INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE (IACS)

A Deemed to be University under de novo category

Jadavpur, Kolkata-700032

Admission notice for the PhD program in the Spring Semester 2027

(Session starting from January 2027)

Advertisement No. **Acad/ PhD/Spring Sem-2027** Date: 28.09.2025

Applications are invited for regular full-time PhD students to the PhD Program in Spring Semester of 2027 under different Schools, namely Applied and Interdisciplinary Sciences, Biological Sciences, Chemical Sciences, Material Sciences, Mathematical and Computational Sciences, Physical Sciences and Director's Research Unit of IACS (A deemed to be University).

Eligibility:

1. 55% or equivalent in masters is mandatory for general candidates, while for SC/ST/OBC (non-creamy layer)/Differently-abled and other categories 50% marks is necessary.
2. Minimum eligibility criteria as per UGC rules. Qualification and eligibility requirements for each School are given separately (*vide infra*).
3. Selection of the regular full-time students will be done on the basis of their academic record, their performance in the appropriate national level examination, and finally, their performance in the written test and/or interview as decided by the respective Schools.
4. Relaxation of the selection criteria for the candidates belonging to SC/ST/OBC (non-creamy layer)/Differently-abled and other categories will be levied according to the norms of UGC and Government of India.
5. Merely satisfying the eligibility criteria does not guarantee that a candidate will be shortlisted for interview.

Fellowship: As per IACS/CSIR/UGC/INSPIRE rules.

Age limit: Should be below 30 years on the closing date of application. Age relaxation is applicable as per Government of India rule.

Nationality: The applicant must be an Indian citizen.

Selection Procedure:

1. Applicants will be shortlisted on the basis of merit by different Schools. Only shortlisted candidates will be informed via email and called for a written test and/or interview (to be decided by the School) for the final selection. IACS holds full right of choosing a candidate and even not selecting any, in case suitable applications are not received.
2. Vacancies given for each School are based on number of positions available in individual research groups in different research areas. Selection depends on the past academic record, performance in examination/interview by the school and also the availability of posts in particular research areas as opted by the shortlisted candidate.

Application Procedure: Applications have to be made online at https://phdapplicationiacs.iacs.res.in/ . Any queries may be sent to **phdcell_iacs@iacs.res.in**. The details of the online application and its procedure are given in the IACS website. Exact date and time of Admission Test/or Interview for each School will be announced on the IACS website.

Last Date of Submission of Applications: October 25, 2026.

Tentative date of interview: 05-13 November, 2026 which is subject to change according to the decision of IACS.

For further information in this regard, please contact Academic Office (Phone: 24734971; Extn: 2236, Email: phdcell_iacs@iacs.res.in).

Application/Examination Fees: Rs. 1200/- (Rs. 600/- for SC/ST candidates) will have to be transferred electronically to the account of IACS (Name of the Account: Indian Association for the Cultivation of Science University, A/C no: 37739525415, State Bank of India, Jadavpur University Branch, Branch Code: 0093. IFSC: SBIN0000093). The electronic transfer reference number should be mentioned in the application form.

Mode of Payment: Payment can be made through either of the following options:

1) Directly by NEFT bank transfer if an applicant can avail Online Banking facility;

2) By depositing the amount at any SBI Counter having CBS facility.

Fees to be paid during admission: One time admission fee (Rs. 15000/-) and caution deposit (Rs. 10000/-) to be paid during the time of admission. The rest of the annual fees for the first year to be paid within 6-months from the date of joining. The fee structure and timeline for payment of fee for the subsequent years are given at the IACS website.

Scholarship: All regular PhD students who join are eligible for scholarship from IACS/CSIR/UGC/INSPIRE as per rules.

Details of the PhD positions and the qualification and eligibility details for the different Schools / Unit are given below.

School of Applied and Interdisciplinary Sciences (SAIS)

No. of vacancies	Broad Research Area (Subject Code)	Essential Qualifications
02	Organic Synthesis, Medicinal chemistry and drug delivery (**SAIS 01**)	M.Sc. in Chemistry with CSIR- NET (JRF), INSPIRE or other fellowships or Integrated MS-PhD Fellowship of IACS etc
01	Cancer Biology and Chemical Biology (**SAIS 02**)	M.Sc. in Biology with CSIR-NET (JRF) or other fellowships or Integrated MS-PhD Fellowship of IACS etc
03	**(i)** Luminescent Oligomers / Polymers: Photophysical Properties and OLED Applications **(SAIS03)**	M. Sc. in Science with CSIR-NET (JRF) or M. Tech. in Mechanical or Polymer Engineering with or without fellowship.

