



NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH BHUBANESWAR
Advt.No: NISER/ACAD/Ph.D/2020-21(1)

Notice for Admission to PhD Program: 2020-21 (Summer Session)

Applications are invited from Indian citizens for admission to Ph.D program scheduled to commence from 28th July, 2020 in the following schools of NISER, Bhubaneswar:

- 1. School of Biological Sciences (SBS)**
- 2. School of Chemical Sciences (SCS)**
- 3. School of Computer Sciences (SCPS)**
- 4. School of Earth & Planetary Sciences (SEPS)**
- 5. School of Humanities and Social Sciences (SHSS)**
- 6. School of Mathematical Sciences (SMS)**
- 7. School of Physical Sciences (SPS)**

1. Eligibility

Name of School	Minimum Educational Qualifications #
Biological Sciences	60% or equivalent GPA in Masters or M. Tech or M. Pharm in any branches of Agricultural Sciences, Biology, Life Sciences, Pharmacy (any specialization), Veterinary Sciences, Computer Sciences, Bioinformatics and Biotechnology. Students with Master's degree in Physics, Chemistry or Mathematics having interest in pursuing a career in Biology are also encouraged to apply.
Chemical Sciences	60% or equivalent GPA in Masters in Chemistry or allied Chemistry fields. Student with Master's degree in any branches of Basic Sciences with undergraduate degree in Chemistry (or chemistry as one of the subjects) or M.Tech in applied Chemistry or Computer Sciences with interest in pursuing a career in Chemistry are also encouraged to apply.
Computer Sciences	60% or equivalent GPA in Masters in Computer Science, Electrical, Electronics Engineering or related fields, or Mathematics.
Earth & Planetary Sciences	60% or equivalent GPA in Masters in Physics, Chemistry, Space, Earth, Atmospheric and Oceanic Sciences OR M.Tech in Space Technology, Hydrological and Earth System Sciences
Humanities and Social Sciences	55% or equivalent GPA in Masters in Social Sciences or in allied disciplines.
Mathematical Sciences	60% or equivalent GPA in Masters in Mathematics or Computer Science.
Physical Sciences	60% or equivalent GPA in Masters in Physics or M.E/M.Tech in Applied Physics.

Candidates who are appearing in the final semester/year of qualifying examination in 2020 are also eligible to apply. However, if selected, their admission will be subject to submission of final semester / year result mark sheet wherein they should have obtained the requisite percentage.

2. Requirement of Qualifying in National Level Examinations for pursuing Ph.D program

School of Biological Sciences - Candidates should have qualified at least one of the National Level Examinations i.e. CSIR-UGC-NET (LS or JRF)/ GATE/ JEST/ GPAT/ DBT/ ICMR/ JGEEBILS or any other equivalent national level examination valid for the academic year 2020-2021.

School of Chemical Sciences -Candidates should have qualified at least one of these National Level Examinations i.e. CSIR-UGC NET (LS or JRF)/ GATE valid for the academic year 2020-2021.

School of Computer Sciences -Candidates should have qualified at least one of these National Level Examinations i.e. CSIR-UGC-NET (LS or JRF)/ GATE/ JEST valid for the academic year 2020-2021.

School of Earth and Planetary Sciences -Candidates should have qualified at least one of these National Level Examinations i.e. CSIR-UGC-NET (LS or JRF)/ GATE/ JEST valid for the academic year 2020-2021.

School of Humanities & Social Sciences -Candidates should have qualified at least one of the National Level Examinations i.e. UGC-NET (LS or JRF)/ ICSSR fellowship or any other equivalent national level examination valid for the academic year 2020-2021.

School of Mathematical Sciences - Candidates should have qualified at least one of these National Level Examinations i.e. CSIR-UGC-NET (LS or JRF)/ GATE/ NBHM* or any other equivalent national level examination valid for the academic year 2020-2021.

** A student will be considered to be qualified in National Level Written Examination conducted by NBHM if he/she has received call letter from NBHM to appear in the interview for PhD fellowship 2020 (irrespective of getting selected for NBHM PhD fellowship 2020 or not).*

School of Physical Sciences - Candidates should have qualified at least one of these National Level Examinations i.e. CSIR-UGC-NET (JRF only)/ GATE/ JEST valid for the academic year 2020-2021.

