews, and examinations. Web Technologies and IT-enabled authentication and authorization methods, including web portals, biometrics, short-messaging services, e-procurement, and digital payments, are adopted to assure safety in handling all IT services. Computer Systems Group is responsible for the operation, maintenance, and security of IIST's IT infrastructure and services. IT infrastructure and services are constantly augmented and upgraded to improve the user experience.

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
883	833

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

710.23

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.

IIST has several instructional and research laboratories. Each lab has a faculty coordinator. He is responsible to upkeep all the equipment in the respective lab. As the lab staffs are skilled, periodic maintenance shall be taken care of by them. In case of repair, the concerned vendor will be communicated and the equipment will be repaired. For the repair and maintenance expenses, a separate budget is earmarked for each department. High-value equipment are secured with annual maintenance contract which also has dedicated budget. As the research equipment was procured on demand by a faculty, it will be maintained by him. Suitable research equipment are shared between labs on demand. The class rooms are maintained by the respective head of departments of the academic blocks. Any repair of window glass panes, or furniture in the class rooms are handled by the institute's maintenance department. The audio-visual systems in the class rooms are maintained by a lab

staff. The repair or upgradation of computers in several labs, offices are done through a central committee. Budget are earmarked for the whole institute. The licences of important academic software are handled by the respective department.

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)

596

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

368

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

13

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

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

176

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

15

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

9

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

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

In IIST, the Student Activity Board (SAB), led by the Dean of Student Activities and Student Welfare, serves as the primary body responsible for coordinating and enhancing student life on campus. The SAB comprises key stakeholders, including the Registrar, Heads of Departments, Chairpersons of various committees, and student representatives, ensuring that students' voices are heard. Each committee within SAB is chaired by a senior faculty member and includes faculty and student members who offer valuable input on student-related matters. The board meets regularly to address student concerns and oversee welfare initiatives.

The Student Activity Board (SAB) of IIST fosters holistic student development by organizing diverse events and programs throughout the year. During the academic year 2023-24, SAB made significant

contributions by organizing key events such as Dhanak, the inter-collegiate cultural festival; Conscientia, the inter-collegiate technical festival; and the Annual Sports Day. SAB also supervised student-run clubs and facilitated a comprehensive 7-day induction program for new students.

It also coordinates welfare initiatives like mentoring, buddy mentoring system, stress management workshops, mental health awareness, and substance abuse prevention programs. By nurturing leadership, teamwork, and creativity, SAB contributes significantly to student welfare, providing a well-rounded educational experience beyond academics.

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

26

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

TheIgnite Series, aimed at showcasing advancements in space technologies and inspiring students, featured notable industry leaders:

1. **17th Jan 2024**
    - **Speakers: Parth Sharma (Director, SatSure) and Akash Yalagach (CTO, KaleidEO).Focus: Satellite data applications and manufacturing advancements.**
2. **24th Feb 2024**
    - **Speaker: Gowtham Sivaraman (Pixxel).Focus: Internship and job opportunities in India’s NewSpace ecosystem.**
3. **23rd Mar 2024**
    - **Speakers: Rohan M Ganapathy (CEO & CTO, Bellatrix Aerospace) and Gaurav Seth (CEO, PierSight).Focus:**

Advanced propulsion systems and SAR-based maritime surveillance.

TheAdvance Series, dedicated to supporting career transitions and higher studies, included diverse topics:

1. 8th Mar 2024
   - Speaker: Nitish Shrimal.Focus: Guidance on UK higher education and Chevening Scholarship applications.
2. 21st Apr 2024
   - Speakers: Sarika Balchandani (ETS India) and Gargi Sunil (NISAU Scholarship recipient).Focus: Test preparation strategies and scholarship opportunities.
3. 27th Apr 2024
   - Speaker: Lt Cdr Bidisha Pandey.Focus: Application process for the Commonwealth Shared Scholarship.
4. 11th May 2024
   - Speaker: Dr. Ir. Sumit Tambe (IISc).Focus: Selecting research topics and preparing strong PhD applications.
5. 22nd Jun 2024
   - Speakers: Ritwick Rane (Partner, BCG) and Akash Singh Baghel (Sr. Product Manager, AWS).Focus: Transitioning to MBA programs and establishing successful careers.

