HOMI BHABHA NATIONAL INSTITUTE

An aided institution of the Department of Atomic Energy and a
Deemed to be University under section 3 of the UGC Act.

STUDENT INFORMATION BROCHURE
2021

Location of HBNI Central Office, Constituent Institutions & Off-Campus Centre

VECC, KOLKATA

HRI, ALLAHABAD

SINP, KOLKATA

IPR, GANDHINAGAR

RRCAT, INDORE

IOP, BHUBANESWAR

BARC, MUMBAI

NISER BHUBANESWAR

TMC, MUMBAI

IMSc, CHENNAI

HBNI CENTRAL OFFICE

IGCAR, KALPAKKAM

INDIA

INTRODUCTION

Welcome to the Homi Bhabha National Institute !

This brochure aims to provide an overview of the Institute, its programs and information in brief about various authorities, processes and guidelines. Detailed information about the institute is also available on the website http://www.hbni.ac.in. All the students are encouraged to visit the website frequently to know about the updates on various programs and procedures.

Vision

❖ To provide an academic framework for integrating basic research with technology development.

❖ To encourage inter-disciplinary research.

❖ To nurture an environment of attracting high-quality manpower in sciences including engineering sciences to take up a career in nuclear science and technology-related areas.

Mission

To encourage the pursuit of excellence in sciences (including Engineering Sciences) and Mathematics in a manner that has major significance for the progress of indigenous nuclear technological capability.

Guided by the vision, mission and objectives, the value proposition of the institute is

❖ To provide an academic framework for integrating basic research with technology development.

❖ To encourage inter-disciplinary research.

❖ To nurture an environment of attracting high-quality manpower in sciences including engineering sciences to take up a career in nuclear science and technology-related areas.

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ABOUT THE INSTITUTE

The Homi Bhabha National Institute (HBNI) was established in 2005 under section 3 of the UGC Act. HBNI has the following Centres as its Constituent Institution (CI)/ Off-Campus Centre (OCC):

- Bhabha Atomic Research Centre (BARC), Mumbai
- Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam
- Raja Ramanna Centre for Advanced Technology(RRCAT), Indore
- Variable Energy Cyclotron Centre (VECC), Kolkata
- Saha Institute ofNuclear Physics (SINP), Kolkata
- Institute for Plasma Research (IPR), Gandhinagar
- Institute of Physics (IoP), Bhubaneswar
- Harish-Chandra Research Institute (HRI), Allahabad
- Institute of Mathematical Sciences (IMSc), Chennai
- Tata Memorial Centre (TMC), Mumbai
- National Institute of Science Education and Research (NISER), Bhubaneswar (OCC)

The role of HBNI is to nurture in-depth capabilities in nuclear science and engineering and to serve as a catalyst to accelerate the pace of basic research and facilitate its translation into technology development and applications through academic programs, viz., Master's and Ph.D. degrees in Engineering, Physical, Chemical, Mathematical, Life and Medical & Health Sciences while encouraging inter-disciplinary research. Additionally, academic programs in the domain of Applied Systems Analysis have also been identified to ensure the availability of adequate qualified human resources to address issues pertaining to nuclear law, the economics of nuclear power, nuclear security, nuclear proliferation, intellectual property rights etc.

HBNI has been accredited by NAAC with a score of 3.4, as a category 'A+' University in 2021. In the MHRD's National Institutional Ranking Framework (NIRF) exercise for the academic year 2021, HBNI received 18th rank in University category and was placed at 36th position among 1657 institutions in the overall category.

