

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

A Deemed to be University under de novo category

Jadavpur, Kolkata-700032

Advertisement No. **Acad/ PhD/Spring Sem-2024**

Date: 19.10.2023

Applications are invited for regular full-time PhD students to the PhD Program in the Spring Semester of 2024 under different Schools, namely Applied and Interdisciplinary Sciences, Biological Sciences, Chemical Sciences, Material Sciences, Mathematical and Computational Sciences and Physical Sciences, of IACS (A deemed to be University). A candidate may apply to **maximum two Schools** by making appropriate selection in the Application Form.

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 are as per that of UGC rules. Qualification and eligibility requirements for each position in different Schools 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 28 years on the 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 the Schools. Only shortlisted candidates will be communicated 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: Applicants may send their [application form](#) to the Academic Office, IACS (phdcell_iacs@iacs.res.in) along with the filled in [excel file](#), both of which are available at <http://www.iacs.res.in/PhD-Student-Career> by clicking “[Application Form for admission to the PhD program](#)” and “[Synopsis of Applicant for admission to PhD program](#)” respectively. Both documents should be sent together by email (phdcell_iacs@iacs.res.in) to the academic office by **November 19, 2023** with the subject line as “**PhD Program, IACS – Spring Semester 2024**”. Exact date and time of Admission Test/or Interview for each School will be announced on the IACS website.

Last Date of Submission: November 19, 2023

Tentative date of interview: 28 November, 2023 to 15 December, 2023 which is subject to change according to the decision of IACS.

For further information in this regard, please contact Academic Office (Phone: 24734971; Extn: 2215. 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.
- 3) Any other form of digital/electronic bank transfer.

Fees to be paid:

Courses	Admission Fee (Rs)	Tuition Fee (Rs) Per Annum	Other Academic Fee (Rs)	Caution Deposit (Rs)	Students' Emergency Fund (Rs)	Contributory Medical Scheme (Rs) per Annum	Total fees to be paid at the time of Admission (Rs)
PhD (Direct Admission) (General/OBC /Other Candidate)	15000	13800	5000	10000 (Refundable on completion of curriculum)	1000	3000	47800
PhD (Direct Admission) (SC/ ST Candidate)	15000	0	5000	10000 (Refundable on completion of curriculum)	1000	3000	34000

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

School of Applied and Interdisciplinary Sciences (SAIS)

Number of vacancies	Broad Research Area (Subject Code)	Essential qualification
1 (One)	Synthesis of nano-micro structures for light harvesting devices (SAIS01)	M.Sc. in Physics / Chemistry with CSIR- NET (JRF) or other fellowships
2 (two)	Design and fabrication of Nanoelectronic devices (SAIS02),	M. Sc. in Organic Chemistry/ Chemistry with CSIR-NET (JRF) or other fellowships
2 (Two)	Organic synthesis of Conjugated chromophores for device application (SAIS 03)	M.Sc. in Organic Chemistry / Physical Chemistry with CSIR-NET (JRF) or other fellowships
2 (two)	Optoelectronic Devices: Neuromorphic Memory Devices, Light Emitting Transistors with conjugated chromophores as active medium. (SAIS 04)	M. Sc. in Physics or Physical Chemistry with CSIR-NET (JRF) or other fellowships
1(one)	Supramolecular Assemblies for organic optoelectronics (SAIS 05)	M.Sc. in Chemistry (Inorganic or Physical specialization) with CSIR-NET (JRF) or other fellowships.
1(one)	Ferroelectric Nanocrystals for memory applications (SAIS 06)	M.Sc. in Physics (Solid State Physics/Materials Science/Electronics specialization) with CSIR-NET (JRF) or other fellowships.
1 (one)	Physical Properties of Polymers (SAIS 07)	MS / M. Sc. in Chemistry (Organic / Physical) with CSIR-NET (JRF) or other fellowships.
2(two)	Novel Micro Energy Harvesting and Sensing Materials 2. Flexible Electronics (SAIS-08)	NET-CSIR/NET-UGC/Inspire

School of Biological Sciences (SBS)

Number of vacancies	Broad Research Area (Subject Code)	Essential qualification
1	Peptide based biomaterials in health care (SBS01)	MSc. in Chemistry/Bio-chemistry/equivalent/ SAIS or SMS students from IACS (If interested)
1	Bio-Organic Chemistry/Biomedicine in Therapeutics (SBS02)	MSc in Chemistry/Biochemistry/Allied Subject domain Fellowship: INSPIRE/DBT/etc

