



Yearly Status Report - 2015-2016

Part A

Data of the Institution

1. Name of the Institution		HOMI BHABHA NATIONAL INSTITUTE
Name of the head of the Institution		Prof. R.B.Grover
Designation		Vice Chancellor
Does the Institution function from own campus		Yes
Phone no/Alternate Phone no.		02225597638
Mobile no.		9969102829
Registered Email		registrar@hbni.ac.in
Alternate Email		dureja@hbni.ac.in
Address		2nd Floor, Training School Complex Anushaktinagar, Mumbai 400094
City/Town		Mumbai
State/UT		Maharashtra
Pincode		400094

2. Institutional Status					
University	Central				
Type of Institution	Co-education				
Location	Urban				
Financial Status	central				
Name of the IQAC co-ordinator/Director	Prof. B.K. Dutta				
Phone no/Alternate Phone no.	02225597629				
Mobile no.	9969102829				
Registered Email	registrar@hbni.ac.in				
Alternate Email	dureja@hbni.ac.in				
3. Website Address					
Web-link of the AQAR: (Previous Academic Year)	http://www.hbni.ac.in/main/dsp_doc.html?nm=NAAC/aqr2015.pdf				
4. Whether Academic Calendar prepared during the year	Yes				
if yes,whether it is uploaded in the institutional website: Weblink :	http://www.hbni.ac.in/students/dsp_file.html?nm=students/acdm_clndr.pdf				
5. Accrediation Details					
Cycle	Grade	CGPA	Year of Accrediation	Validity	
				Period From	Period To
1	A	3.53	2015	11-May-2015	10-May-2020
6. Date of Establishment of IQAC	27-Jun-2014				
7. Internal Quality Assurance System					
Quality initiatives by IQAC during the year for promoting quality culture					
Item /Title of the quality initiative by IQAC	Date & Duration			Number of participants/ beneficiaries	

Participation in NIRF exercise	30-Sep-2016 1	40
Sensitization and Awareness of Academic Staff and Deans handling academic matters in CIs/OCC	07-Nov-2016 1	40
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8. Provide the list of Special Status conferred by Central/ State Government-UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.

Institution/Department/ Faculty	Scheme	Funding Agency	Year of award with duration	Amount
No Data Entered/Not Applicable!!!				
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9. Whether composition of IQAC as per latest NAAC guidelines:	Yes
Upload latest notification of formation of IQAC	View File
10. Number of IQAC meetings held during the year :	1
The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website	Yes
Upload the minutes of meeting and action taken report	View File
11. Whether IQAC received funding from any of the funding agency to support its activities during the year?	No

12. Significant contributions made by IQAC during the current year(maximum five bullets)

(i) Internalize and institutionalize a quality culture within all the CIs/ OCC through sensitization activities (ii) Formulated a working methodology for inculcating a quality culture within the academic systems (iii) Creation of awareness on the Quality issues amongst the faculty, students and staff (iv) Detailed deliberations and discussions on the role of IQAC and their roles in the academic systems of HBNI (v) Established a system of regular Quality related activities as part of all statutory meeting such as Academic Council, Standing Committee of Deans, Board of Studies, Council of Management.

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13. Plan of action chalked out by the IQAC in the beginning of the academic year towards Quality Enhancement and outcome achieved by the end of the academic year

Plan of Action	Achievements/Outcomes
Review and design of course curriculum for PGD programmes	Course curriculum for PGD programmes were designed, reviewed and approved by discipline wise Training School Committees and Apex Committee of the Training School
Implementation of CBCS in all the programmes except in Medical and Health Sciences programmes	Implemented CBCS in all the programmes and courses of HBNI, (except in Medical and Health Sciences programmes, these follow MCI guidelines) all the course curriculum are structured as (a) Fundamental Courses (b) Core
Adoption of a continuous assessment systems	Adopted a continuous assessment system involving periodically conducted examinations
Implementation of quality improvement strategies	Implemented quality improvement strategies in the academic programmes
Implementation of innovative and best practices	Implemented innovative and best practices which are institution centric, decentralized academic governance, timely declaration of results
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14. Whether AQAR was placed before statutory body ?

Yes

Name of Statutory Body	Meeting Date
Standing Committee of Deans of HBNI	07-Nov-2016

15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?

No

16. Whether institutional data submitted to AISHE:

Yes

Year of Submission

2016

Date of Submission

30-Sep-2016

17. Does the Institution have Management Information System ?

Yes

If yes, give a brief description and a list of modules currently operational (maximum 500 words)

HBNI has established a state of art website for sharing of information

regarding student regulations, guidelines, information on academic matters. An online portal for student information management was conceived for processing of admission, student progression assessment and review.

Part B

CRITERION I – CURRICULAR ASPECTS

1.1 – Curriculum Design and Development

1.1.1 – Programmes for which syllabus revision was carried out during the Academic year

Name of Programme	Programme Code	Programme Specialization	Date of Revision
MD	HLTH09	Medical and Health Sciences	03/08/2015
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1.1.2 – Programmes/ courses focussed on employability/ entrepreneurship/ skill development during the Academic year

Programme with Code	Programme Specialization	Date of Introduction	Course with Code	Date of Introduction
Mtech	Soft skills in Communication, Interpersonal skills, Creative Thinking, Team work, Stress management	03/08/2015	SS01	03/08/2015
Mtech	Administrative practices and Procedures	03/08/2015	SS02	03/08/2015
Mtech	Nuclear Security Safety	03/08/2015	SS03	03/08/2015
PG Diploma	Soft skills in Communication, Interpersonal skills, Creative Thinking, Team work, Stress management	03/08/2015	SS01	03/08/2015
MSc	Technical Communication I and II	03/08/2015	TSS01 TSS02	03/08/2015
PG Diploma	Radiological Physics PGDFIT	03/08/2015	HLTH14 HLTH 16	03/08/2015

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1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the Academic year

Programme/Course	Programme Specialization	Dates of Introduction
MD	Palliative Medicine	03/08/2015
Mtech	Engineering Sciences (IPR): new courses introduced	03/08/2015
MSc	Five Year Integrated programme: New courses introduced in Mathematical Sciences: REGRESSION ANALYSIS, TIME SERIES ANALYSIS, INTRODUCTION TO MANIFOLDS	03/08/2015
Mtech	Lasers and Application	03/08/2015
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1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective Course System implemented at the University level during the Academic year.

Name of programmes adopting CBCS	Programme Specialization	Date of implementation of CBCS/Elective Course System
PG Diploma	Physical Sciences, Chemical Sciences, Mathematical Sciences, Life Sciences	03/08/2015
Mtech	Engineering Sciences	03/08/2015
MSc	Five Year Integrated programmes in Physical Sciences, Chemical Sciences, Mathematical Sciences, Life Sciences	10/08/2015
MSc	Engineering Sciences	10/08/2015

1.3 – Curriculum Enrichment

1.3.1 – Value-added courses imparting transferable and life skills offered during the year

Value Added Courses	Date of Introduction	Number of Students Enrolled
Soft Skills Programme for MTech Students	03/08/2015	183
Soft Skills programme for PG Diploma Students in Physical Sciences, Chemical Sciences and Life Sciences	03/08/2015	101
Certified Fellowship Programmes in various specializations of Oncology	13/07/2015	11
Technical Communication for Five year Intergrated MSc programmes in NISER I and II (for 1st year and 2nd year students)	03/08/2015	110