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	No File Uploaded

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 provides a teaching-learning ecosystem emphasizing innovation and social sensitivity and promotes ethical, value-based education.

The Academic Bank of Credit (ABC) is integrated into IIST's educational framework. A task team studied NEP 2020 and this has been successfully implemented in IIST from the academic year 2024-25. Through international collaborations, IIST seamlessly integrates research with academics. IIST has signed national MoUs with CET, CSIR-NAL, NIT-Calicut, IISc Bengaluru, TCIL. VSSC, and an international MoU with STAR-Belgium. Students continue doing projects/ internships at CalTech and ANU- FRT, NTU, Boulder Colorado etc. SSPACE activities in collaboration with ISRO centres and R&D labs include:

· Integrated Diagnostics Module (IDM) payload for electric propulsion satellite

· Space Biology Payload to investigate Spaceflight induced changes in kidney stone of Drosophila (fruit) fly

· Development of Hybrid Propulsion Experimental Rocket (HyPER-D)-sub orbital experimental student rocket.

· Droplet characterization tests of the Scramjet fuel injection struts of ISRO's Dual Fuel Scramjet (DFS) engine.

· Development of real time gas sensor for the crew module of GAGANYAAN flight.

IIST’s research environment along with Indian Space Sector, through Advanced Space Research Group (ASRG) has 32 projects. In addition, to enhance IIST-ISRO collaboration a high level ISRO-IIST Research Enhancement Committee (IREC) was constituted for basic and applied space research cluster for accelerated national growth.

https://www.iist.ac.in/aboutus/vision-mission

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 Council 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, Associate Deans, department heads, faculty members, officers, and staff remit their duties. In this assessment year Associate Deans were also introduced into the organizational structure. The Dean (Academics) manages academic activities; the Dean (R&D) handles projects and other research-related activities, the Dean (IPR) handles patent-related activities, and the Dean (Student Activity, Student Welfare, and Outreach) leads student support activities. Registrar heads the administration and is supported by deputy registrars. The Deputy Registrar (Academics) takes care of exams, admissions, and other academic responsibilities. The Deputy Registrar (Finance) monitors accounts and financial matters; the procurement of various equipment/ facilities is managed by the 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 the 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

IIST devices and implements its strategic plan through integration of programmes, cutting-edge research, interdisciplinary courses to train the next generation of space engineers/scientists/professionals. Accordingly, it follows the below listed activities.

- **Choice Based Credit System (CBCS) and elective courses.**
- **Students enrolled SWAYAM and NPTEL courses offered by MHRD.**

SPACE MISSIONS include;

• Preparations for PILOT-G2 (GRACE) Payload for PSLV C60 – POEM Platform (SpaDex Mission), Design, Development and Qualification

activities of Payload and Integrated Diagnostics Module (IDM) for Technology Demonstration Mission–Electric propulsion (TDS01-EPS) Design, development and qualification activities of sensor, electronics and Mechanical System

• Activities related to AHAN Satellite (SSPACE), Space Biology Payload (SSPACE), INSPIRESAT (SSPACE), Electric Propulsion Studies (EPDL) Initiation of ARIS-VENUS payload

ASRG's collaborative research led to 32 live projects as on 30.06.2023.https://www.iist.ac.in/innovation/asrg-vision

- **STIIC established 11 start-ups.https://www.iist.ac.in/stiic**
- **9 patents were granted.https://events.iist.ac.in/iprcell/ip_compendium.html**

Strengthened partnerships with international space agencies, research institutions, and universities and signed 6 national and 1 international MoUs in 2023-24.