Important Note:

(a)The cut off marks for national examination such as GATE/ JEST/ GPAT/ NBHM/ JGEEBILS/ CSIR-UGC-NET etc will be further decided by each School for the relevant subject area.

(b) Those who have appeared for CSIR-UGC-NET examination held in **December, 2019** and awaiting results may also apply. However, such candidates, if shortlisted have to produce the qualifying mark statement of CSIR-UGC-NET (LS or JRF) exam on the date of Ph.D written test / interview failing which his/her candidature will be rejected automatically.

(c) As per HBNI Ordinance, student having INSPIRE Fellowship Doctoral Fellowship ONLY, without qualifying any other national level written examination will not be considered for admission to Ph.D program in NISER.

(d) Candidates with GPA in qualifying degree may need to produce the conversion note (in case it is not mentioned in their mark sheet) from their institution towards calculation of percentage.

3. Fellowship

1. The institute fellowship given by NISER is ₹31,000/- for first two years, which will subsequently be enhanced to ₹35,000/- for remaining three years, subject to the condition that he/she fulfills all the requirements of the Institute that will be stipulated from time to time.

2. Students with external fellowship from agencies viz. CSIR, UGC etc will be eligible to draw fellowship as per the extant rules of the respective funding agencies.

4. Research Areas for some schools

School of Biological Sciences

- Regulation of cell adhesion and signaling in *Helicobacter pylori*-mediated gastric cancer progression. (Dr. Asima Bhattacharyya Lab)
- Molecular Genetics and Epigenetics of Ageing Disorders: Neurodegeneration and Cancer (Dr. Debasmita P. Alone Lab)
- Understanding the Translational Control mechanism in Eukaryotes (Dr Pankaj V Alone Lab)
- Molecular Microbiology: Functional significance of membrane proteins and mechanisms underlying bacterial persistence. (Dr. Harapriya Mohapatra Lab)
- Cell based models for characterizing small molecules in the area of drug discovery (Dr. V. Badireenath Konkimalla Lab)
- Interaction of light and auxin in shaping development in plants; Role of splice variant of CONSTANS, CO like and GIGANTEA in the regulation of Florigen (Dr. Kishore CS Panigrahi Lab)
- Molecular Genetics of Gallbladder cancer; putative angiogenic regulators and tumorigenesis (Dr. Manjusha Dixit Lab)
- Neuroendocrine regulation, Neural circuitry of energy balance and reproduction (Dr. Praful S. Singru Lab)
- Cellular Regulation of morphogenesis and degradation of complex cell shapes (Dr. Renjith Mathew Lab)
- Mechanism of membrane remodelling during host-pathogen interactions. (Dr. Mohammed Saleem Lab)

NOTE: Only the above-mentioned labs have vacancies in SBS and the final number of vacancies filled will be the prerogative of the School.

For more information please visit: <https://www.niser.ac.in/sbs/page/faculty-and-area-research>

School of Computer Sciences

Research Areas: Algorithms focusing on Game Theory, Social Choice theory, and Online Computation, Computational Geometry, Cryptography and Cyber Security, Cyber Physical Systems, Graph Algorithms, Information Theory, Machine Learning.

School of Earth and Planetary Sciences

- Astrochemistry/Cosmochemistry, Astrobiology, Radio/sub-mm/infrared astronomy to study origin of sun-like stars and planetary systems such as our own solar-system, Exoplanets and its atmospheres, High resolution astronomical spectroscopy of solar-system objects (e.g. comets, asteroids) using ground or space telescopes (e.g. ALMA, NASA's SOFIA and JWST), Planetary atmospheres
- Planetary geology and early Earth geology; Planetary mineralogy and morphology using spacecraft data (e.g., ISRO's Chandrayaan, NASA Dawn, NASA Cassini, ISRO and NASA Mars missions, etc.); Asteroids & comets & meteorites & analogues and the early solar system science; Geochemical and geologic evolution of planetary bodies; Geology and evolution of icy planetary bodies & analogues
- Regional hydro-climatology; vegetation-climate interactions, especially in forested ecosystems of Amazonia, the Indian subcontinent and Himalayas; boundary layer and atmospheric modeling; physical processes behind convection; Heat wave phenomenology and regional vulnerability; thermodynamic impacts of aerosols and implications on regional climate.