Certified Fellowship programme in various specializations of Oncology	20/07/2015	11
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1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	Programme Specialization	No. of students enrolled for Field Projects / Internships
PG Diploma	Physical Sciences, Chemical Sciences, Life Sciences Engineering Sciences	101
Mtech	Physical Sciences, Chemical Sciences, Life Sciences Engineering Sciences	183
MSc	Five Year Integrated programmes in Physical Sciences, Chemical Sciences, Life Sciences and Mathematical Sciences	110
MD	All super specialities in Medical Oncology areas	24
MCh	All super specialities in oncology area	11
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1.4 – Feedback System

1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	Yes
Employers	
Alumni	
Parents	

1.4.2 – How the feedback obtained is being analyzed and utilized for overall development of the institution? (maximum 500 words)

Feedback Obtained
<p>The Homi Bhabha National Institute (HBNI) is a unique Deemed to be University, offering academic programs in 10 different constituent institutions (CIs) and Off Campus Centre (OCC). Nearly half of the students are employees of DAE. The motivation and the expectation of such employee students are naturally different from students who join HBNI to acquire a degree/diploma and move further into academic/professional career. Many HBNI students pursue basic research in a variety of disciplines, while others pursue research programs that have a vector towards applications. CIs/OCC regularly collects feedback from the students concerning each course work and lecturer. This feedback helps to understand the effectiveness of course syllabus, and teaching quality and blind spots of the lecturers. The lecturers are also advised to obtain informal feedback regularly so that they can gauge the pulse of their classroom and make necessary changes in teaching methodology to suit the class.</p>

CRITERION II – TEACHING- LEARNING AND EVALUATION**2.1 – Student Enrolment and Profile**

2.1.1 – Demand Ratio during the year

Name of the Programme	Programme Specialization	Number of seats available	Number of Application received	Students Enrolled
PhD or DPhil	Physical Sciences (VECC)	10	319	10
PhD or DPhil	Life Sciences (SINP)	10	450	5
PhD or DPhil	Physical Sciences (SINP)	30	1200	11
PhD or DPhil	Integrated programme in PhD in Chemical Sciences Physical Sciences Chemical Sciences Life Sciences	150	788	48
MSc	Five Year Intergrate programme in Physical Sciences, Mathematical Sciences, Chemical Sciences, Life Sciences	100	33539	99
PG Diploma	Fusion Imaging Technology (TMC)	10	52	10
MSc	Nursing Sciences (TMC)	10	446	10
MSc	Clinical Research (TMC)	10	446	10
PhD or DPhil	Enggineering Sciences, Physical Sciences, Chemical Sciences (IGCAR)	50	1651	44
PhD or DPhil	Mathematical Sciences	5	82	5
PhD or DPhil	Physical Sciences & Integrated PhD programmes (HRI)	15	151	7

MPhil	Physical Sciences (IoP)	30	326	17
PG Diploma	Fusion Imaging Technology	10	51	10
MSc	Nursing Sciences Clinical Research	20	321	20
MSc	Physical Sciences, Chemical Sciences Life Sciences Mathematical Sciences (NISER)	130	54100	130
PG Diploma	Physical Sciences, Chemical Sciences Life Sciences (BARC)	110	15237	110
Mtech	Engineering Sciences (BARC)	183	140235	183
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2.2 – Catering to Student Diversity

2.2.1 – Student - Full time teacher ratio (current year data)

Year	Number of students enrolled in the institution (UG)	Number of students enrolled in the institution (PG)	Number of fulltime teachers available in the institution teaching only UG courses	Number of fulltime teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2015	0	3102	0	973	0

2.3 – Teaching - Learning Process

2.3.1 – Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc. (current year data)

Number of Teachers on Roll	Number of teachers using ICT (LMS, e-Resources)	ICT Tools and resources available	Number of ICT enabled Classrooms	Number of smart classrooms	E-resources and techniques used
973	973	1124	100	2	1124
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2.3.2 – Students mentoring system available in the institution? Give details. (maximum 500 words)

Students are mentored by Doctoral Committee for PhD programmes, and MTech Committee for MTech programmes, MPhil Thesis Committee for MPhil programmes and such other PG Programmes Committee for MSc and MSc 5 Year Integrated programmes. There is a continuous process of students mentoring, through academic courses, project work and mini projects. The facilities are also extended to selected students from outside and when the requirement arises. The students are always welcome and encouraged to interact outside

the classes during the course work. After the course work, they are encouraged to get into the research aspects, and interact outside the classroom. Towards the end of research programme, the supervisor and other faculty members help the student to look for the places for career development and institute forwards supporting letters, whenever required. They are encouraged to undertake 6 month project work in such sectors that are relevant for career development. HBNI has a well defined policy for mentoring newly admitted students and enrolled graduate students. Students from various geographies and socioeconomic backgrounds, urban rural mix of students join the PG PhD programmes following due processes as stipulated in the CIs/ OCC. All the CIs/ OCC conduct student induction programme with the objective to orient them in behavioural, emotional, cultural aspects. They are also well informed about the detailed academic and related activities in advance. For PG programmes there is MTech Project Monitoring Committee, which mentors students in the project work and related all academic activities. Students have access to their guides and mentors at all times. Similarly, for the PhD programme the student specific Doctoral Committee provides the complete mentoring and guidance to the research students. The student specific guide also mentors the student in their postdoctoral fellow as well. External members in DC is also proposed taking into account the specialities of thesis and research needs, they also mentor the student as per needs of sectoral growth and employment. Provision of Institute information regulations: HBNI at the central level prepares Student information Brochure, which highlights about the university level activities and student related matters in terms of academic activities, academic regulations, ordinances and other academic requirements. In each of the CIs/ OCC, Dean Student Affairs is the key person to inform and guide students in case of concerns like regulations, student matters of course requirements, guides, external interactions. Each of the CIs/ OCC have a Student Grievance Committee for students to have access to key relevant information and raise issues if any and resolve the matter at the CI level. In case they are not satisfied, they can address directly to the Central Office and Vice Chancellor is the final authority.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
3102	973	1:3

2.4 – Teacher Profile and Quality

2.4.1 – Number of full time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
1123	973	150	66	828

2.4.2 – Honours and recognition received by teachers (received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the year)

Year of Award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
2016	S. N. Jha	Assistant Professor	DAE Group Achievement Award
2016	K. Mahata	Associate Professor	DAE Young Scientist Award
2015	D. Dutta	Associate Professor	DAE Group Achievement
2015	Dr. P. C. Rout	Assistant Professor	DAE Young Scientist Award
2015	D. Bhattacharyya	Professor	DAE Group Achievement Award
2015	Aparna Shastri	Assistant Professor	DAE Group Achievement
2016	Dr Biswaranjan Dikshit	Professor	Outstanding Reviewer Award 2016, from European Journal of Physics

			(IOP) Publishing)
2016	Dr D Mandal	Professor	Homi Bhabha Science Technology Award 2016, Department of Atomic Energy, Govt. of India, 2017
2016	Dr D Mandal	Professor	Group Achievement Award 2016, Excellence in Science Technology Award Scheme, Department of Atomic Energy, Govt. of India, 2017
2016	Dr D Mandal	Professor	Sisir Kumar Mitra Memorial Award 2016, Indian Institute of Chemical Engineers, 2017
2015	Rajesh Gopakumar	Professor	J.C. Bose Fellowship
2015	Rajesh Gopakumar	Professor	The World Academy of Sciences (TWAS)
2015	B. Mukhopadhyaya	Professor	Distinguished Faculty Award by HBNI
2015	S D Adhikari	Professor	Distinguished Faculty Award by HBNI
2015	Ashoke Sen	Professor	Distinguished Faculty Award by HBNI
2015	Samal, Areejit	Lecturer	Awarded Ramanujan Fellowship, for 2015, by the Department of Science and Technology (DST), India
2015	Samal, Areejit	Lecturer	Awarded Simons Associateship, for 2015, by the The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy for the period 2015-2020
2015	Prof. Gautam	Professor	Fellow of Indian