This includes CET, CSIR-NAL, NIT-Calicut, IISc Bengaluru, TCIL. VSSC, and an international MoU with STAR-Belgium. Continuing student exchange programs with CALTECH, ANU and USRA for student's global exposure and collaboration. Organized outreach-programs/workshops/events/camps including Astronomy School, YTN, NuMATS, IIST@School, etc.

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, Deans, and Associate 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; 26 technical officers/staff to support lab and research activities, 11 permanent administrative officers and 8 office assistants, and close to 350 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

Welfare Measures:

- **Contributory Health Service Scheme (CHSS) – Contribution @ 1% of (basic pay+DA) per month**
- **24X7 Health centre /Polyclinic facility**
- **In-house counselling centre**

- **Leave Travel Concession for self and dependent family members for visiting Home Town/ Any Place in India**
- **Scheme for Assistance to Families in Exigency (SAFE)**
- **Vikram A. Sarabhai Trust (VAST)**
- **Financial Assistance in Exigency (FAE)**

Promotional Avenues and Welfare Measures:

IIST follows Merit Promotion Scheme (MPS) for permanent faculty (Teaching), Technical staff (Non-Teaching) and Limited Flexible Complement Scheme (LFCS) for permanent Administrative Staff. All permanent employees are required to submit Annual Performance Assessment Report (APAR). The APAR is reviewed by a three-tier system consisting of Reporting, Reviewing and Countersigning Officers. If the individual is not satisfied with the grade awarded appeal can be given to Appellate Authority within 15 days which will be reviewed again and the decision communicated to individual.

Other welfare measures include:

- **Central Civil Services (Pension) Scheme**
- **National Pension System (NPS)**
- **Performance Related Incentive Scheme (PRIS): Organizational/Group/Individual Incentives**
- **Professional update /Space technology/Campaign Allowances**
- **Computer Advance for purchasing computer**
- **House Building Advance for building house**
- **Transport facility/Transport Allowance**
- **Financial support for scientific/ professional bodies membership**
- **Telephone/internet bill reimbursement**
- **Earned Leave encashment during LTC and on cessation of service**

- **Sabbatical/Maternity/Paternity/Child Care /Child Adoption Leaves**

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

92

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

8

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)

32

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 every quarter (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)

6838.62

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 2023-24 ishttps://www.iist.ac.in /sites/default/files/library/AnnualReport2023-24E.pdf

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

Internal Quality Assurance Cell (IQAC) Initiatives for the Year 2023-24

IQAC has refined the digital portal leading to the development of an Institute Resource Planning (IRP) software and data repository.

Key Initiatives:

- **Digital IIST: IIST Digital Data Portal was launched to streamline data collection. This initiative was facilitated by the Software Systems Group and the Library of IIST. New facilities introduced include:**
  - **Academic Audit: A portal for generating academic audit of departments was generated.**
  - **Parent Portal: Provides access to their ward's details.**
  - **Leave Management System: An online system for applying/approving all leaves (except extraordinary leaves) has been implemented.**
  - **IRINS Profile Update: Faculty updates their scholarly profiles on IRINS.**
  - **Library Portal Updates: provides information on e-journals, print journals, and electronic databases.**
- **A Student Satisfaction Survey (SSS) was conducted to evaluate the teaching-learning process and outcomes. Based on SSS, areas for improvement were identified, and recommendations were made for enhancing the quality of education.https://events.iist.ac.in/IQAC/sss.php**
- **Implementation of National Education Policy (NEP) 2020 will begin from AY 2024-25.**
- **IQAC facilitated signing of six national and one international MoU.**
- **Self-Study Report (SSR) for IIST's second cycle of NAAC accreditation, was initiated.**
- **Students were encouraged to register for NPTEL courses.**

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)	**A. Any 5 or all 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)

Following the first NAAC accreditation in 2013, IIST has taken the following initiatives:

- **IIST implemented M.Tech (Quantum Technology) in 2022-23.**
- **IIST proposed M.tech (Manufacturing Technology) for the academic year 2024-25**
- **The Advanced Space Research Group (ASRG) has expanded its activities with various ISRO centres resulting in 32 projects.**
- **The Space Technology Innovation and Incubation Cell (STIIC) inaugurated in 2018 supports 11 incubation cells in space sector.**
- **IIST has signed 6 national and 1 international additional MoUs with ISRO centers and international institutions in 2023-24.**
- **9 patents were granted during 2023-24.**
- **SSPACE activities in collaboration with ISRO centres and R&D labs have initiated Integrated Diagnostics Module (IDM) payload, Space Biology Payload, development of Hybrid Propulsion Experimental Rocket (HyPER-D)-sub orbital experimental student rocket, droplet characterization tests of the Scramjet fuel injection struts of ISRO's Dual Fuel Scramjet (DFS) engine and development of real time gas sensor for the crew module of GAGANYAAN flight.**
- **Outreach and exchange programs, such as workshops, Astronomy School, YTN (Young Talent Nurture), NuMATS (Nurturing Mathematics Talent Search), seminars, and conferences.**
- **Curriculum updating in line with the National Education Policy (NEP) was initiated and will be implemented in the academic year 2024-25**

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

- **The institute is committed to providing equal opportunity in all aspects of admission and employment. Hence, no discrimination is based on gender. As a measure to increase the numbers, the super numeracy posts for female students (10% of the total number of seats) advised by the Government of India in all educational institutions for women's empowerment were strictly implemented in undergraduate programs.**
- **A gender sensitization Cell serves as a crucial institutional mechanism dedicated to fostering a gender-inclusive and equitable environment within the academic community.**
- **Women in STEM on 24th April 2024 organized talk on Gender and STEM delivered by. Dr. Mridul Eapen, Honorary Fellow, Centre for Development Studies, Trivandrum.**
- **March 08 is marked and celebrated as International Women’s Day every year. The event was held at the Multipurpose Hall in the Students Activity Centre (SAC). Ms. Nigar Shaji, URSC, Project Director - Aditya-L1 Mission, delivered the chief guest's address and shared her personal experiences, and made a technical presentation regarding the mission. This event provided a unique opportunity for the students to interact with the Project Director of the mission.**
- **An exhibition cum sales by IIST students and the women staff members showcasing their talents was organized as part of Womens day celebration.**
- **Utilization of Labs and accessing library timing is gender-neutral.**
- **Female employees and students attended training on self-defence.**
- **The Institute's mechanism allows female students to work 24/7 in a secure environment.**

File Description	Documents
Upload relevant supporting document	View File
Annual gender sensitization action plan(s)	https://www.iist.ac.in/Internal-Complaints-Committee
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	Nil

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	**A. Any 4 or All 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

Solid Waste Management: A no-waste incinerator is maintained on the campus for proper waste disposal, with a 150 kg/hr capacity and a 1.5 cubic meters/53 CFT volume. Napkin Incinerators are also installed in all ladies' toilets of ladies' hostels and one ladies' toilet in all academic/ administrative buildings, which can burn 50 pads at a time. 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.

Liquid Waste Management: A sewage treatment plant has been made in IIST to produce clean, odorless water for reuse. The recycled water is used for gardening. It has a capacity of 350 KLD.

Water treatment plants are installed inside the campus to recycle used water. The recycled water is used for drinking and daily usage

by meeting a demand of 200m3/day.

The amount of e-waste generated is less, which includes UPS, inverters, industrial refrigerators, printer cartridges, and water dispensers. It is managed with utmost care by promoting buy-back options and scraping mechanisms per the guidelines.

Hazardous Chemical Waste Management: The chemical wastes are disposed of as per the safety guidelines of the hazardous chemicals waste management regulations. Purchase orders are released to the recognized external agent for waste disposal.