1	Nanobioelectronics (SBS03)	M.Sc. in physical chemistry/organic chemistry/biotechnology with fellowship (CSIR/DST-INSPIRE/UGC/DBT)
1	Cell Biology (SBS04)	MSc in Biochemistry/any branch of life sciences (specialization in Molecular Biology/Cell Biology)
2	Cancer Biology/ Cancer Immunology/ Organic bioactive molecules synthesis (SBS05)	MSc in any discipline of Biological Science/ MSC in Chemistry (desirable Organic Specialization). Candidates should have their own Fellowship
1	Molecular Biology of DNA repair in Cancer with special reference to DNA topoisomerase (SBS06)	Valued score with Qualified NET/ JRF; DBT/JRF. MSc degree passed from any branches of Life Sciences (Biotechnology, Microbiology, Zoology, Biochemistry, Molecular biology).
1	Host-pathogen interactions (SBS07)	M.Sc. in Biology with NET/equivalent qualification.

School of Chemical Sciences (SCS)

Number of vacancies	Broad Research Area (Subject Code)	Essential Qualifications
2	Spectroscopy, Biochemistry (SCS 01)	CSIR-JRF, UGC-JRF DST inspire
4	Chemistry of N-confused Bilanes and Heterocyclic macrocycles (SCS 02)	MSc in Organic/Inorganic/Physical Chemistry 3: CSIR-JRF or UGC-JRF 1: DST-INSPIRE
1	Supramolecular chemistry of biomaterials (SCS 03)	M.Sc. in Chemistry (Organic/Inorganic)
2	Theoretical/computational physical chemistry (SCS 04)	M. Sc. in physics/chemistry with UGC/CSIR-JRF or Inspire
1	Physical Chemistry; Computational chemistry (SCS 05)	M. Sc. in physics/chemistry UGC/CSIR-JRF or Inspire
1	Beyond Born-Oppenheimer theories, Spectroscopy Reaction dynamics, Molecule-Surface Scattering (SCS 06)	M. Sc. in physics/chemistry UGC/CSIR-JRF or Inspire
2	Inorganic and Bioinorganic Chemistry (SCS 07)	MSc in Chemistry JRF/LS (Joint UGC-CSIR NET), DST Inspire, GATE
2	Organic Chemistry (Natural Product Synthesis) (SCS 08)	M.Sc. Chemistry/Organic Chemistry UGC/CSIR-JRF
1	Organic Synthesis (SCS 09)	MSc Chemistry, UGC/CSIR-JRF

1	Chemical Biology (SCS 10)	MSc Bio-chemistry/Biotechnology/Life Sciences, CSIR-NET/INSPIRE
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School of Material Sciences (SMS)

Number of vacancies	Broad Research Area (Subject Code)	Essential Qualifications
02	nanobiotechnology	MSc in chemistry with CSIR/UGC
02	Inorganic and Physical chemistry specialization	Master's degrees in chemistry
01	Experimental materials physics, quantum materials, magnetism, multiferroicity, and x-ray based spectroscopies	Master's in Physics with fellowship through CSIR NET, UGC, or DST INSPIRE.
02	Optoelectronics and Energy Harvesting	Master in Physics/Chemistry/Materials with JRF(CSIR/UGC)

School of Mathematical and Computational Sciences (SMCS)

Number of vacancies	Broad Research Area (Subject Code)	Essential Qualifications
01	Natural Language processing OR Image processing (SMCS-01)	MS/MTech in Computer Science or relevant area. UGC NET JRF qualified or with external funding.
02	Complex Analysis and Complex Dynamics (SMCS-02)	The candidates should have qualified NET(LS, CSIR, UGC) /GATE/NBHM.
01	Formal Verification of Cyber-Physical Systems (SMCS-03)	B.Tech./B.E./M.Tech./M.Sc. in Computer Science. UGC JRF qualified. 60% marks in undergraduate and masters degree

School of Physical Sciences (SPS)

Number of vacancies	Broad Research Area (Subject Code)	Essential Qualifications
2	Experimental condensed matter physics - superconductivity and magnetism in quasi-2D and quasi-1D materials.	NET -UGC/CSIR or inspire fellowship
1	Experimental condensed matter physics - Physics and application of conducting polymers	NET -UGC/CSIR or inspire fellowship
2	M.Sc. in physics with CSIR-NET/UGC/INSPIRE awarded own fellowship	Experimental condensed matter physics: Optoelectronics of 2D semiconductors.”

Documents to be sent by email at phdcell_iacs@iacs.res.in

- (a) Scanned copy of filled in application form with signature of the applicant.
- (b) Scanned copy of the receipt of application fee payment
- (c) Editable soft copy of the filled in excel sheet.

Academic Coordinator (PhD Program)