	Bhattacharyya		Academy of Sciences, Bangalore
2015	Kakoli Bose	Professor	National Women Bioscientist Award (Young Category)
2015	Sorab N. Dalal	Associate Professor	DAE SRC Outstanding Scientist Award
2015	Dr Kinshuk Dasgupta	Associate Professor	DAE Scientific Technical Excellence Award 2015 by Department of Atomic Energy, Government of India, under Excellence in Science, Engineering and Technology Awards Scheme 2015
2015	K. K. Singh	Associate Professor	Humboldt Fellowship for Post doctoral Research from Alexander vom Humboldt foundation, Germany
2015	Anindya Chakravarty	Associate Professor	SCIENTIFIC AND TECHNICAL EXCELLENCE AWARD, DAE
2016	Dr Gaurav Malhotra	Professor	Marfatia Award by Indian Psychiatric Society
2015	Manoj Yadav	Professor	Member of National Academy of Sciences, India (NASI)
2015	Samal, Areejit	Lecturer	Awarded Max PlanckDST Mobility Grant, for 2015, by the Max Planck Society (MPG) and IndoGerman Science and Technology Centre (IGSTC) for the period 20152018.
2015	Chandrashekar C M	Lecturer	Awarded Ramanujan Fellowship, for 2015 , by the Department of Science and Technology (DST), India

2015	Gopalakrishna, Shrihari	Professor	Elected as a Kavli Fellow, National Academy of Sciences (NAS) and The Kavli Foundation, USA, 2015.
2015	Nagaraj, D. S.	Professor	Awarded Fellow, for 2015, by The National Academy of Sciences, India.
2016	Prasad, Amritanshu	Professor	Awarded Swarnajayanti Fellowship, for 2016, by the Department of Science and Technology, Government of India.
2015	Sunder, V. S.	Professor	Awarded Distinguished Faculty Award of HBNI on its completion of 10 years of existence., for 2015, by the Homi Bhabha National Institute.
2016	Samal, Areejit	Lecturer	Awarded Max Planck Partner Group, for 2016, by the Max Planck Society (MPG).
2015	Dr. A. K. Nayak	Lecturer	Ramanujan Fellowship, DST Govt. of India.
2015	Prof. A. M. Jayannavare	Professor	Distinguished faculty award 2015 HBNI, Mumbai
2016	Prof. S. Panda	Professor	Recipient of Fellow of Indian Academy of Science
2016	Prof. S. Panda	Professor	Recipient of Fellow of Indian National Science Academics Award
2016	Prof. P. V. Satyam	Professor	Fellow of Andhra Pradesh Academi of Sciences
2016	Prof. P. V. Satyam	Professor	Elected as Vice President of Electron Microscope

			Society of India
2016	Dr. A. Virmani	Lecturer	Head of the DST MaxPlanck partner group between IOP and AEI Potsdam
2016	Dr. Victor Roy	Assistant Professor	DST Inspire Faculty Award
2016	Dr. S. K. Agarwalla	Lecturer	Winner of the NASI Scopus Young Scientist Awards 2016 Physics category
2016	Dr. Debakanta Samal	Lecturer	Head of the partner group of Max Planck Institute for Solid State Research
2016	Dr Palok Aich	Professor	Honorary Diploma from VARNA Medical University Bulgaria
2016	Dr C.Gunanathan	Lecturer	ECRP EVONIK Research proposal award
2016	Dr Subhankar Bedanta	Lecturer	DAAD Fellowship
2016	Prof. Bedangadas Mohanty	Professor	Fellow of Indian National Science Academy
2016	Prof. T.K. Chandrashekar	Professor	SASTRACNR Rao Award
2015	Prof J Moharana	Associate Professor	SN Bose Medal by INSA
2015	Prof.V Krinshnakumar	Associate Professor	INSABest Teacher Award
2015	Dr. Bedangadas Mohanty	Professor	Shanti Swarup Bhatnagar Prize
2015	Prof. V. Chandrasekhar	Director	SASTRACNR Rao Award
2015	Dr. Nishikanta Khandai	Lecturer	Ramanujan Fellowship
2015	A. K. Karnal	Professor	Prof. P. Ramasamy National Award for Crystal Growth from Indian Association for Crystal Growth
2015	APARNA CHAKRABARTI	Associate Professor	EXCELLENCE IN SCIENCE, ENGINEERING AND TECHNOLOGY AWARD (group achievement award)

2015	Arup Banerjee	Professor	EXCELLENCE IN SCIENCE, ENGINEERING AND TECHNOLOGY AWARD (group achievement award)
2016	C. P. Singh	Assistant Professor	Group achievement award for "Development of engineered high average power intracavity frequency doubled Nd:YAG solid state laser", " received from DAE
2016	Dr. K.S. Bindra	Professor	EXCELLENCE IN SCIENCE, ENGINEERING AND TECHNOLOGY AWARD (group achievement award)
2015	Dr. Maheswar Nayak	Assistant Professor	DAEESSET (Department of Atomic EnergyExcellency in Science, Engineering Technology) Group Achievement award
2015	Himanshu Singhal	Assistant Professor	HBNI best thesis award
2016	J. A. Chakera	Professor	EXCELLENCE IN SCIENCE, ENGINEERING AND TECHNOLOGY AWARD (group achievement award)
2016	J. Jayabalan	Associate Professor	DAEESSET SCIENTIFIC TECHNICAL EXCELLENCE AWARD
2015	Mohammed H Modi	Assistant Professor	EXCELLENCE IN SCIENCE, ENGINEERING AND TECHNOLOGY AWARD (group achievement award)
2015	Raktim Dasgupta	Assistant Professor	Outstanding Doctoral Thesis Award, selected among all the theses submitted in the last 10 years to Homi Bhabha National Institute.

2015	Raktim Dasgupta	Assistant Professor	Best oral presentation award in the 21st Meeting of International society for laser surgery and medicine.
2015	V. K. Dixit	Associate Professor	Homi Bhabha Science and Technology Award
2016	VINIT KUMAR	Associate Professor	Group Achievement Award, Department of Atomic Energy, Govt. of India
2016	Prof. Gautam Bhattacharyya	Professor	J.C. Bose National fellowship(DT/SERB)
2015	Prof. Milan K Sanyal	Professor	Fellow of The Third World Academy of Sciences (TWAS)
2015	Prof. Sukalyan Chattopadhyay	Professor	Fellow of National Academy of Science, India (NASI)
2015	Prof. Susanta Lahiri	Professor	Hevesy Medal for outstanding contribution in nuclear Chemistry
2015	Prof. Anjan Kundu	Professor	Fellow of Indian Academy of Sciences, Bangalore
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2.5 – Evaluation Process and Reforms

2.5.1 – Number of days from the date of semester-end/ year- end examination till the declaration of results during the year

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-end examination	Date of declaration of results of semester-end/ year- end examination
MD	HLTH09 (TMC Nuclear Medicine)	2015 - 2016	01/06/2015	17/08/2015
MD	HLTH09 (TMC Pathology)	2015 - 2016	14/06/2015	17/08/2015
MD	HLTH09 (TMC Radiodiagnosis)	2015 - 2016	20/06/2015	17/08/2015
MD	HLTH09 (TMC Radiation Oncology)	2015 - 2016	17/06/2015	17/08/2015
MD	HLTH09 (TMC Anaesthesia)	2015 - 2016	13/06/2015	17/08/2015
PG Diploma	HLTH16 (TMC)	2015 - 2016	06/06/2015	17/08/2015

