



INDIAN INSTITUTE OF SPACE SCIENCE AND TECHNOLOGY
(Declared as Deemed to be University under section 3 of the UGC act 1956)
Thiruvananthapuram – 695547

IIST Ph.D. Programme – July 2023 Admissions

Indian Institute of Space Science and Technology envisions basic and applied research for meeting the national R&D requirements of Science and Technology in general and the Indian Space Programme in particular. The institute provides a vibrant research atmosphere and offers doctoral and post-doctoral programmes.

Applications are invited from highly motivated applicants for admission to the Ph.D. Programme starting in July 2023, in the departments given below: -

- (i) Aerospace Engineering
- (ii) Avionics
- (iii) Chemistry
- (iv) Earth and Space Sciences
- (v) Humanities
- (vi) Mathematics
- (vii) Physics

Eligibility

- 1. Nationality:** Applicant should be an Indian citizen.
- 2. Age Limit:** Applicant should be **below 35 years as on 09th May, 2023**. Age relaxation is applicable as per Government Rules.

Minimum qualifications for the six categories of applicants are as follows:

- 1. Applicants with Master's Degree in Engineering/Technology as their highest qualifying degree**
 - Master's Degree in Engineering/Technology with 60% marks or 6.50 CGPA on a scale of 10 or equivalent (55% marks or 6.00 CGPA for OBC/EWS/SC/ST/PwD) in the qualifying master's degree.
 - Master of Science in Engineering or equivalent from leading foreign Universities with minimum CGPA 8.00/10 or 3.60 /4 or equivalent.
- 2. Applicants with Bachelor's Degree in Engineering/Technology as their highest qualifying degree**

- Bachelor's Degree in Engineering/Technology with 75% marks or 8.00 CGPA on a scale of 10 or equivalent (70% marks or 7.50 CGPA for OBC/EWS/SC/ST/PwD) in the Qualifying Bachelor' degree. **They should have a valid GATE score.**

Candidates in the following categories are exempted from the requirement of GATE score: -

- i) Bachelor's Degree in Engineering/Technology from Indian Institute of Technology (IIT) /Indian Institute of Space Science and Technology (IIST) with 8.00 CGPA (CGPA of 7.50 for OBC/EWS/SC/ST/PwD) on a scale of 10 or equivalent in the Qualifying Bachelor's degree
- ii) Applicants with Dual degree (Bachelors in Engineering and Masters in Science from IITs and Indian Institute of Space Science and Technology) with minimum score in Bachelor's degree as mentioned above
- iii) Applicants who have cleared a National level eligibility test, such as a valid **UGC-CSIR-NET-JRF/Lectureship or NBHM/JEST** in the relevant disciplines. Applicants applying with their JEST score should have secured a rank within the first 400.

3. Applicants with Master's Degree in Science as their highest qualifying degree

- Master's Degree in the relevant area with a minimum of 60% marks or 6.50 CGPA on a scale of 10 or equivalent (55% marks or 6.00 CGPA for OBC/EWS/SC/ST/PwD) in the Qualifying Master's degree. They must have cleared a National level eligibility test, such as a valid **UGC-CSIR-NET-JRF/Lectureship or NBHM/JEST/GATE** in the relevant disciplines.
- Applicants applying with GATE score should have a valid GATE score of minimum 300 (285 for OBC / EWS / SC/ST/PwD categories) in a Science discipline. Applicants applying with JEST should have JEST rank within the first 400.

4. Applicants with Bachelor's Degree with four-year duration in Science as their highest qualifying degree

- Bachelor's Degree (4 years' duration) in Science with 75% marks or 8.00 CGPA on a scale of 10 or equivalent (70% marks or 7.50 CGPA for OBC/EWS/SC/ST/PwD) in the Qualifying Bachelor's degree.
- They must have cleared a National level eligibility test, such as a valid UGC-CSIR-NET-JRF/Lectureship or NBHM/JEST/GATE in the relevant discipline.
- Applicants applying with GATE score should have a valid GATE score of minimum 400 for General Category (380 for OBC / EWS / SC/ST/PwD categories) in a Science discipline or valid JEST rank within the first 400.