	(ii) Visco-elastic Properties of Polymer Networks **(SAIS04)**. **(iii)** Electrochemistry on the Surface of Conducting Polymer **(SAIS05)**.	
01	Polymer Chemistry, Supramolecular Chemistry and Functional Materials (**SAIS 06**)	MSc in Chemistry with Fellowship (CSIR, UGC, Integrated MS-PhD Fellowship of IACS etc.)
02	**(i)** Supramolecular Polymers (**SAIS 07**) **(ii)** Biodegradable Polymer Materials **(SAIS 08)**	MSc with specialization in organic chemistry/ polymer chemistry.
02	Quantum Devices Based on Perovskite Nanocrystals **(SAIS 09)** Chiral Nanocrystals synthesis and characterizations **(SAIS 10)**	MSc in Chemistry or Physics with Fellowship (CSIR, UGC, INSPIRE, Integrated MS-PhD Fellowship of IACS etc.)
02	Synthesis, photophysics and charge transport of luminescent organic semiconductors **(SAIS 11)**	M.Sc. in Organic Chemistry / Physical Chemistry with CSIR-NET (JRF) or other fellowships
01	Organic optoelectronic synaptic transistors for neuromorphic memory and sensory applications **(SAIS 12)**	M.Sc. in Physics / Chemistry with CSIR- NET (JRF) or other fellowships
02	Peptide and Modified Peptide Chemistry for Targeted Antimicrobial Resistance (AMR) Therapeutics and Cancer Biology **(SAIS 13)**	M.Sc. in Chemistry or Biology with JRF or INSPIRE Fellowship

School of Biological Sciences (SBS)

No. of vacancies	Broad Research Area (Subject Code)	Essential Qualifications
1	Chemical Biology in Cancer Theranostics (**SBS 01**)	MSc in Chemistry/Biochemistry/Allied Subject domain with Fellowship (CSIR/ UGC//DBT/others)
1	Non-invasive detection of oncogenic driver mutations from liquid biopsy (**SBS 02**)	MSc. in Biotechnology/Biophysics/Biochemistry/Interdisciplinary with fellowship (DBT/DST-INSPIRE/ICMR/UGC/CSIR)
1	Molecular and Physical Principles of TNF Receptor Organization and Cell Volume Regulation in Health and Disease (**SBS 03**)	MSc Life Science/ Physics/chemistry, BTech Biotechnology
1	Molecular and Mechanistic Insights into PARP Inhibitor–Mediated Synthetic Lethality in Breast Cancer (**SBS 04**)	MSc in Life Sciences, Biotechnology, Biochemistry, Zoology, with mandatory **CSIR-NET qualified with JRF-own fellowship.**
1	Antimicrobial resistance in pathogenic bacteria (**SBS 05**)	M.Sc. in Biology with NET/GATE/equivalent qualification

School of Chemical Sciences (SCS)

Number of vacancies	Broad Research Area (Subject Code)	Essential Qualifications
2	Bioinorganic Chemistry **(SCS-01)**	M.Sc. in Chemistry with JRF (CSIR/UGC) or any other fellowship
2	Bioinspired Inorganic Chemistry **(SCS-02)**	MSc in Chemistry with CSIR/UGC Fellowship or equivalent
3	Heterocyclic Macrocycles and Supramolecular Chemistry **(SCS-03)**	MSc (Organic/Inorganic/Physical Chemistry) with CSIR-JRF / UGC-JRF / INSPIRE Fellowship
1	Chemistry/ Supramolecular Chemistry (SCS-04)	MSc in Chemistry/Organic Chemistry with CSIR/UGC/Inspire fellowships
2	Supramolecular Chemistry **(SCS-05)**	M.Sc. in Chemistry with CSIR-JRF or UGC-JRF
2	Organic synthesis via catalysis: Asymmetric Organocatalysis, Photoredox Catalysis **(SCS-06)**	MSc (Organic Chemistry/Chemistry) with CSIR-JRF/UGC-JRF
2	Carbohydrate Chemistry **(SCS-07)**	MSc in Chemistry, CSIR-UGC NET (JRF/LS) or a valid GATE score.
2	Synthetic methodologies, synthesis of Biologically active compounds **(SCS-08)**	MSc in Chemistry/ Organic Chemistry with CSIR/UGC/Inspire fellowships
2	DNA and RNA biology for gene regulation **(SCS-09)**	MSc in Bio-chemistry/Life Science/ Biotechnology with CSIR/ UGC/ Inspire fellowship.
3	AI-driven computational and theoretical research in chemistry, biophysics and soft materials **(SCS-10)**	MSc or 4-year BS/MS in Chemistry/ Physics, BTech and/or MTech in Biotechnology/Chemical Engineering /Materials Science and Engineering / Computer Science and Engineering GATE or CSIR/UGC/DBT/ICMR/NET JRF or equivalent.
2 (1 position sponsored by NQM)	Quantum computing, Quantum chemistry, machine learning **(SCS-11)**	MS/MSc in Chemistry/Physical Chemistry/Physics/Computer Science with NET/DST-INSPIRE/GATE eligibility.
3	Theoretical and Computational Physical/ Biophysical Chemistry integrating AI/ML (Physical Chemistry) **(SCS-12)**	M.Sc. Or equivalent (minimum 55% marks or equivalent) in Chemistry/ Physics/ biotechnology/biophysics & computational biology with GATE or CSIR/UGC/DBT/ICMR/NET JRF or INSPIRE or equivalent.
2	Computational Chemistry and Materials	CSIR-JRF/UGG-JRF/INSPIRE