MSc	HLTH17 (TMC)	2015 - 2016	11/06/2015	17/08/2015
MSc	HLTH15 (TMC)	2015 - 2016	18/08/2015	17/08/2015
MSc	LIFE04 (SINP)	2015 - 2016	24/07/2016	31/07/2016
MSc	PHYS04 (SINP)	2015 - 2016	24/07/2016	31/07/2016
PhD or DPhil	PHYS04 (RRCAT)	2015 - 2016	23/06/2016	13/07/2016
Mtech	ENG01 (RRCAT)	2015 - 2016	23/06/2016	17/06/2016
MSc	CHEM13, PHYS13, LIFE13, MATHs13	Even Sem (NISER)	12/05/2016	22/05/2016
MSc	CHEM13, PHYS13, LIFE13, MATHs13	Odd Sem	07/12/2015	15/12/2015
Mtech	ENGG01 (IPR)	2015 - 2016	31/07/2016	13/11/2016
MSc	ENGG03 (IPR)	2015 - 2016	31/07/2016	13/11/2016
PhD or DPhil	PHYS04 (IoP)	2015 - 2016	13/05/2016	01/08/2016
PhD or DPhil	PHYS05 (IMSc)	2015 - 2016	05/05/2016	19/05/2016
PhD or DPhil	PHYS04 (IMSc)	2015 - 2016	05/05/2016	19/05/2016
PhD or DPhil	MATH04 (HRI)	3rd Sem	09/12/2015	20/12/2015
PhD or DPhil	PHYS04 (HRI)	04 Aug to 10 Dec 2015	16/12/2016	02/01/2016
Mtech	ENGG01	I	31/07/2015	10/09/2015
MD	HLTH09 (TMC Anaesthesia)	2015 - 2016	22/12/2015	03/01/2016
MD	HLTH09 (TMC Radiotherapy)	2015 - 2016	23/12/2015	03/01/2016
DM	HLTH10 (TMC Medical Oncology)	2015 - 2016	27/12/2015	03/01/2016
MCh	HLTH10 (TMC Surgical Oncology)	2015 - 2016	21/12/2015	03/01/2016
DM	HLTH10 (TMC Critical Care)	2015 - 2016	16/06/2015	28/07/2015
DM	HLTH10 (TMC Gas troenterology)	2015 - 2016	16/06/2015	28/07/2015
DM	HLTH10 (TMC Paediatric Oncology)	2015 - 2016	22/06/2015	28/07/2015
DM	HLTH10 (TMC Medical Oncology)	2015 - 2016	22/06/2015	28/07/2015
MCh	HLTH10 (TMC Head Neck Surgery)	2015 - 2016	28/06/2015	28/07/2015
MCh	HLTH10 (TMC Plastic Reconstructive Surgery)	2015 - 2016	27/06/2015	28/07/2015

MCh	HLTH10 (TMC Gynaecological Oncology)	2015 - 2016	29/06/2015	28/07/2015
MCh	HLTH10 (TMC Surgical Oncology)	2015 - 2016	27/06/2015	28/07/2015
MD	HLTH09 (TMC Palliative Medicine)	2015 - 2016	03/06/2015	17/08/2015
MD	HLTH09 (TMC Microbiology)	2015 - 2016	02/06/2015	17/08/2015
MD	HLTH09 (TMC IHBT)	2015 - 2016	16/06/2015	17/08/2015
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2.5.2 – Average percentage of Student complaints/grievances about evaluation against total number appeared in the examinations during the year

Number of complaints or grievances about evaluation	Total number of students appeared in the examination	Percentage
10	3102	1

2.6 – Student Performance and Learning Outcomes

2.6.1 – Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed in website of the institution (to provide the weblink)

http://www.hbni.ac.in/main/dsp_doc.html?nm=agar/prg_otcm.pdf

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
CHEM04, ENGG04, LIFE04, PHYS04, MATH04	PhD or DPhil	Chemical Sciences, Engineering Sciences, Life Sciences, Physical Sciences, Mathematical Sciences,	175	171	98
PHYS05, ENGG05, MATH05	PhD or DPhil	Physical Sciences, Engineering Sciences, Mathematical Sciences.	32	32	100
PHYS08, ENGG03, HLTH15A01, HLTH17	MSc	Physical Sciences, Engineering Sciences, Nursing,	63	63	100

		Clinical Research			
CHEM13, PHYS13, MATH13, LIFE13	MSc	Chemical Sciences, Physical Sciences, Mathematical Sciences, Life Sciences	97	94	97
HLTH09A01,HLTH09A02,HLTH09A03,HLTH09A04,HLTH09A05,HLTH09A06,HLTH09A07,HLTH09A08	MD	Pathology, Aesthesia, Radio-Diagnosis, Radiation Oncology, Microbiology, Nuclear-Medicine, Palliative Medicine, Immunology & Transfusion Medicine	67	62	93
HLTH10A02,HLTH10A04.HLTH10A03	DM	Paediatric Oncology, Critical Care Medicine, Gastroenterology	21	21	100
HTLTH10B01,HTLTH10B02,HTLTH10B03,HTLTH10B04	MCh	Surgical Oncology, Gynecological Oncology, Plastic Surgery & Reconstructive Surgery, Head & Neck Oncology	23	23	100
HLTH16	PG Diploma	Fusion Imaging Technology	11	11	100
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2.7 – Student Satisfaction Survey

2.7.1 – Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

http://www.hbni.ac.in/main/dsp_doc.html?nm=agar/stud_stsftn.pdf

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

3.1 – Promotion of Research and Facilities

3.1.1 – Teachers awarded National/International fellowship for advanced studies/ research during the year

Type	Name of the teacher awarded the fellowship	Name of the award	Date of award	Awarding agency
International	Dr. Rahul Checker	Postdoc fellowship	20/08/2015	University of Texas, MD Anderson Cancer Centre, Houston, USA
International	Dr. Yogesh K Gupta	Postdoc fellowship	11/01/2015	University of Texas, MD Anderson Cancer Centre, Houston, USA
International	Dr. Sunita Sonavane	IAEA/RCA RAS6071 Regional Training Course on Nuclear Medicine techniques thyroid cancer, bone pain palliation and peptide receptor radioisotope therapy for neuroendocrine tumors, Manila, Philippines 1317 April 2015	07/07/2015	University of Notre Dame, Indiana, USA
International	Dr. Prasenjit Sen	Regular Associate of the ICTP	20/12/2016	International Atomic Energy Agency, Vienna International Centre, Vienna, Austria
International	Dr. Raj Gandhi	Neutrino Physics Centre Fellowship	16/10/2015	ICTP
International	Dr. Raj Gandhi	Intensity Frontier Fellowship	03/02/2016	Fermilab
International	Dr. Santosh Kumar Rai	Finland Fellowship	22/01/2016	University of Helsinki Helsinki Institute of Physics
International	Dr. Anshuman Maharana	Regular Associate of the ICTP	18/01/2016	ICTP
International	Dr. Ashoke Sen	Schroedinger	20/07/2016	Institute for