5. Applicants with Master's Degree in Humanities/Management/Social Sciences as their highest qualifying degree

- Master's Degree in the relevant area of Humanities/Management / Social Sciences with a minimum of 60% marks or 6.50 CGPA on a scale of 10 or equivalent in the Qualifying Master's degree (55% marks or 6.00 CGPA for OBC/EWS/SC/ST/PwD). They must have cleared a national level eligibility test, such as a valid UGC-NET-JRF/Lectureship.

6. Applicants with Bachelor's Degree with four year duration in Humanities/Management/Social Sciences as their highest qualifying degree

- Bachelor's Degree (4 years' duration) in **Humanities/Management/Social Sciences** with 75% marks or 8.00 CGPA on a scale of 10 or equivalent (70% marks or 7.50 CGPA for OBC/EWS/SC/ST/PwD) in the Qualifying Bachelor' degree.
- They must have cleared a National level eligibility test, such as a valid UGC- NET-JRF/Lectureship in the relevant discipline.

Selection Procedure:

For candidates with M.E/M.Tech./B.E/B.Tech as their highest qualifying degree, selection to the PhD programme will be based on **online screening test** followed by an interview. **Interview will be conducted through Video Conference mode.** However, candidates with a valid **UGC-CSIR-NET-JRF/Lectureship/NBHM/JEST** post their ME/M.Tech/B.E/B.Tech will be directly called for the interview **through Video Conference mode.**

For candidates with Master's degree in Sciences, Humanities, Management, Social Sciences/Dual Degree applicants (B.Tech and Master of Science from IITs/IIST)/ four years' undergraduate degree in Sciences, Humanities, Management, Social Sciences as their highest qualifying degree and having a valid score card/certificate in any of the National level eligibility tests (listed in the minimum qualifications), **selection to the programme will be based on an interview through Video Conference mode.**

Applicants who are employed in Government/ Semi Government/ PSUs/ Autonomous Bodies should produce a "No Objection Certificate (NOC)" from the current employer at the time of Interview.

Research Areas for July 2023 PhD Admission

Table 1(Funded by IIST)			
Department of Aerospace Engineering – Number of research positions available : 8			
SI No	Department code	Broad Area	Eligibility
1	PAE01	Bioastronautics	ME/M.Tech/MS in Mechanical/Aerospace/Biomedical Engineering, Biomedical Sciences, Biotechnology or equivalent areas OR BE/B Tech in Mechanical/ Chemical/Applied Mechanics/Aerospace/Biotechnology/Biomedical or equivalent areas
2	PAE02	Computational Fluid Dynamics and Heat Transfer	ME/M.Tech/MS in Aerospace/Mechanical/Engineering Mechanics or equivalent areas OR BE/B.Tech in Aerospace/ Mechanical or equivalent areas
3	PAE03	High-Speed Flows (Experimental/ Computational)	ME/M.Tech/MS in Aerospace/Mechanical/ Engineering Mechanics or equivalent specialization related to thermal and fluid science OR
4	PAE04	Combustion/Propulsion	BE/ B.Tech in Aerospace/Mechanical/ Chemical/ Engineering Mechanics, or equivalent areas
<p><u>Syllabus for screening test – PAE01, PAE02, PAE03, & PAE04</u></p> <p>Please click this link for syllabus.</p>			
5	PAE05	Design and analysis of Flight Dynamics and Control of Unmanned Aerial Vehicles	ME /M.Tech/MS in Aerospace/ Mechanical/ Engineering Mechanics or equivalent specialization related to Flight Mechanics, UAVS, Flight Control Systems OR BE/B.Tech in Aerospace/Mechanical/Engineering Mechanics or equivalent specialization related to Flight Mechanics, UAVS, Flight Control Systems
<p><u>Syllabus for screening test – PAE05</u></p> <p>Please click this link for syllabus.</p>			
6	PAE06	Deformation processing, Aerospace materials and characterization of Aerospace grade alloys	M.E/ M.Tech/ M.S(Engg.) in Industrial Metallurgy/Materials science / Welding Engineering/ Metallurgical engineering/ manufacturing Engineering or equivalent areas OR B.E/ B.Tech in Metallurgical /Mechanical /Production engineering or equivalent areas
<p><u>Syllabus for screening test – PAE06</u></p> <p>Please click this link for syllabus.</p>			