For more information please visit: <http://www.niser.ac.in/seps/page/faculty>

School of Humanities and Social Sciences

English and Psychology

School of Mathematical Sciences

Algebraic Geometry, Algebraic Graph Theory, Cryptography, Differential Equations, Differential Geometry, Discrete Mathematics, Functional Analysis, Harmonic Analysis, Incidence Geometry, Number Theory, Probability Theory, Statistics

5. Selection Procedure

- The selection committee of the respective schools will short-list the candidates among those who meet the minimum educational qualifications and satisfy additional criteria which each school may set as deemed necessary.
- The short-listed candidates will be called for an interview, supplemented by a written test, if necessary, for the admission.
- Based on the academic record and the performance of the candidates in the selection process, the selection committee of the school will recommend candidates to the Chairman, Academic Council for admission to the Ph.D. program.
- All candidates called for the Test / Interview will be paid to and fro single, second-sleeper class railway fare by the shortest route from their place of residence to the Institute. They have to produce evidence (railway ticket) in support of their claim.

6. How to Apply

- The application form has to be filled up online at <http://www.niser.ac.in> and candidates should follow stepwise instructions mentioned to complete the application submission process. At the time of application, along with this online form, the candidate should upload soft copy of the supporting documents as per the eligibility criteria.
- Candidates intending to apply for more than one school should fill up separate online application forms for each school with appropriate supporting documents.
- Two sealed letters of reference in the prescribed format with signature of the referee on the envelope should be produced by the student at the time of interview. The copy of the reference letter is available online.
- NISER does not demand any application fee from the candidates who apply for Ph.D program.

7. Important dates:

- Online application will be activated on – **01.03.2020 (Sunday)**
- Last date for filling up online application – **31.03.2020 (Tuesday)**
- Short-listed candidates list will be uploaded on NISER website latest by 15.04.2020
- Tentative dates for test/interview will be as follows:
 1. School of Biological Sciences: **12.05.2020 – 14.05.2020**
 2. School of Chemical Sciences: **13.05.2020 – 14.05.2020**
 3. School of Computer Sciences **25.05.2020 – 26.05.2020**
 4. School of Earth & Planetary Sciences **26.05.2020 – 27.05.2020**
 5. School of Humanities and Social Sciences: **18.05.2020 – 19.05.2020**
 6. School of Mathematical Sciences **27.05.2020 – 29.05.2020**
 7. School of Physical Sciences: **22.05.2020 – 23.05.2020**
- Each school will send the call letters to the candidates separately. Kindly refer to the website for the announcement of the selected candidates.
- The registration is scheduled to be held on **24th July, 2020** (Friday).

- If you have any further query, kindly send an email to cpsbs@niser.ac.in, cpscs@niser.ac.in, cpscps@niser.ac.in, cpseps@niser.ac.in, cpsHSS@niser.ac.in, cpsms@niser.ac.in, cpsps@niser.ac.in for Biological Sciences, Chemical Sciences, Computer Sciences, Earth & Planetary Sciences, Humanities & Social Sciences, Mathematical Sciences and Physical Sciences respectively.
- Applicants are encouraged to visit school web page for more information on research activities.

Address for communication and more details

Faculty-In Charge (Academic Affairs),
National Institute of Science Education and Research (NISER),
P.O.-Jatni, Dist-Khurda, Odisha-752050
Phone: 0674-2494013, Fax-0674-2494004
Email: dean_aa@niser.ac.in

Checklist for application submission

During online submission, you will need to have the following ready with you for uploading;

- JPEG file of your passport size photo.
- JPEG file of your valid signatures.
- Birth Certificate/10th pass certificate in support of date of birth.
- Certificate in support of category (SC/ST), only if applicable.
- Certificate and mark sheets in support of passing qualifying examination i.e Master's degree. In case the original pass certificate is not issued by University then a certificate from the University on its letterhead with seal of the concerned authority certifying the completion of degree should be submitted.
- Certificate/document in support of qualifying national level examination(s) viz. CSIR-UGC NET/GATE/GPAT/DBT/ICMR/JEST/NBHM or any other as applicable.
- For students applying for PhD in Mathematics through NBHM PhD written test-2020 need to upload the interview call letter received from NBHM.
- Candidates who have appeared CSIR-UGC-NET exam held in December 2019 and are awaiting the result are required to upload the CSIR-UGC-NET admit card at the time of submission of online application.

FIC/Dean, Academic Affairs