		Professor		Theoretical Physics, Zurich
International	Dr. Chitta Ranjan Das	Marie Skłodowska-Curie Individual Fellowships (IF)	20/10/2015	European Commission
International	Dr. Anish Kumar	Foreign Guest Researcher	11/11/2015	George August University, research work as part of an IndoGerman project
International	Dr. SANDIP KUMAR DHARA	Guest Scientist : Department of Physics, Technical University of Chemnitz, Chemnitz, Germany, March 1926, 2015	10/11/2015	Technical University of Chemnitz, Germany
International	Dr.A.Virman	Head of DST Max Planck	24/08/2016	Max Planck Institute, Germany
International	Dr Palok Aich	Honorary Diploma	23/02/2016	VARNA Medical University Bulgaria
International	Dr Subhankar Bedanta	DAAD Research Fellowship	20/12/2016	DAAD
International	Raktim Dasgupta	Post doctoral fellowship	27/10/2015	Max Planck Institute of Colloids and Interfaces, Germany
National	Dr. Kakoli Bose	National Women Bioscientist Award (Young Category)	10/12/2015	National Women Bioscientist Award (Young Category)
National	Dr. Sorab N. Dalal	DAE SRC Outstanding Scientist Award	18/05/2015	DAE SRC Outstanding Scientist Award
International	Dr. Yogesh S.Kashyap	Postdoc fellowship	16/06/2015	Diamond Light Source Ltd., Oxfordshire, UK
International	Dr. Soumyaditya Mula	Postdoc fellowship	13/07/2015	Universite de Strasbourg, Strasbourg, France
International	Dr. Ritesh Ruhela	Postdoc fellowship	21/02/2016	Queens University Belfast, UK

International	Dr.Sanjay Kumar	Postdoc fellowship	18/02/2015	Hiroshima University, Japan
International	Dr.Sheetal Uppal	Postdoc fellowship	22/03/2016	National Cancer Institute, NIH, Bethesda, USA
International	Dr. Chandra Bhanu Basak	Postdoc fellowship	20/04/2016	Brunel University, London, UK
International	Dr. Ashish Kumar Srivastava	Postdoc fellowship	18/05/2015	Shanghai Centre for Plant Stress Biology (Chinese Academy of Sciences), Shanghai, China
International	Dr. Imran Ali Khan	Postdoc fellowship	13/05/2015	Texas AM University, Texas, USA
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3.1.2 – Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other fellows in the Institution enrolled during the year

Name of Research fellowship	Duration of the fellowship	Funding Agency
DAE Fellowship for PhD programmes	5	Department of Atomic Energy
DAE Fellowship for Research Associate (Post Doc)	2	Department of Atomic Energy
UGC CSIR Fellowship for PhD programmes	5	UGC CSIR, MHRD
View File		

3.2 – Resource Mobilization for Research

3.2.1 – Research funds sanctioned and received from various agencies, industry and other organisations

Nature of the Project	Duration	Name of the funding agency	Total grant sanctioned	Amount received during the year
Major Projects	1825	Department of Atomic Energy	23665	23665
Minor Projects	1095	Department of Atomic Energy Units AEC, BRNS	1187	1187
Interdisciplinary Projects	1095	BRNS, AEC RD Units NGOs	108	108
Industry sponsored Projects	728	Pharma Diagnostic corporates/NGOs/Philanthropist	656	656
View File				

3.3 – Innovation Ecosystem

3.3.1 – Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of workshop/seminar	Name of the Dept.	Date
Intellectual Property and Its Functions	IGCAR (funded by DAE)	15/07/2015
View File		

3.3.2 – Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of Awardee	Awarding Agency	Date of award	Category
Development of preclinical orthotopic tumor xenograft mouse model and in vivo imaging	Dr. Neelam Shirsat, ACTREC Indian Society of Neurooncology	Indian Society of Neurooncology	02/03/2015	Faculty Awards
Development of genetically modified T cells to treat cancer	Dr. Swati Pendharkar, Memorial SloanKettering Cancer Center, New York, USA	SloanKettering Cancer Center, New York, USA	17/08/2015	Medical Researcher HBNI Faculty
Mouse models of lung adenocarcinoma: steps towards personalized treatment of cancer	Dr. Narayana Yedula, The Salk Institute for Biological Studies, La Jolla, USA	The Salk Institute for Biological Studies, La Jolla, USA	22/06/2015	Faculty Awards
Highly adaptable breast cancer cells as a functional model for testing anticancer agents	Dr. Balraj Singh, MD Anderson Cancer Center, Houston, USA	Anderson Cancer Center, Houston, USA	30/07/2015	Faculty Awards
Tumour reverse cholesterol transport drives treatment resistance in prostate cancer	Dr. Rachana Patel, Cancer Research UK - Beatson Institute, Glasgow, UK.	Cancer Research UK - Beatson Institute, Glasgow, UK.	27/07/2015	Faculty Awards
Cell polarity and organoids: new pathways and models for controlling cancer	Dr. Senthil Muthuswamy, UHN Princess Margaret Cancer Centre, Toronto, Canada	UHN Princess Margaret Cancer Centre, Toronto, Canada	25/08/2015	Faculty Awards
Nanomedicine for targeted tumor therapy	Dr. Ashish Ranjan, Center for Veterinary	Oklahoma State University, Stillwater, USA	20/10/2015	Faculty Awards

	and Health Sciences, Oklahoma State University, Stillwater, USA			
Biological and biomedical applications using laser sources and midIR conventional and Synchrotron light	Prof. G.D. Sockalingum, Universite de Reims Champagne Ardenne, Reims, France	Universite de Reims Champagne Ardenne, Reims, France	20/11/2015	Faculty Awards
Molecular imaging of cancer stem cells (CSCs) during development of chemoresistance in ovarian carcinoma	Mr. Ram Kumar Singh, SRF, Ray Lab	Ray Lab, TMC DAE	27/11/2015	Student Innovation Awards
Molecular insights into p53 repressed antiapoptotic proteins, Clusterin and Survivin in human oral cancer	Ms. Rupa Mishra (nee Vishwanath raman), SRF, Teni Lab	TMC DAE	07/12/2015	Student Innovation Awards
Role of Galectin3 in modulating tumorspecific immunity and lung metastasis in mice	Ms. Aparna D. Chaudhari, SRF, Chiplunkar Lab	TMC ACTREC DAE	22/12/2015	Student Innovation Awards
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3.3.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Center	Name	Sponsered By	Name of the Start-up	Nature of Start-up	Date of Commencement
na	na	na	na	na	26/12/2016
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3.4 – Research Publications and Awards

3.4.1 – Ph. Ds awarded during the year

Name of the Department	Number of PhD's Awarded
Physical Sciences	90
Chemical Sciences	28

Engineering Sciences	34
Life Sciences	37
Mathematical Sciences	9
Applied Systems Analysis	1
Medical and Health Sciences	1

3.4.2 – Research Publications in the Journals notified on UGC website during the year

Type	Department	Number of Publication	Average Impact Factor (if any)
International	Scopus (publications in Engineering Sciences, Chemical Sciences, Physical Sciences, Mathematical Sciences, Medical and Health Sciences, Life Sciences and Interdisciplinary fields)	2243	5.8
National	Publications in Engineering Sciences, Chemical Sciences, Physical Sciences, Mathematical Sciences, Medical and Health Sciences, Life Sciences and Interdisciplinary fields	234	4.3

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3.4.3 – Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	Number of Publication
HBNI All publications Books, Chapter in Edited volumes and Conference proceedings	439

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3.4.4 – Patents published/awarded/applied during the year

Patent Details	Patent status	Patent Number	Date of Award
A Bhowmik, P. Shanmugavelu, D. Dhavamani, Ankur Agrawal Canada, Single stage purification for uranium refining	Published	2707460	20/01/2015