ACADEMIC PROGRAMS

The HBNI offers a range of academic programs in chemical sciences, engineering sciences, life sciences, mathematical sciences, medical & health sciences, physical sciences and applied systems analysis. All institutions, except NISER, conduct programs at the post-graduate level. Various programs offered are the following:

S.No	Program	Program Name
Department Affiliation: Chemical Sciences		
1	CHEM00	PGD (Chemical Sciences)
2	CHEM02	M Phil (Chemical Sciences)
3	CHEM04	PhD(Chemical Sciences)
4	CHEM13	Integrated MSc(Chemical Sciences)
Department Affiliation: Engineering Sciences		
5	ENGG00	PGD (Engineering Sciences)
6	ENGG01	M Tech
7	ENGG03	MSc(Engineering Sciences)
8	ENGG04	PhD (Engineering Sciences)
9	ENGG05	Integrated MSc(Engg)-PhD (Double Degree) - (Engineering Sciences)
10	ENGG18	Integrated PhD (Single Degree) - (Engineering Sciences)
Department Affiliation: Life Sciences		
11	LIFE00	PGD (Life Sciences)
12	LIFE04	PhD (Life Sciences)
13	LIFE13	Integrated MSc(Life Science)
14	LIFE18	Integrated PhD (Single Degree) - (Computational Biology)
15	LIFE24	PhD (Computational Biology)

ACADEMIC PROGRAMS

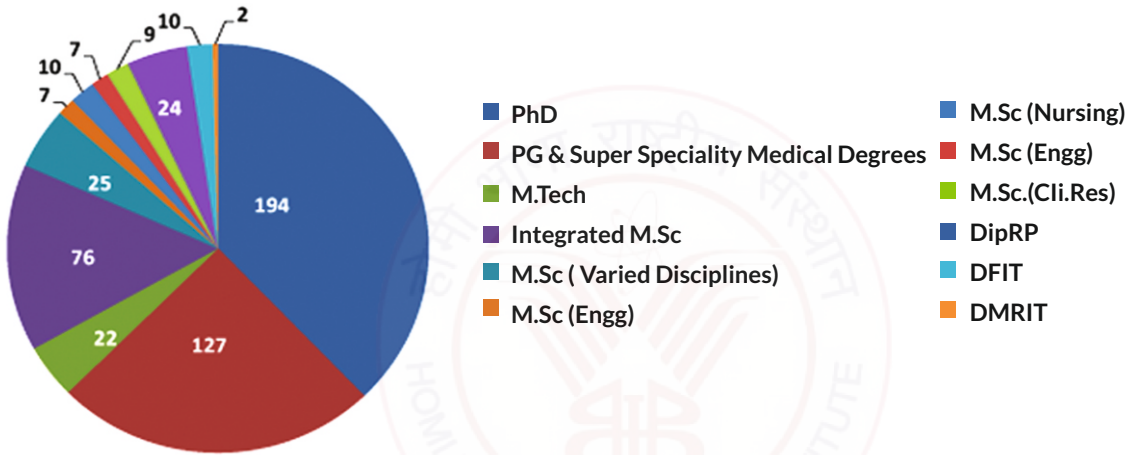| S.No	Program	Program Name
Department Affiliation: Physical Sciences		
16	PHYS00	PGD (Physical Sciences)
17	PHYS02	M Phil(Physical Sciences)
18	PHYS04	PhD(Physical Sciences)
19	PHYS05	Integrated MSc-PhD((Double Degree) - (Physical Sciences)
20	PHYS08	MSc(Physical Sciences)
21	PHYS13	Integrated MSc-(Physical Sciences)
22	PHYS18	Integrated MSc-PhD((Single Degree) - (Physical Sciences)
23	PHYS25	PhD (Earth & Planetary Sciences)
24	PHYS26	MSc (Medical and Radiological Physics)
Department Affiliation: Applied System Analysis		
25	APSA04	PhD (Applied System Analysis)
26	APSA18	Integrated. PhD (Single Degree) - (Applied Systems Analysis)
27	APSA27	PhD(Humanities & Social Sciences)
Department Affiliation: Mathermatical Sciences		
28	MATH04	PhD (Mathematical Sciences)
29	MATH05	Integrated MSc-PhD (Double Degree)- (Mathematical Sciences)
30	MATH13	Integrated MSc (Mathermatical Sciences)
31	MATH28	PhD (Computer Science)
32	MATH29	PhD(Theoretical Computer Science)
33	MATH30	Integrated. MSc-PhD (Double Degree)- (Theoretical Computer Science)