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 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**	**B. Any 3 of the above**

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)

All major festivals, such as Holi, Diwali, Dusshera, Pongal, Onam, Ugadi, Christmas, etc, are celebrated with the active participation of students and staff. The Institute has established the SC/ST Cell, the Students Grievance Redressal Cell, Anti-ragging Cell to maintain a peaceful academic environment. Canteen Services in IIST caters to satisfy the students' food preferences by ensuring a menu that serves the palates of the pan-Indian community in consultation with the students. The institute also has disabled-inclusive measures

such as buildings with disabled access ramp, lifts, accessible toilets etc., for the convenience of persons with reduced mobility. IIST Hindi Section conducts various instructional programs to improve Hindi proficiency not only among students but also among staff. English Language Support Programme was offered to scholars from the Humanities department through in-house lectures cum training and also international faculty. With a will to “demystify” science to the less privileged tribal students, the social outreach club of IIST-Nirmaan organized a science camp for the students of the tribal settlementfor the students of Idinjar Tribal School and Karipoor Government Higher Secondary School. This camp organized from July 2023 to April 2024, was an attempt to transform a routine curriculum subject into a lifelong passion among the school students.

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 Celebrated the following to sensitize the students and employees :

- **The Constitution Day was celebrated on November 26, 2023.**
- **The Independence Day celebrated the 77 years of India's independence; its glorious history, culture, and achievement was flagged off on 15th August 2023.**
- **The 133rd Birth Anniversary of ‘Bharat Ratna’ Dr. B. R. Ambedkar was celebrated on April 30th, 2024. Dr. M.R.Baiju, Chairman Kerala Public Service Commission,delivered the talk.**
- **The courses offered by the Humanities department, such as Introduction to Social Science and Ethics and Economics, cover several aspects of citizens' rights, duties, and responsibilities. Universal Human Value course -AICTE sponsored is also offered to the students.**
- **The 75th Republic Day was celebrated with all dignity and fervor, which helped inculcate the values of harmony and national integrity.**
- **Swachhta Pakhwada was celebrated by administering the pledge from their respective departments. Cleaning drives within the campus and in the neighboring community were also organized.**
- **IIST observed the Sadbhavana Diwas on November 26th, 2023.**
- **Vigilance Awareness Week Celebrations With the theme, "Say No to Corruption, Commit to the Nation," underscores the**

collective responsibility of students, faculty, and staff to uphold ethical values in both personal and professional spheres.

-

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	All 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

- Festivals Like Diwali, Onam, Pongal, Ugadi, Ganeshotsav, Deepavali, Navarathri, and Holi were celebrated at IIST with equal fervor and grandeur.
- Celebrated International Women’s Day on March 14, 2024. The Chief Guest, Ms.Nigam Shaji, Project Director, Aditya L1URSC, Bangalore. Her talk motivated the participants to take up challenging tasks in their careers.
- The 133rd Birth Anniversary of ‘Bharat Ratna’ Dr. B. R. Ambedkar was celebrated on April 30th, 2024. Dr. M.R.Baiju, Chairman Kerala Public Service Commission,delivered the talk.
- Ananta, the Yoga Club of IIST, organized International Yoga Day on June 21, 2024, to provide participants with a holistic experience that would nourish their minds, bodies, and spirits.
- IIST celebrated the 77th Independence Day with a series of vibrant events and activities
- Vigilance Awareness Week (VAW) is observed in IIST during the week in which the birthday of Sardar Vallabhbhai Patel (October 31) falls. IIST celebrated Vigilance Awareness Week by taking the pledge to promote integrity and transparency within the institution and eliminate corruption.
- November 26th, 2023, is observed as Samvidhan Diwas

(Constitution Day) to honor the adoption of the Constitution of India by the Constituent Assembly.