A dualpurpose atomic device for realising atomic frequency standard and magnetic field measurement USA	Published	9097750	04/08/2015
T. K. Dey, Avishek Pal, R. C. Bindal, P. K. Tewari, Nanofiltration membranes with surface negative charge for fractional separation of mono and multivalent ionic species	Filed	2095/MUM/2	29/05/2015
Alok Kumar, A. K. Nayak, R. K. Singh, V. Ganesh and P. K. Vijayan, A process for suppressing condensation induced water hammer (CIWH)	Filed	000413	09/11/2015
M. Vasudevan, A.K. Bhaduri, Baldev Raj India, A penetration enhancing flux formulation for Tungsten Inert Gas (TIG) welding of austenitic Stainless steel and its application	Published	266346	30/04/2015
C. Anand Babu, B.K. Sharma, G. Europe (validated in France), Mohanakrishnan Baldev Raj, An innovative cutandfeed operation for enhancing the performance of ionexchange chromatographic separation	Published	2274075	09/09/2015
Sanjiv Kumar Tiwari, Satya Ram Mishra India, Generator of Collimated variable diameter hollow	Published	269505	26/10/2015

laser beam			
Dr. Vikas Jain, Mr. Girdhar Mundra, Dr. Satish Chandra Joshi, Dr. P. D. Gupta, A method and device for tuning SCRF Cavity	Published	051517	13/10/2015
Dr. Alok Dube, Ms. Paromita Sarbadhikary and Dr. P. K. Gupta, Metal complex of chlorophyll derivative for magnetic resonance imaging and photodynamic therapy	Filed	4912/MUM	15/06/2015
Dr. Vikas Jain, Mr. Girdhar Mundra, Dr. Satish Chandra Joshi, Dr. P. D. Gupta, A method and device for tuning SCRF Cavity	Filed	15/022358	14/07/2015
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3.4.5 – Bibliometrics of the publications during the last academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citation
Web of Science publications	Faculty of HBNI CIs OCC	Web of Science online	2015	24000	HBNI CI OCC	35555
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3.4.6 – h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the Paper	Name of Author	Title of journal	Year of publication	h-index	Number of citations excluding self citation	Institutional affiliation as mentioned in the publication
Web of Science publications	Faculty of HBNI CI OCC	Web of Science Online	2015	68	35555	HBNI CIs OCC
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3.4.7 – Faculty participation in Seminars/Conferences and Symposia during the year

Number of Faculty	International	National	State	Local
Attended/Seminars/Workshops	200	50	0	0

Presented papers	200	50	0	0
Resource persons	120	80	0	0
View File				

3.5 – Consultancy

3.5.1 – Revenue generated from Consultancy during the year

Name of the Consultan(s) department	Name of consultancy project	Consulting/Sponsoring Agency	Revenue generated (amount in rupees)
HBNI CIs TMC	Medical and Health Sector	Corporates in the Pharma sector	1650000
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3.5.2 – Revenue generated from Corporate Training by the institution during the year

Name of the Consultan(s) department	Title of the programme	Agency seeking / training	Revenue generated (amount in rupees)	Number of trainees
BARC	Radiography Testing (Level 2)	AERB	1712000	94
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3.6 – Extension Activities

3.6.1 – Number of extension and outreach programmes conducted in collaboration with industry, community and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the activities	Organising unit/agency/ collaborating agency	Number of teachers participated in such activities	Number of students participated in such activities
Science Exhibition	SINP At two Science Technology Fairs organized by local Clubs in and around Kolkata	10	200
Safety Awareness Programme	SINP	5	60
Blood Donation Camp	SINP	5	60
Indocrypt 2015 - IISc, Bangalore, Workshop on Number Theory, NCM AIS programme on operator algebras , Quantum Disordered Systems, Workshop on Probability Representation Theory - ATM	IMSc in association with Universities colleges in the region	20	1000
Enriching Mathematics education 2015	IMSc in association with NCM	10	150

Acharya Satyendranath Basu Smarak Bijnan 'O' Prajukti Mela, January 1924, 2016.	VECC Hedua Park, Kolkata	5	100
Visit to cyclotrons at VECC and other laboratories	VECC in collaboration with St. Agnes School, South Point High School, Ranigung Girls college, Jadavpur University, JBNSTS, Godavaris Mahavidyalaya, Banpur, Odisha, DonBosco High School, Anandamohan College, Bhairav Ganguly College, Belgharia Hig	20	280
Outreach programme at Ramakrishna Mission, Narendrapur, West Bengal on May, 2015	VECC	5	250
All India Essay competition on the topic "Nucleus for Nation"	VECC	10	50
International Kolkata Book Fair	VECC	15	100
Celebration of National Science Day on theme "Atoms in the Service of Nation"	VECC	15	200
Education outreach	HRI	5	200
Summer Training Programme in Physics and Chemistry	IGCAR	10	20
Workshop on NDE	IGCAR	5	200
Workshop on Chemistry	IGCAR	10	250
Workshop on radioactivity	IGCAR	5	1500
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3.6.2 – Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the activity	Award/Recognition	Awarding Bodies	Number of students Benefited
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na	na	na	0
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3.6.3 – Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/Agency/collaborating agency	Name of the activity	Number of teachers participated in such activities	Number of students participated in such activities
Science Exhibition	SINP	Awareness	10	60
Safety Awareness Programme	SINP	Awareness	10	60
Blood Donation Camp	SINP	Awareness	5	60
Summer School on Quantum Correlation: Foundation, Information Processing and Various Applications	IMSc	Promotion of Science	10	200
Celebration of National Science Day on the theme "Make in India: ST driven innovations"	VECC	Promotion of Science Innovation	15	300
All India Essay competition on the topic "Nucleus for Nation"	VECC	Awareness about Nuclear Sciences and Energy	15	250
Celebration of National Science Day on theme "Atoms in the Service of Nation"	VECC in collaboration with Colleges Universities	Awareness of students to use application of sciences	20	100
Education outreach	HRI	Outreach for children in Maths and Sciences	10	60
International Kolkata Book Fair	VECC	Awareness promotion of reading habits of school children in Sciences	5	250

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3.7 – Collaborations

3.7.1 – Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of activity	Participant	Source of financial support	Duration
MTech PG Diploma student for Courses in Engineering	Students of PG Diploma and Mtech Engineering sciences	DAE	6
Research exchange details given in attachment	Faculty of CIs/ OCC on theme based research (details in attachment)	National and international institutions	3
Research and faculty exchange	Faculty of various CIs/ OCC	Respective CIs/ OCC and participating institutions national and international research schemes in the theme areas	3

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3.7.2 – Linkages with institutions/industries for internship, on-the- job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration From	Duration To	Participant
Technical Study Tours	Visit to Power plants	NPCIL	04/01/2016	20/01/2016	154
Project and Collaborative Research	Student Exchange Research collaboration	IIT Kharagpur	12/12/2015	12/12/2016	05

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3.7.3 – MoUs signed with institutions of national, international importance, other universities, industries, corporate houses etc. during the year

Organisation	Date of MoU signed	Purpose/Activities	Number of students/teachers participated under MoUs
IITs (Bombay, Madras, Delhi, Kanpur, Kharagpur, Roorkee), ICT Mumbai, NIT Rourkela, HBUIIT Varnasi, Indian Statistical Institute, TIFR, Mumbai Jadavpur University	08/07/2016	Pursuing MTech level courses as per choice of student interest and relevant to their R and D	12

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CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES

4.1 – Physical Facilities

4.1.1 – Budget allocation, excluding salary for infrastructure augmentation during the year

Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development
11000	10379

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Campus Area	Existing
Class rooms	Existing
Seminar Halls	Newly Added
Classrooms with LCD facilities	Newly Added
Seminar halls with ICT facilities	Newly Added
Classrooms with Wi-Fi OR LAN	Newly Added

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4.2 – Library as a Learning Resource

4.2.1 – Library is automated {Integrated Library Management System (ILMS)}

Name of the ILMS software	Nature of automation (fully or partially)	Version	Year of automation
LIBSYS	Fully	7	2004
LIBSYS	Partially	LS Premia	2002
LIBSYS	Partially	7	2003
KOHA	Fully	17.11.11.000	2014
KOHA	Fully	17.11	1998