	(SCS-13)	
1 (ANRF funded position)	Theoretical/Computational Chemistry (Quantum Chemistry) of excited and ground state chemical phenomena and Machine Learning approaches thereof. (**SCS 14**)	Required qualifications are NET-PhD/NET-LS/GATE. Students with superior qualifications, such as CSIR/UGC JRF or INSPIRE may also apply.
2	Spectroscopy, Cold Chemistry, Quadruple Mass Spectrometry, Ion Trapping. (**SCS 15**)	MSc in Physics/Chemistry or any allied subjects with GATE/CSIR/NET/ Inspire
1	Physical Chemistry (**SCS 16**)	MSc in chemistry preferably from physical chemistry with CSIR fellowship.

School of Material Sciences (SMS)

Number of vacancies	Broad Research Area (Subject Code)	Essential Qualifications
1	Materials for aqueous Zn-ion batteries	MSc Chemistry with NET or INSPIRE
1	Probing Electronic Structure and Phase Transitions and Degradation mechanisms in Battery Cathodes (**SMS 01**)	MSc Physics with NET or INSPIRE
1	Emerging Semiconductor Materials for Next-Generation Optoelectronic and Energy-Harvesting Devices (**SMS 02**)	MSc Chemistry/Physics with NET or INSPIRE
1	Nanoelectronic and Optoelectronic Devices: Micro–Nanofabrication, Characterization and Device Physics (**SMS 03**)	MSc Physics with NET or INSPIRE
1	Single crystal growth, Probing Frustrated Magnetism, Topological Spin Textures, and Emergent Quantum Phenomena in Kagome Materials (**SMS 04**)	M.Sc. in Physics/Materials Science with NET/INSPIRE
1	Single crystal growth and Probing Layered van der Waals Materials for Spintronics and Quantum Magnetism (**SMS 05**)	M.Sc. in Physics/Materials Science with NET/INSPIRE

School of Mathematical and Computational Sciences (SMCS)

Number of vacancies	Broad Research Area (Subject Code)	Essential qualification
01	SMCS 01 -Algebraic Enumerative Geometry	Strong background in one or more of the areas Algebraic geometry or Enumerative geometry or topology, Differential topology or Differential geometry. **Selection Criteria:**

		❖ Master's degree in mathematics (or equivalent), including a solid background in at least one of above; ❖ Written and oral proficiency in English; ❖ Fellowship holders might get preference
01	SMCS 02 - Operator Theory/Operator Algebra	Selection Criteria: Master's degree in Mathematics (or equivalent), including a solid background in Linear Algebra, Functional Analysis, Measure Theory, Real analysis, Topology.
01	SMCS 03 - Beyond the Single Cluster: Learning to Optimize Across Equivalent Implementations for Serverless Edge Computing	MTech/ MS in Computer Science and Engineering / Computer Science/ Information Technology/ Data Science or Allied Fields

School of Physical Sciences (SPS)

Number of vacancies.	Broad Research Area (Subject Code)	Essential Qualifications
03	Experiments Condensed Matter Physics – Quantum materials, topological materials, and CDWs, superconductivity, magnetism etc. (**SPS 01**)	MSc in physics with CSIR/UGC/Gate/JEST/Inspire fellowships
02	Theoretical Physics: Quantum Field Theory methods for Gravitational Waves, explorations in Effective Field Theories, and broad topics in String Theory. (**SPS 02**)	I. UGC/CSIR NET with JRF: Rank up to 100, II. Credited at least one graduate-level course in both General Relativity and Quantum Field Theory during their master's studies.
02	Statistical Mechanics of Active Matter / Biophysics (Cell Mechanics): Projects in computational and mathematical modelling. Programming skills in C/C++ are essential; Python is desirable. (SPS-03)	M.Sc. in Physics with a valid CSIR-NET-JRF or UGC-NET-JRF qualification.
01	Dynamics and memory in flowing soft matter (experimental) - Research area: Condensed Matter Physics - Soft Matter, Complex Fluids, Nonequilibrium Dynamics, and Flow Physics (**SPS 04**)	MSc in Physics/Materials Science/ Chemistry with CSIR-NET-JRF / UGCNET-JRF, INSPIRE – Provisionally Selected, UGC-NFSC (National Fellowship for Scheduled Caste students) or any other individual fellowship.

Directors Research Unit (DRU)

Number of vacancies	Broad Research Area (Subject Code)	Essential Qualifications

2	DRU 01 Quantum materials (superconductivity, magnetism, topological materials, correlated systems, electron spectroscopy)	Master's degree or 4years Bachelor's degree in Physics Preferably candidates having NET/GATE/JEST/Inspire fellowship

For any further information please write to phdcell_iacs@iacs.res.in or contact at Phone number 033-24734971 Extn-2236.

PhD Coordinator