ACADEMIC PROGRAMS

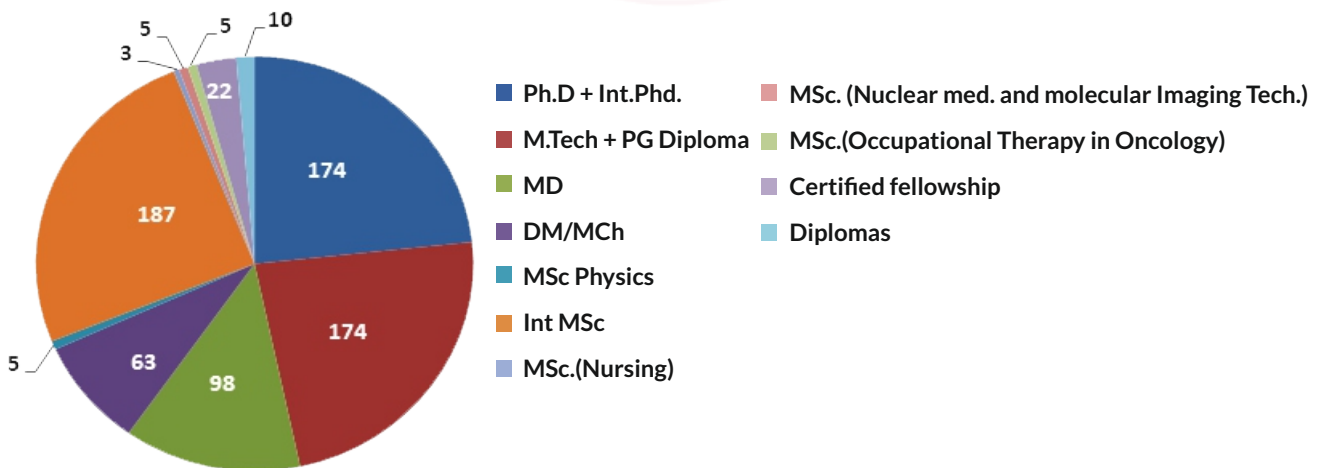| S.No	Program	Program Name
	Department Affiliation: Medical & Health Sciences	
34	HLTH04	PhD (Medical & Health Sciences)
35	HLTH05	Integrated. MD/DM/MCh-PhD (Double Degree - (Health Sciences)
36	HLTH07	DMRIT
37	HLTH09	MD
38	HLTH10A	DM
39	HLTH10B	MCh
40	HLTH11	DipRP
41	HLTH15	MSc(Nursing)
42	HLTH16	PGDFIT
43	HLTH17	MSc (Clinical Research)
44	HLTH19	MSc (Nuclear Medicine and Molecular Imaging technology)
45	HLTH20	MSc (Hospital Radio Pharmacy)
46	HLTH21	MSc (Public Health and Epidemiology)
47	HLTH22	MSc.(Occupational Therapy in Oncology)
48	HLTH23	MSc.(Patient Navigation)

ACADEMIC PROGRAMS

HBNI AT A GLANCE 2020-21

During the last academic year (2020-21), HBNI awarded 194 Ph.D degrees. The total number of Ph.D degrees awarded by HBNI till 31st March 2021 stands at 1805. HBNI also awarded 22 M.Tech, 7 M.Sc.(Engg.) 25 M.Sc. in various disciplines, 10 M.Sc.(Nursing), 9 M.Sc.(Clinical Research), 127 post graduate & super specialty medical degrees with specializations in Oncology, 24 diplomas in radiological physics (DipRP), 2 post graduate diplomas in Medical Radioisotope Technology (DMRIT), and 10 Fusion Imaging Technology (DFIT) during this period. 746 students have been admitted to different academic programs during 2020, out of which 174 students are for Ph.D program.