4.2.2 – Library Services

Library Service Type	Existing		Newly Added		Total	
Text Books	249462	368534729	2719	4794994	252181	373329723
Reference Books	11023	47925852	60	406800	11083	48332652
e-Books	32579	77567155	1544	5825237	34123	83392392
Journals	14404	3274203226	209	208947923	14613	3483151149
Digital Database	445	76760424	70	13836645	515	90597069

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4.2.3 – E-content developed by teachers such as: e-PG- Pathshala, CEC (under e-PG- Pathshala CEC (Under Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System (LMS) etc

Name of the Teacher	Name of the Module	Platform on which module is developed	Date of launching e-content
Prof. Ashoke Sen	Lectures in Video,	www.youtube.com/ash	20/12/2016

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4.3 – IT Infrastructure

4.3.1 – Technology Upgradation (overall)

Type	Total Computers	Computer Lab	Internet	Browsing centers	Computer Centers	Office	Departments	Available Bandwidth (MBPS/GBPS)	Others
Existing	19214	6	3000	71	13	72	88	1000	0
Added	2134	2	200	9	3	8	0	0	0
Total	21348	8	3200	80	16	80	88	1000	0

4.3.2 – Bandwidth available of internet connection in the Institution (Leased line)

100 MBPS/ GBPS

4.3.3 – Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and recording facility
25 seater multifunctional mini studio facility is established in which handles video conferencing, web streaming, video recordings and meetings (IMSc)	https://ekalavya.imsc.res.in/

4.4 – Maintenance of Campus Infrastructure

4.4.1 – Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary component, during the year

Assigned Budget on academic facilities	Expenditure incurred on maintenance of academic facilities	Assigned budget on physical facilities	Expenditure incurred on maintenance of physical facilities
8600	8309	25900	24939

4.4.2 – Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (maximum 500 words) (information to be available in institutional Website, provide link)

The HBNI and the Constituent Institutions/ Off Campus Centre are established by the Govt. of India through the Department of Atomic Energy. The academic buildings, laboratories, resources such as IT computer centre, classrooms, ICT labs, sports complex, residential facility for faculty, staff and students are the facility established following the procedures of the Govt. of India and such statutory bodies. Accordingly the maintenance and the physical facilities are under their purview, the DAE allocated budgets directly for the respective activities. The resources relating to ICT, campus infrastructure for academic and related activities are part of the major RD activities of the CIs/ grant in aid to the respective institutions following the govt. norms. Where specific facilities such as e governance peripherals are purchased, installed and maintained following due procedures of the Govt. of India. It is estimated that approximately 12 percent to 15 percent of the total cost of equipment, devices, computers, peripherals are spent on annual maintenance across all the institutions, where applicable, replacement of spares is undertaken as per the maintenance policies of the institutions. All the facilities available in the CIs is available across all the CIs/ OCC for carrying out experimental and

theoretical work. For utilizing these facilities from other CIs/ OCC a communication to the in charge of the lab are made through formal and informal for use of such facilities. Some facilities are for central use of all scientists across the CIs/ OCC, The Electron Microscope facility of SINP is working as a central facility and equipped with a 200 keV Transmission Electron Microscope and a 300keV Field Emission Gun Transmission Electron Microscope. The facility caters to the researchers from diverse disciplines like Biological Sciences, chemical sciences and engineering sciences. Researchers utilize some of the facilities like Indus I and II, which are very unique and they are used by almost all the CIs/ OCC and other instituted in India, who also use the facility for study of biological samples like bacteria their thin section, lipid vesicles, detergent micelles, lipid protein complexes, peptide aggregation etc.

www.hbni.ac.in

CRITERION V – STUDENT SUPPORT AND PROGRESSION

5.1 – Student Support

5.1.1 – Scholarships and Financial Support

	Name/Title of the scheme	Number of students	Amount in Rupees
Financial Support from institution	DGFS PhD, Post Doc RA assistanceship	1323	59438000
Financial Support from Other Sources			
a) National	UGC CSIR DST others	16	5600000
b)International	DAAD	1	200000

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5.1.2 – Number of capability enhancement and development schemes such as Soft skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,

Name of the capability enhancement scheme	Date of implemetation	Number of students enrolled	Agencies involved
Bridge Course on Nondestructive Evaluation and Quality Assurance	03/08/2015	30	IGCAR, Indian Society for NDT Society for Failure Analysis
Yoga Meditation for Reseachers Scientists and Research Fellows	03/08/2015	12	RRCAT with support of Yoga Circle Indore
Course on Communication skills Technical Communication Skills	03/08/2015	35	RRCAT and IIT Kanpur

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5.1.3 – Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the scheme	Number of benefited students for competitive	Number of benefited students by career	Number of students who have passedin the comp. exam	Number of studentsp placed
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		examination	counseling activities		
2016	Scheme to support the needy students	10	10	5	7
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5.1.4 – Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	Number of grievances redressed	Avg. number of days for grievance redressal
0	0	0

5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Name of organizations visited	Number of students participated	Number of students placed	Name of organizations visited	Number of students participated	Number of students placed
na	0	0		0	0
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5.2.2 – Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Department graduated from	Name of institution joined	Name of programme admitted to
2016	320	HBNI and all CI/ OCC	Physical Sciences, Chemical Sciences, Mathematical Sciences, Life Sciences, Medical and Health Sciences	various national and International Universities, Labs in the specialized areas	PhD programmes. Post Doc fellows, senior positions in labs, pharmacos and Scientists in RD Labs of DAE
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5.2.3 – Students qualifying in state/ national/ international level examinations during the year (eg:NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Items	Number of students selected/ qualifying
GATE	2
NET	1
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5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
NISER: Udbhava Annual	Staff students of NISER	200

Cultural meet, Umang Intra Coljege Cultural Fest, Udgaman Intra College Sports Meet	and neighbouring colleges, IISERS	
IMSc Annual sports Day and Cultural event	staff and students	80
TMC Foundation day	Staff students and key stakeholders	200
HRI: Annual sports day, Inter staff cricket match Rajbhasha Poem Recitation, SPIC MACAY Programmes, Essay competition on Observance of Vigilance Awareness Week	Staff and students	120
IoP: Various sports cultural events organized from time	Students and faculty	50
SINP: Chess, Caroom, TT	All staff and students	60
SINP: Hindi Day celebration including week long competition on hindi recitation, song, story writing etc., Annual Cultural Programme including performance by students, faculties and other employees	All staff and students	60
SINP: Annual Sports, Cricket, Football, Volley Ball, Badmitton,	All staff and students	60
HBNI Research Scholar Day (RRCAT), Mini Marathon	All staff Students	75
BARC badminton tournament 21 Nov 2015, Annual Carrom tournament 6 Nov 2016, BARC staff club football tournament 1015 April 2015 Ball badminton tournament 78 Feb 2015	Students and Research fellows	160
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5.3 – Student Participation and Activities

5.3.1 – Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one)

Year	Name of the award/medal	National/ Internaional	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
No Data Entered/Not Applicable !!!						
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5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