Department of Avionics – Number of research positions available : 11			
1	PAV01	Modeling of Physiological Systems	M.Tech/MS in Signal Processing / Control Systems / Applied Electronics / Biomedical Engineering / Instrumentation or equivalent areas OR B.E./B.Tech in Electronics and Communication Engineering / Electrical and Electronics Engineering / Electronics and Instrumentation / Biomedical Engineering / Avionics or equivalent areas
2	PAV02	Control systems / Small Satellites	M.Tech/MS in Signal Processing / Control Systems / Guidance and Navigation or equivalent areas OR MSc Mathematics or equivalent areas OR B.E./B.Tech in Electronics and Communication Engineering / Electrical and Electronics Engineering / Electronics and Instrumentation / Avionics or equivalent areas
<p><u>Syllabus for screening test – PAV01 & PAV02</u></p> <p>Please click this link for syllabus.</p>			
3	PAV03	Communication Systems & Networks (Reinforcement learning)	M.Tech / M.E / M.S or equivalent in Electronics/ Electronics and Communication/ Electrical / Electrical and Electronics/ Communication/ Communication Networks/ Telecommunication/ Signal Processing/ Machine learning/ Computer Science/ Control-Systems / System-Science/ Data-analytics or equivalent areas. OR B.Tech / B.E or equivalent in Avionics, Electronics and Communication, Electrical Engineering, Electronics and Telecommunication, Electronics, Computer Science or equivalent areas
<p><u>Syllabus for screening test – PAV03</u></p> <p>Please click this link for syllabus.</p>			
4	PAV04	Signal Processing/Image Processing/Digital VLSI Signal Processing/Computer vision/Machine learning	M.Tech/ME/MS in Electronics and Communication Engineering/ Signal Processing/ Communication / Digital Design/ VLSI Design/ Embedded system/ Computer Science/ Machine learning or equivalent areas OR B.Tech/B.E or equivalent in Avionics, Electronics and Communication, Electrical Engineering, Electronics and Telecommunication, Electronics, Computer Science or equivalent areas

5	PAV05	Antenna and Microwave Engineering	M.Tech / M.E / M.S or equivalent in Electronics/Electronics and Communication/ Electrical/ Electrical and Electronics/ RF and Microwave Engineering/ Wireless Communication or equivalent areas OR B.Tech/B.E or equivalent in Avionics, Electronics and Communication, Electrical Engineering, Electronics and Telecommunication, Electronics or equivalent areas
6	PAV06	Analog/ mixed-signal/ RF IC design	M.Tech/ME/MS or equivalent in VLSI/ Microelectronics/ RF & Microwave Engineering/ Instrumentation Engineering or equivalent areas OR B.Tech/ BE or equivalent in Electronics & Communication, Electronics & Instrumentation, Electronics & Telecommunication or equivalent areas
7	PAV07	Micro and nanotechnology for sensors	M. Tech/ME/MS or equivalent in VLSI/ Microelectronics/ RF & Microwave Engineering/ Instrumentation Engineering /materials science/nanotechnology or equivalent areas OR B.E./B.Tech in Electronics and Communication Engineering / Electrical and Electronics Engineering /Electronics and Instrumentation / Avionics or equivalent areas
<u>Syllabus for screening test – PAV04, PAV05, PAV06 & PAV07</u>			
Please click this link for syllabus.			
8	PAV08	Instrumentation and Sensor Electronics	M. Tech/ M. E./M. S. or equivalent in Applied Electronics and Instrumentation/ Biomedical Instrumentation/ Electronics and Communication/ Instrumentation and Control/ Instrumentation & Signal Processing/ VLSI/Embedded Systems or equivalent areas. OR B.E./B.Tech in Applied Electronics and Instrumentation/Electronics and Communication Engineering / Electrical and Electronics Engineering /Electronics and Instrumentation / Biomedical Engineering / Avionics or equivalent areas
<u>Syllabus for screening test – PAV08</u>			
Please click this link for syllabus.			
9	PAV09	Power Electronics and Drives	M. Tech/ M. E in Power Electronics / Power Systems / Control Systems/Industrial Electronics/Electrical Engineering or equivalent areas OR B.E /B.Tech in Electrical Engineering / Electrical and Electronics Engineering or equivalent areas
<u>Syllabus for screening test – PAV09</u>			
Please click this link for syllabus.			