Program wise results declared during 2020-21

Legend:
- PhD — 194
- PG & Super Speciality Medical Degrees — 127
- M.Tech — 22
- Integrated M.Sc — 76
- M.Sc (Varied Disciplines) — 25
- M.Sc (Engg) — 7
- M.Sc (Nursing) — 10
- M.Sc (Engg) — 7
- M.Sc.(Cli.Res) — 9
- DipRP — 24
- DFIT — 10
- DMRIT — 2

Program wise admission details during 2020-21 Total (746)

Legend:
- Ph.D + Int.Phd. — 174
- M.Tech + PG Diploma — 174
- MD — 98
- DM/MCh — 63
- MSc Physics — 5
- Int MSc — 187
- MSc.(Nursing) — 3
- MSc. (Nuclear med. and molecular Imaging Tech.) — 5
- MSc.(Occupational Therapy in Oncology) — 5
- Certified fellowship — 22
- Diplomas — 10

MANAGEMENT OF HBNI

The Council of Management is the principal organ for the management of the Institute which is chaired by Secretary, DAE. All academic issues are handled by Academic Council, which has directors of each CI/OCC as its members implementing participative management. The academic council functions on the advice of the Board of Studies which has been constituted for each major discipline and has representatives from all CIs and OCC as well as experts from other reputed Indian institutes.

To manage the affairs of the HBNI at the level of Constituent Institutions, each CI has one or more Deans-Academic. In addition, a Standing Committee of Deans, comprising of Deans (Academic) from all the institutions, ensures harmony in the processes. CIs have also established a robust framework of admission, evaluation of performance and monitoring the progress of research by the students.

RESEARCH FACILITIES

The CIs/OCC of HBNI have a wide range of facilities ranging from tabletop set up to mega science facilities such as research reactors, accelerators, tokamaks, etc. Computational resources available to faculty and students are quite extensive and the faculty is well trained to build their own instrumentation and facilities. Thus, doctoral students have a unique opportunity to work in frontline areas with world-class facilities.

HBNI and its CIs/OCC have MoUs with several eminent national and international academic organizations, including INSTN, France and Ghent University, Belgium. These MOUs enable HBNI students to interact with the faculties of organizations and plan research programs in collaboration with them.

ACADEMIC RESOURCES

The libraries at the CIs/OCC have an excellent collection of books; journal volumes etc. and have a large volume of literature available on the intranet for easy access by faculty and students from their tabletop. The libraries also provide facilities to access various resources from other libraries of different institutes and e-resources as well.

FACULTY

The CIs /OCC of HBNI offer teaching and guidance by nationally and internationally renowned faculty members who have won prestigious national awards like S.S. Bhatnagar awards, Civilian awards and honors like fellowships of national/international academies. Nine winners of Indian Civilian awards have been associated with HBNI and the current faculty of HBNI includes four S.S. Bhatnagar awardees.

ADMISSION PROCESS

Each CIs/OCC of HBNI offers a different set of academic programs and has its own established procedure for admission to its various academic programs. The students are advised to browse the brochure published by CI for details about the academic programs offered, eligibility criteria for admission, seat matrix, seat reservation and fee structure for each program. The students can also visit the respective websites of CIs/OCC for detailed information about the admission process.

ACADEMIC PROCESS

HBNI is implementing the academic programs as per the prescribed Academic Calendar. Detailed information on the programs is available with the Deans - Academic at the CIs/OCC. The calendar, the ordinances and guidelines, provide all necessary information to the student as well as the faculty about the academic process and the timelines to be strictly adhered to. The student is advised to carefully study these documents and clarify any doubt with his guide or the Dean (Student Affairs) (DSA) in the respective CIs/OCC.

The details of the academic process for the HBNI academic programs are given in the ordinances of HBNI. Students should refer to the HBNI website for the latest version of these ordinances, and also other guidelines that may be updated from time to time. The format /template for various types of forms are also available on the website, and the students are advised to use the forms available on the web site and not any versions that may have undergone revision.

A website, http://www.anuvidhya.in has been launched by HBNI last year. The website currently allows for online submission of fee and all the documents required for issue of provisional degree certificate (PDC) viz., soft copy of the thesis, alumni form and feedback form by the PhD students. The facility for online submission of documents for result declaration will soon be extended for other academic programs as well.