- **IIST celebrated the 75th Republic Day with great enthusiasm and patriotism, commemorating the occasion with a series of activities and events.**

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 - Debate Club and Model United Nations: Empowering Students Through Dialogue**
2. **Objectives of the Practice - The Debate Club and Model United Nations (MUN) at our institute aim to cultivate a culture of intellectual engagement, critical thinking, and articulate communication.**
3. **The Context – The Debate Club was established to address the growing need for students to develop vital communication and analytical skills often overlooked in conventional technical education. Recognizing the importance of international awareness and diplomacy, MUN was introduced as an extension of the club's objectives, offering students an opportunity to engage in global issues through structured discussions and negotiations.**
4. **The Practice - Regular MUN practice sessions focus on key components such as drafting position papers, moderated caucuses, and unmoderated discussions, ensuring participants gain practical experience in diplomacy. The club also conducts debates, which include British Parliamentary style and structured discussions, to refine argumentative and analytical abilities.**
5. **Evidence of Success - The success of the Debate Club and MUN is evident from the enthusiastic participation of students from across the country in events and conferences hosted by the institute. Many students have gained recognition for their outstanding performances in MUNs, reflecting the effectiveness of training sessions and workshops.**
6. **Problems Encountered and Resources Required**

- **Logistical constraints, limited funds, and a lack of experience in hosting large-scale events.**

- **Uncertainty in participant numbers and sponsorship limitations further complicated matters.**

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)

IIST, being a premier space research institute, can lead advancements in electric propulsion for satellites and spacecraft, offering cost efficient and environmentally friendly alternatives to traditional chemical propulsion systems. In this context, IIST initiated/ progressed in three major projects.

1. A project relating to Electric Aircraft Powertrain Technology is sanctioned to IIST by Aeronautics Research and Development Board, DRDO, on 23 October 2023, with a budget outlay of Rs. 6.6 Crores.

2. Another project titled Novel High-power Integrated Battery Chargers for Electric Vehicles and E-bikes was sanctioned to IIST by Kerala State Council for Science, Technology and Environment (KSCSTE) in October 2023.

3. Dept. of Physics, IIST has been collaborating with Liquid Propulsion Systems Centre (LPSC) of ISRO, Valiamala in the field of electric propulsion research since the year 2012. A new 6m X 9m class high vacuum test facility is being established at LPSC Valiamala to test and develop high efficiency Hall effect thrusters. Dept. of Physics,

IIST has contributed to the facility's overall design and, most specifically, the beam dump system and the diagnostics suit. An advanced, state-of-the-art diagnostics suite of seven diagnostics sensors was developed indigenously at IIST under a joint MoU, and the hardware was installed in the main vacuum chamber in October 2023 at LPSC. All the diagnostics systems are delivered and in operational condition. These systems are in routine use by LPSC for their R&D as well as flight qualification activity of the Hall Effect Thrusters.

7.3.2 - Plan of action for the next academic year

As part of its focus on advancing electric technology, the institute has outlined several key initiatives for the upcoming year.

- **A sub-scale model of a proposed axial flux motor with quadruple windings will be fabricated and tested with a motor controller in the laboratory. The motor controller’s**

architecture, along with auxiliary systems, will be finalized, and fabrication will commence. Additionally, new modulation techniques for split-phase motors aimed at electric vehicle (EV) applications will be proposed and experimentally implemented.

- **In aerospace applications, the engineering, qualification, and flight models of a payload will be fabricated, with radiation testing of electronics conducted up to 80krad to validate the use of commercial off-the-shelf (COTS) components for radiation resilience.**
- **To enhance electric propulsion technology, the institute aims to deliver and operationalize the integrated diagnostics module, a critical component of the Electric Propulsion System, for a technology demonstration satellite.**
- **Collaboration with VSSC is ongoing to realize the power processing and control unit for micro-thruster development, with testing currently underway at the Electric Propulsion Diagnostics Laboratory of IIST.**

These initiatives reflect the institute’s commitment to driving innovation and advancing research in electric technology for both terrestrial and space applications.