Under ASRG Project		
10	PAV10	<p>Understanding Deep learning methods in the area of weather nowcasting development of deep learning models Doppler weather radar (DWR) data quality control DWR data ingestion into these models and verification of these algorithms</p> <p>Accuracy assessment of the developed algorithms</p> <p>Development of a user interface module for classification</p> <p>Comparing the performance improvement with NWP models like WRFDA, algorithm verification and documentation</p> <p>Note: <i>After completing the mandatory course work at IIST, the candidate will be stationed at ISTRAC, Bangalore</i></p>
<p>M.Sc/BS- MS. in Physics/Atmospheric Science/AI/ Mathematics / Statistics or MS/M.E/M.Tech in Computer science/Electronics and communication /AI/Signal Processing/ Machine learning or equivalent with BE/BTech/BSc/MSc/BS degree in computer science/ Physics/Electronics/CS/ Earth system Science or equivalent areas</p> <p>2. Good Programming skills.</p> <p>Desirable Qualification of JRF</p> <p>1. Familiar with programming languages like python, MATLAB.</p> <p>2. Prior experience and knowledge in ML/Neural Network/AI based application development.</p>		
<p><u>Syllabus for screening test – PAV10</u></p> <p>Please click this link for syllabus.</p>		
Department of Chemistry - Number of research positions available: 4		
1	PCH01	<p>Nano functional materials/polymeric materials for energy/environmental/sensing applications</p>
<p>MSc/BS-MS in Chemistry (all branches) or equivalent /MSc Materials Science and allied areas/ M.Tech in Materials Science, Nanoscience & Technology, Polymer Technology, Chemical Engineering, Mechanical Engineering or equivalent areas</p> <p style="text-align: center;">OR</p> <p>B.Tech/BS in Materials Science, Nanoscience & Technology, Nanotechnology, Polymer Technology, Chemical Engineering, Mechanical engineering or equivalent areas</p>		
<p><u>Syllabus for screening test – PCH01</u></p> <p>Please click this link for syllabus.</p>		
Under ASRG Project		
2	PCH02	<p>Bioastronautics</p>
<p>M.Sc/BS-MS in Chemistry (all branches), Biosciences or equivalent /MSc Materials Science and allied areas, M.Tech in Materials Science, Nanoscience& Technology, Polymer Technology, Chemical Engineering, Mechanical Engineering or equivalent areas</p> <p style="text-align: center;">OR</p> <p>B.Tech/BS in Materials Science/ Polymer Technology/ Chemical Engineering, Nanoscience and Technology BS in Biochemistry/Materials Science/ Biosciences or equivalent areas</p>		
<p><u>Syllabus for screening test – PCH02</u></p> <p>Please click this link for syllabus.</p>		

Department of Earth and Space Sciences - Number of research positions available: 5			
1	PES01	Astronomy and Astrophysics	Master of Science in Physics / Astronomy & Astrophysics / Space Physics / Integrated MS (Physics) / BS-MS (Physical Sciences) or equivalent areas
2	PES02	Atmospheric Research	M.Sc / M.Tech (Atmospheric Science), M.Sc / M.Tech (Meteorology), M.Sc (Physics), M.Tech (Earth System Science) or equivalent areas OR B.Tech./B.E./B.S./B.Sc. (4 years) in Engineering physics/ Physical Sciences/Physics or equivalent areas
3	PES03	Atmospheric Modelling using Deep Learning approaches	MSc/M.Tech. in Atmospheric Science/ Meteorology/ Earth System Science/ BS-MS in Earth Science/ Atmospheric Science or equivalent areas
For PES02 and PES03, candidates with M. Sc as well as M. Tech qualification need to qualify any of the national level eligibility tests as mentioned in the minimum qualifications			
Department of Humanities Number of research positions available: 2			
1	PHS01	Sociology/Social Work	MA in Sociology / Social Work or equivalent areas OR 4 Years BA in Sociology /Social Work or equivalent areas
2	PHS02	Economics	M A / MSc Economics/Economics or equivalent areas OR 4 Years BA/BSc Economics or equivalent areas
Department of Mathematics - Number of research positions available: 3			
1	PMA01	Machine Learning	M.Tech. /M.E. or equivalent degree in Computer Science/Electronics/Electrical/Machine Learning or equivalent areas. OR M.Sc. or Integrated MSc. or equivalent degree in Computer Science/Mathematics / Statistics or equivalent areas. OR BS (4 years)/ B.Tech. / B.E. or equivalent degree in Computer Science/Machine Learning/Information Technology or equivalent areas.
<u>Syllabus for screening test – PMA01</u>			
Please click this link for syllabus.			
2	PMA02	Mathematical Modelling and Orbital Dynamics	MSc (Mathematics), BS-MS (Mathematics), MSc (Applied Mathematics) OR