Financial Aspects

Fellowship

The fellowships provided by DAE to research fellows as well as other amenities and entitlements are covered by DAE notification from time to time.

Contingency Grant

The contingency Grant is to be used for buying (i) books/journals (ii) stationery (iii) computer hardware and software, (iv) mailing expenses (v) travel, registration fee and other expenses connected with participation in seminars/conferences (vi) membership of professional bodies.

Other Benefits

The research fellows are eligible for house rent allowance if hostel accommodation is not available. They are eligible for medical allowances as per the rules of the institution in which they are working.

Financial Assistance for participation in International conference abroad:

The PhD students are encouraged to participate in a good quality international conference/symposium on a relevant topic, for presenting their research work. Limited travel assistance is provided by HBNI for this purpose, once during the tenure of Ph.D. To qualify for the travel assistance, the student should have passed the Oral General Comprehensive Examination (OGCE) and also made significant progress in the research work. The students are required to follow Government orders and regulations regarding travel. Details of the scheme are available with Dean, Students Affairs(DSA) of CIS/OCC.

Fee Payment:

HBNI central office only charges an enrolment fee and does not charge any tuition fee for the programs. The research student is liable to pay fees for various processes such as thesis evaluation and academic extension (the first extension does not need any fee payment) to HBNI central office, in addition to the enrolment fee. The fee payment can be made online. The fee structure, as well as procedure for online payment, is available on the HBNI website.

GUIDELINES FOR STUDENTS

Guidelines for Publications

We are very keen that the publications of HBNI students as well as faculty are not only of high standards, but also conform to the best ethical practices. Guidelines for publications have been framed by HBNI and all Deans (Academic) have been sensitized about implementing the guidelines. In addition, the CIs / OCC may have additional guidelines for publications which also should be met by the students and faculty. Students are advised to discuss with their guide or Dean (Academic) or Dean (Student Affairs) about the guidelines and ensure that they are followed.

Students in particular, should ensure that their affiliation to HBNI is reflected in the publications. Where a thesis is submitted to HBNI for the award of a degree, it is only appropriate that the publications appearing in the thesis reflect the affiliation. Boards of Studies have been advised that the publications of students that do not reflect HBNI affiliation need not be considered for the award of the degree.

Completion of program / discontinuation

On completion of the academic program, or in case the student has to discontinue the program for any valid reasons, the student should intimate the same to the Guide and to the DSA. The student should also meet all administrative requirements of the CI / OCC , such as handing over documents, materials, apparatus, books drawn from the library, accommodation, identity card, etc.

The fee structure for the various programs is detailed in the brochure issued by the CI/OCC.

DISCIPLINE

◆ The students are expected to dress and to conduct themselves in a proper manner.

◆ HBNI has zero-tolerance policy for ragging. If a student is found guilty of ragging,his / her enrolment could be cancelled, besides initiation of other actions as prescribed in Government rules. Students are also strictly warned not to indulge in any form of sexual harassment, which may attract disciplinary action.

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◆ The student is expected to adhere to the guidelines/instructions provided by the Guide and the Doctoral Committee in all academic matters. In administrative matters, he will be governed by the rules and procedures of the CI/OCC. The student is expected to strictly follow the code of conduct prescribed by the Institute and the CI / OCC. If a student commits a breach of the code of conduct, his / her enrolment could be cancelled, and he/she would also attract administrative actions as per the rules of the CI.

◆ Students are required to attend lectures and other academic activities and meet the requirement of the minimum residence time prescribed for the program. Applications for leave of absence have to be made to the Research Supervisor in advance and approval for leave should be obtained before proceeding on leave. The eligibility concerning various kinds of leave is notified by the authority paying the fellowship/stipend. Participation in any scientific event in India or abroad will be treated as on duty. Unauthorised absence for long periods may result in termination of enrolment.