			M Tech (Aerospace)/Orbital Mechanics OR B Tech Aerospace/ EEE/ ECE OR 4 Years BS Mathematics
Syllabus for screening test – PMA02			
Please click this link for syllabus.			
3	PMA03	Differential Equations (Dynamics and Rheology)	BS-MS/MSc in Mathematics / Applied Mathematics / Mathematics & Computing or equivalent areas.
Department of Physics -Number of research positions available: 2			
1	PPH01	Atomic and Molecular physics	MSc/MS/M.Tech in Physics/ Applied Physics/ Photonics/ Optical Engineering/ Solid State Physics or equivalent areas. OR B.Tech./B.E./B.S./B.Sc. (4 years) in Engineering physics/ Physical Sciences /Physics or equivalent areas.
2	PPH02	Fundamental and Applied Optics	
For PPH01 and PPH02, candidates with M. Sc as well as M. Tech qualification need to qualify any of the national level eligibility tests as mentioned in the minimum qualifications			

Table 2: External Fellowship Holders

Candidates **having a valid fellowship from** Government agencies such as DST, CSIR, NBHM, UGC or State Government Science and Technology Scheme etc. only are eligible to apply for the positions given in this list. They should have a valid score card/certificate in any of the National level eligibility tests (listed in the minimum qualifications). Such candidates will be selected based on an Interview.

Sl. No.	Department code	Broad Area	Eligibility
Department of Avionics - Number of research positions available : 8			
1	EAV01	Small satellites	M.Tech/MS in Signal Processing / Control Systems / Guidance and Navigation / or equivalent areas. OR MSc Mathematics or equivalent areas. OR B.E./B.Tech in Electronics and Communication Engineering / Electrical and Electronics Engineering /Electronics and Instrumentation / Avionics or equivalent areas
2	EAV02	Computer Networks/Wireless Networks/6G Networks/Advanced Satellite Networks/AI-driven Computer Networks	B.Tech and M.Tech in Computer Science/ Engineering/Electronics and Communication Engineering/Information Technology/equivalent areas. Good programming skills and knowledge in Data structures and algorithms is desirable. OR

			B.Tech in Computer Science and Engineering/Electronics and Communication Engineering/Information Technology/equivalent areas. Good programming skills and knowledge in Data structures and algorithms is desirable.
3	EVA03	Signal Processing/Image Processing/Digital VLSI Signal Processing /Computer vision/Deep Learning	M.Tech / ME / MS in Electronics and Communication Engineering / Signal Processing / Communication/Digital Design/VLSI Design/ Embedded system/ Computer Science/Machine learning or equivalent areas with UGC CSIR JRF Fellowship/ KSCSTE Fellowship/Prime Minister's Fellowship/Similar Government Fellowships for PhD OR B.Tech/B.E or equivalent in Avionics, Electronics and Communication, Electrical Engineering, Electronics and Telecommunication, Electronics, Computer Science or equivalent areas with UGC CSIR JRF Fellowship/ KSCSTE Fellowship/Prime Minister's Fellowship/Similar Government Fellowships for PhD. Note: Candidates having Fellowship only will be called for interview
4	EAV04	Antenna and Microwave Engineering	M.Tech / M.E / M.S or equivalent in Electronics/Electronics and Communication/Electrical/Electrical and Electronics/ RF and Microwave Engineering/ Wireless Communication or equivalent areas. OR B.Tech/B.E or equivalent in Avionics, Electronics and Communication, Electrical Engineering, Electronics and Telecommunication, Electronics or equivalent areas.
5	EAV05	Instrumentation and Sensor Electronics	M. Tech/ M. E./M. S. or equivalent in Applied Electronics and Instrumentation/ Biomedical Instrumentation / Electronics and Communication/ Instrumentation and Control / Instrumentation & Signal Processing / VLSI/ Embedded Systems or equivalent areas . OR B.E./B.Tech in Applied Electronics and Instrumentation/Electronics and Communication Engineering / Electrical and Electronics Engineering /Electronics and Instrumentation / Biomedical Engineering / Avionics or equivalent areas.
6	EAV06	Power Electronics	M. Tech/ M. E in Power Electronics / Power Systems / Control Systems/Industrial Electronics/Electrical Engineering or equivalent areas. OR B.E /B.Tech in Electrical Engineering / Electrical and Electronics Engineering or equivalent areas.

Department of Chemistry - Number of research positions available : 8			
1	ECH01	Nano functional materials/polymeric materials for energy/environmental/sensing applications	M.Sc/BS-MS in Chemistry (all branches) or equivalent /M.Sc Materials Science and allied areas, M.Tech in Materials Science, Nanoscience & Technology, Polymer Technology, Chemical Engineering, Mechanical Engineering or equivalent areas. OR B.Tech/BS in Materials Science, Nanoscience& Technology, Nanotechnology, Polymer Technology, Chemical Engineering, Mechanical engineering or equivalent areas.
2	ECH02	Organic smart materials	M.Sc/BS-MS Chemistry (all branches) or equivalent/M.Sc Materials Science/ M.Sc Biochemistry/Masters in Biosciences/ allied areas M.Tech in Materials science and Technology /Nanoscience and Technology or equivalent areas OR B.Tech/BS in Materials Science, Polymer Technology, Chemical Engineering, Mechanical engineering or equivalent BS in Biochemistry/Materials Science/ Biosciences or equivalent areas.
Department of Earth and Space Sciences-Number of research positions available : 1			
1	EES01	Remote Sensing and GIS	Masters in Geoinformatics/ Remote Sensing/GIS/ Computer Science/ Machine Learning/Information technology /Image Processing/Mathematics/Natural Resource management/ Agriculture/Forestry/ environmental sciences or equivalent areas.
Department of Humanities: Number of research positions available : 4			
1	EHS01	Sociology/Social Work	MA in Sociology / Social Work or equivalent areas. OR 4 Years BA in Sociology /Social Work or equivalent areas.
2	EHS02	Economics	M A / MSc Economics/Economics or equivalent areas. OR 4 Years BA/BSc Economics or equivalent areas.
3	EHS03	Cultural Studies	M A in Literature/Gender Studies/ Cultural Studies/Mass Communication or equivalent areas. Or 4 years BA in Literature/ Gender Studies/ Cultural Studies/ Mass Communication or equivalent areas.
4	EHS04	Operations and Supply Chain Management	M.B.A (Any Specialization) / M.E / M.Tech/ (Any Specialization) or equivalent areas. Or

			B.Tech/ BE in any branch of Engineering
Department of Mathematics-Number of research positions available : 2			
1	EMA01	Computational Methods and Analysis for Partial Differential Equations	BS-MS/MSc in Mathematics/ Applied Mathematics/ Mathematics & Computing or equivalent areas.
2	EMA02	Differential Equations (Dynamics and Rheology)	
Department of Physics :Number of research positions available : 2			
1	EPH01	Fundamental and Applied Optics	MSc/MS/M.Tech in Physics/ Applied Physics/ Photonics/Optical Engineering/ Solid State Physics or equivalent areas. OR B.Tech./B.E./B.S./B.Sc. (4 years) in Engineering physics/ Physical Sciences /Physics or equivalent areas.

Table 3: External Projects

Sl. No	Department code	Broad Area& Project Title	Eligibility
Department of Avionics- Number of research positions available : 4			
1	EPAV01	Control and Signal/Bio-Signal Processing Funding agency: DST-SERB	M.Tech/MS in Signal Processing / Control Systems / Applied Electronics / Biomedical Engineering / Instrumentation or equivalent areas
<u>Syllabus for screening test – EPAV01</u>			
Please click this link for syllabus.			
2	EPAV02	Computer Networks/Wireless Networks/6G Networks/Advanced Satellite Networks/AI-driven Computer Networks Funding agency: DST-SERB	M.Tech in Computer Science/ Engineering/Electronics and Communication Engineering/Information Technology or equivalent areas. Good programming skills and knowledge in Data structures and algorithms is desirable.
<u>Syllabus for screening test – EPAV02</u>			
Please click this link for syllabus.			
3	EPAV03	Instrumentation and Sensor Electronics/Signal Processing/Biomedical Electronic Systems Funding agency: KSCSTE	M. Tech/ M. E./M. S. or equivalent in Applied Electronics and Instrumentation/Biomedical Instrumentation/Electronics and Communication/ Instrumentation and Control/ Instrumentation & Signal Processing/VLSI/Embedded Systems or equivalent areas.
<u>Syllabus for screening test – EPAV03</u>			
Please click this link for syllabus.			
4	EPAV04	Power Electronics and Electric Drives Funding agency: KSCSTE Note: Designation: Project Fellow 1	M. Tech/ M. E in Power Electronics / Power Systems / Control Systems/Industrial Electronics/Electrical Engineering or equivalent areas. OR