ACADEMIC INTEGRITY

Students and faculty members are expected to function with the highest level of academic integrity. In their academic behaviour, there should be an open adoption of ethical practices. The term "ethical practice" will include avoiding / reporting / discouraging plagiarism, giving due credits to co-workers and not indulging in any kind of cheating including fudging of experimental data. Ethical practices concerning publications are discussed in the guidelines that have been issued in this regard.

STUDENT WELFARE COMMITTEES

Grievance Cell

A grievance cell is functional at each CI/OCC, which the student is welcome to approach in case he has any kind of grievance. However, it is expected that before the matter is taken up with the grievance cell, the student has exhausted all other options including discussion with DSA. In case a student is not satisfied with the redressal mechanism in the CIs/ OCC, he/she may seek support from the Central Office of HBNI by forwarding a representation to the Convener, HBNI Grievance Redressal Committee or e-mail to sghbni@hbni.ac.in, through proper channel.

Women's Cell/Internal Complaint Committee

Sexual harassment includes unwelcome sexually determined behaviour (whether directly or by implication). A Sexual Harassment Complaint Committee (SHCC) is functional in all the CIs/OCC, and Women's Cell/Internal Complaint Committee at HBNI Central Office. Any aggrieved female student, regardless of age, can lodge a complaint of sexual harassment in the work place with SHCC/Women's Cell/ Internal Complaint Committee at HBNI Central Office. The contact details of the members of the Women's Cell/Internal Complaint Committee are available on the HBNI website.

Alumni Cell

The Alumni Cell of HBNI was constituted in the year 2019 in order to create a robust mechanism to remain in touch with the alumni of HBNI to obtain feedback and suggestions from them based on their experience and involve them in various promotional activities including guiding students for their placements. The details about the alumni cell of HBNI as well as links to alumni of CIs/OCC are available on the HBNI website. The students can approach Alumni cell of HBNI for help with their placement.

CONTACT DETAILS OF KEY OFFICIALS OF HBNI

VICE-CHANCELLOR
Prof. P.R. Vasudeva Rao	vasudeva@hbni.ac.in	022-25597638
Vice-Chancellor's Office	vcoff@hbni.ac.in	022-25597621

DEAN
Prof. P.D. Naik	deanhbni@hbni.ac.in	022-25595358

REGISTRAR(Officiating)
Prof. D.K. Maity	registrar@hbni.ac.in	022-25597623

INSTITUTE CHAIR PROFESSORS
Prof. B.K. Dutta	bkdutta@barc.gov.in	022-25597640

ASSOCIATE DEAN
Prof. D.K. Maity	registrar@hbni.ac.in	022-25597623
Prof. A.K. Dureja	dureja@hbni.ac.in	022-25597629
Prof. G. Ravikumar	ravig@hbni.ac.in	022-25597624
Prof. Sunil Kumar Ghosh	sunilg@hbni.ac.in	022-25597628

ASSISTANT DEAN
Dr.(Mrs.) Anshu Singhal	asinghal@hbni.ac.in	022-25597616

DEPUTY REGISTRAR
Shri. B.V. Balaji	bvbalaji@hbni.ac.in	022-25597637

ADMINISTRATIVE OFFICER(III)
Shri J.N. Makwana	ao3@hbni.ac.in	022-25597554

CONTACT DETAILS

CORE VALUES OF HBNI

Student-Centric Approach
Keep in mind the good of the student in designing processes and progams

Science for Society
Encourage application of advanced knowledge in sciences including medical and health sciences, to address needs of society

Ethical Conduct
Adhere to code of ethics in teaching, research and service

Resist and relegate dishonesty

World Class Education and Research
Nurture human resources in sciences (including Engineering sciences) and Mathematics

Provide access to world class experimental facilities and research problems in frontier areas

Promote Excellence
Devise mechanisms to recognize, encourage and reward Excellence

Use merit as the only consideration in every process

Focus on National Mission
Use education and research as tools to meet the needs of the nation in various domains and particularly nuclear science and technology

होमी भाभा राष्ट्रीय संस्थान

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Website: www.hbni.ac.in