		Monthly emoluments: Rs. 22,000/-	B.E /B.Tech in Electrical Engineering / Electrical and Electronics Engineering or equivalent areas.
<u>Syllabus for screening test – EPAV04</u>			
Please click this link for syllabus.			

RESEARCH FELLOWSHIP:

- 1) All scholars selected to the programme specializations listed in Table 1 shall receive a fellowship of ₹31000/- per month. (Research Scholars selected with UGC/CSIR/NET-JRF/NBHM and State Government Science and Technology Scheme etc., shall draw fellowship from the concerned organizations). For all research scholars with external fellowship, the concerned rules and regulations of the funding agency apply.
- 2) The fellowship will be enhanced to ₹35,000/- per month based on a performance review after two years of Research.
- 3) The scholars will be required to assist the Departments in tutorials, practical training in labs or similar academic activities normally limited to 6 hours per week.
- 4) The scholars will have to pay applicable fees as well as charges for the services provided by the Institute like boarding/lodging/medical facilities etc., as per IIST rules.
- 5) For those who receive fellowship from agencies such as DST, CSIR, NBHM, UGC and candidates who have been provided research fellowship by State Government Science and Technology Scheme through competitive written test etc., the Institute will not bear the fellowship of the student if the same is stopped due to any reasons by the concerned agency.
- 6) The Institute is completely residential and will provide accommodation to all the regular Ph.D students. However, in the event of shortage of rooms in the hostels, preference will be given for room allotment to candidates whose fellowships are borne by the Institute.

FEE STRUCTURE:

(To be paid at the beginning of every semester)

Description of Fees	Amount (Rs.)
Tuition Fees(*)/ Semester	Rs.2500(*)
Other Fees/Semester	Rs.4950
Total Fee(A)	Rs.7450
Hostel Fee/ Semester	Rs.10250
Admission Fee (Non-Refundable) One-time	Rs.1500
Caution Deposit (Refundable)(One-time)	Rs.5000
Total Fee(B)	Rs.16750(**)
Mess Bill/(Nominal) in advance	Rs.18000 (#)
Grand Total 1 st Semester (A+B)	Rs.42200
2 nd Semester onwards (A+B-one time)	Rs.35700

Note:

- **A candidate who confirms the seat has to remit Seat Acceptance fee of Rs. 4950/-**
- (*) SC/ST/PD students are exempted from payment of Tuition Fees.
- **(**) Will be collected at the time of physical reporting at the Institution.**
- **(#)3000 p.m. X 6 months as advance will be collected after the student physically reports to the Institute by Canteen Office**
- Additional fees: Supplementary Examination fees - Rs.100/- per paper and Thesis Submission - Rs.1000/- and Convocation fees - Rs.2000/- & Alumni Registration fees - Rs.500/-, which will be collected with the final semester fee.

GENERAL SELECTION PROCEDURE:

- 1) Applications will be received through on-line only.
- 2) **Candidates are permitted to apply up to maximum four broad research areas only, that includes research areas across different departments, if eligible**
- 3) **Candidates having fellowship from funding agencies such as DST, CSIR, NBHM, UGC, State Government Science and Technology Scheme etc, applying to research areas in Table 2 may also apply for other research areas in Table 1 and Table 3, if eligible.**
- 4) Candidates are advised to visit the individual department profile for more details on the respective areas of research.
- 5) Candidates with valid fellowship from Government funding agencies shall upload a scanned copy of the fellowship award letter and indicate the period of fellowship validity.
- 6) A short-list of applicants for Online screening test or interview will be displayed in IIST admission portal.
- 7) **Online screening test will be held on 30th May, 2023 (Tuesday).**
- 8) Candidates screened in through the online screening test will be called for an interview **through Video Conference mode.**
- 9) **Selection Criteria based on Online screening test& Interview:**
 - (i) The candidates who have participated in the Online screening test will be shortlisted if they secure a minimum of 50 % combined for Section A (Section A comprises questions based on Aptitude and class 12 Mathematics) and Section B (the research area).
 - (ii) There will be a relaxation of 5 % for SC/ST/PD and OBC / EWS candidates, i.e., SC/ST/PD and OBC / EWS candidates require a combined mark of 45 % and above for Section A and Section B together.
 - (iii) There will be a 70 % weightage for the PhD Online screening test and 30 % weightage for the interview.

- (iv) Candidates securing less than 10 marks out of 30 marks in the interview will not be selected irrespective of category and irrespective of the performance in the Online screening test.
- (v) The combined mark for the PhD Online screening test and interview for a UR candidates should be 60 % and above to be selected and for the SC/ST/PD and OBC / EWS candidates, the combined mark for the PhD Online screening test and interview should be 55 % and above.
- 10) Provisionally selected candidates list, after the interview, will be displayed in the IIST admission portal.
- 11) Admissions are governed by Ph.D Rules and Regulations of IIST. (<https://www.iist.ac.in/academics/rules-regulations>).
- 12) **The date of the Online screening test will not be changed under any circumstances. The date of interview span over a period of several days. In case the date and time of the interview clashes with the applicant's End semester examination in his/her qualifying examination, the Institute will consider shifting the date and time of interview within the overall window available.**
- 13) During interview, candidates will be tested in their main research area and not restricted to the syllabus of the online screening test.
- 14) **Ph.D scholars with B. Tech/BS (4 years) as their highest qualification need to undergo additional course work, as prescribed by the institute.**

HOW TO APPLY:

- 1) Applications shall be submitted **online** at the IIST website: <https://admission.iist.ac.in>. Applications received online only will be considered.
- 2) The applicants will not be allowed to make any changes in their registration profile once submitted. Hence utmost care should be taken by the applicants while filling their profile.
- 3) Application fee for General/EWS/OBC candidates who are male is Rs. 700/- per Department (for SC/ST/PD and Women applicants - Rs.350/- per Department). If the applicant is eligible and wishes to apply for more than one Research Area in the same Department, he/she need not pay any additional application fee. **The application fee is non-refundable.** Applicants, who wish to apply to multiple departments, will have to pay the appropriate application fee (sum of the application fee for each department).
- 4) The application fee shall be paid through online after completing the process of registration.
- 5) **Applicants who are employed in Government/Semi Government/PSUs/ Autonomous Bodies need to produce a "No Objection Certificate (NOC)" from the current employer at the time of Interview.**

- 6) SC/ST/OBC (Non-Creamy Layer)/EWS/Persons with Disabilities (PD) candidates shall upload the relevant certificates as per the format available in admission portal before the last date of online application. **GEN-EWS/OBC-NCL candidates need to produce updated certificate issued on or after 01st April, 2023 during the reporting at the Institute.**
- 7) Applications of GEN-EWS/OBC-NCL/SC/ST/PD candidates will be processed only after the receipt of the relevant proof online. In other words, non-submission of proof online will lead to rejection of application.

IMPORTANT DATES		
Sl. No.	Event	Date
1.	Opening of IIST website for online submission of applications	April 06, 2023 - 1000 hrs (Thursday)
2.	Closing of IIST website for online submission of applications	May 09, 2023 - 2359 hrs (Tuesday)
3.	Display of shortlisted candidates for Test	19 May 2023 (Friday)
4.	Date of online screening test	30 May 2023 (Tuesday)
5.	Publishing of screening test results	06 June 2023 (Tuesday)
6.	Interview Dates	13-16 June 2023 (Tue-Friday)
7.	Display of provisionally selected candidates	27 June 2023 (Tuesday)
8.	Reporting date at the Institution	10 July 2023 (Monday)
9.	Classes begin for Ph.D Programme	31 July 2023 (Monday)
10	Last date of Admission	14 August 2023 (Monday)

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