HBNI in its endeavor to provide effective and transparent functioning of the academic and academic related activities have constituted functional bodies/committees to undertake the delegated functions. Students are represented in all such bodies to seek views of the students and their matters. For the purpose of academic activities students are represented in Student Grievance Committees (at the CI levels), Internal Quality Assurance Cell, Placement and Alumni Cell. In order for the functioning of cultural and outreach activities, each of the CI/ OCC have Student Cultural Committees, which organize and conduct national festivals, environmental and health awareness campaign, swachaata abhiyan, outreach activities such as blood donation camps, awareness campaign. Students of HBNI and CIs/ OCC participate in various sports, cultural, library, nature clubs and such other committees. They organize annual events, sports and cultural as per their academic calendar. All support is being extended to them for organizing such events through student mentors and Dean Student Affairs PhD Guides. Each of the CIs have indoor games, sports and cultural clubs which organize such events within the campus. The students are engaged in annual hostel day celebrations, institute day, swachata abhiyan, clean campus campaign, new year eve celebrations, Ganapathi Utsav, colloquium on science topics, health matters, popular science talks, invites lectures on Science Day, Yoga Day, Republic day, Independence Day, Literary Club, Dance, Drama and Film club and such other events. The students in all the CIs/ OCC are actively engaged in the national/ international level scientific forums, meeting and conferences for exchange of ideas and theme based research. They are generally mentored and guided by the Dean(s) Academic, , PhD guides. Clean Green Campaign in the CIs: The students of PG level are engaged in Swacchata Abhiyan, planting tree sapling on the notified days of the year to commemorate their contributions to the country. These activities help inculcate a habit for conservation of environment and natural resources. All the students of the CIs take this initiative annually. Promotion and Popularization of Science Education Programmes by students of CIs: A large number of students in the CIs actively participate in training and education programme to the undergraduate and post graduate during the summer vacation and regular projects during the final year of the science programme being pursued by students of other university, colleges etc. They even train students for 1year project leading to preparation of a project report in the chosen topics. The number of such trainee students are in large numbers to the extent of more than 200 to 1000. Select CIs also conduct summer students visitor programme for a duration of 6 weeks, students sponsored and supported by INSA also take part in such activities. The students are also engaged in organizing popular science lecture for school students either within the CIs or in their school campus. National Science Day/ National Technology Day: The students in the CIs are actively engaged in National Science Day and National Technology Day programme celebrated as per their programmes.

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

One of the CI of HBNI has an Alumni Association registered

5.4.2 – No. of registered Alumni:

0

5.4.3 – Alumni contribution during the year (in Rupees) :

0

5.4.4 – Meetings/activities organized by Alumni Association :

As per the plans of CI/ OCC meeting organized.

CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 – Institutional Vision and Leadership

6.1.1 – Mention two practices of decentralization and participative management during the last year (maximum 500 words)

The organizational structure of HBNI is indeed truly decentralized. The responsibilities for selection and admission of students, payment of fellowships, guidance and monitoring of progress of students, redressal of grievances of students, organization of exams and other such activities are under the purview of the CI/OCC. The Director of the CI/OCC provides overall guidance to the academic programs at the CI and sets up necessary committees for the design and implementation of the academic programs with complete academic rigour. A Standing Academic Committee is set up at each CI that prescribes the course work for the students and also forms the Doctoral Committee. Every CI/OCC has one or more Deans (Academic), depending on the disciplines handled by the CI/OCC, and one Dean(Student Affairs) and a Nodal Officer who handle all the academic Governance and students' welfare activities. Participative Management: The Academic Council of HBNI has, as its members, Directors of all the CIs/OCC as well as Convenors and Co convenors of Boards of Studies. Deans(Academic) are invitees to the meetings of the Academic Council. All major decisions on academic programs and processes are arrived at by discussion in the Academic Council with participation of all important functionaries of HBNI. This has ensured that the institutions are able to meet their individual objectives and at the same time, adhere to a common set of academic standards and processes. Similarly, the Standing Committee of Deans (SCD) of HBNI, chaired by Vice Chancellor, has as its members Deans(Academic) and Deans (Student Affairs) of all CIs and OCC. The finer aspects of academic governance are discussed in detail in the meetings of SCD. Case Study: Revision of Ordinances of HBNI The Ordinances of HBNI, which govern the conduct of all academic programs, were formulated in 2013. Subsequently, based on the decisions taken by Academic Council and other bodies on various topics, guidelines were issued to students, faculty as well as CIs/OCC. These guidelines covered a number of important issues and during last year, it was decided that the ordinances need to be revised to incorporate all the guidelines and provide them a statutory base. Also, considering various developments in the field of higher education, and guidelines issued from time to time by bodies such as UGC, many changes had to be made in the ordinances. Further, ordinances had to address new courses which were started in the intervening period. Considering the comprehensive changes required, the ordinances were first drafted through several detailed deliberations within the Central Office. These were, then discussed in meetings of the Standing Committee of Deans, where Deans (Academic) from all CIs and OCC participated and shared their views. The ordinances were then discussed in the Academic Council, where the Directors of CIs/OCC as well as academic experts from outside HBNI provided a number of important inputs.

6.1.2 – Does the institution have a Management Information System (MIS)?

Yes

6.2 – Strategy Development and Deployment

6.2.1 – Quality improvement strategies adopted by the institution for each of the following (with in 100 words each):

Strategy Type	Details
Curriculum Development	The university follows a systematic process for the design and the

development of curriculum for various academic programmes, which are explained below. The curriculum development for MTech/ MSc (Engg)/ MPhil is carried out by a subcommittee of experts constituted for this purpose by the subject specific Training School Committees (TSC). The TSCs basis their recommendations on evolution of DAE programmes during the period since the last review and feedback from students. The revised syllabus incorporating the recommendations of the TSC is then forwarded to the Board of Studies (BoS) of respective discipline for the ratification of the suggestions and recommendations. The recommendations of the BoS is placed in the Academic Council for ratification and approval. This process is carried out once in three years on a holistic basis.

However, minor modifications if required are carried out on a case by case basis in an ongoing manner and duly ratified in the meetings immediately following the revision by the above committees as state above.

DipRP/ DMRIT/ DFIT These programmes come under Board of Studies in Medical and Health Sciences. Any revision to the syllabus is approved first by the standing committee and then by the BoS.

MD/ MCh/ DM The conduct of these programmes including any revision of syllabus is managed by the Board of Studies in Medical and Health Sciences and the guidelines of the Medical Council of India. The BoS meets periodically and deliberates on the recent trends, development and recommends introduction of new specializations that may be needed to generate manpower in the specialized medical field. MSc (Nursing) Conduct of this programme including any revision of syllabus is governed by the Board of Studies in Medical and Health Sciences and the guidelines of the Nursing Council of India. PhD and Integrated PhD: The course work is designed and approved by CI level discipline wise academic committees and approved by BoS. Additionally, Student specific doctoral committees look into the requirements of individual students and prescribe additional courses which have to be taken as self study courses. Syllabi for such courses are tailor

made. With regard to the MSc as part of the programme, the curriculum is designed by the discipline wise committees constituted by Director of CI/ OCC based on the current national and international trends in Masters level education in Physics, Chemistry and Mathematics. It is then run through Board of Studies and their feedback is incorporated before finalizing the curriculum. Student feedback is taken both during the course as well as at the end of the course and based on the feedback the required changes in the course curriculum, research methodology and examination system is made for effective learning of the subject. The feedback process is monitored and implemented by the Graduate committee of the Institute. MSc (5Year Integrated) This programme is conducted only at NISER. The course structure of the programmes is designed by the experts consisting of eminent scientists in the field and frozen for a minimum of 3 years. The syllabus for individual courses in any program is proposed by the faculty and submitted to the Under Graduate Committee of the BoS (UGCS) of the respective school. It is discussed and sent to Undergraduate Committee of the Institute (UGCI) and then sent to the BoS. The BoS of the CIs of NISER meets once in every 3 months to ratify the above. Finally, it is discussed and approved by the Board of Studies of CI and Academic Council of HBNI.

Teaching and Learning

Doctoral students are encouraged to enrich themselves by taking up courses beyond mandatory one year of course work to broaden their knowledge. Such courses could be in the form of self study courses, open seminars or minor RD project. Similarly, MTech, students during one year course in training school are given mini projects to be carried out under the guidance of senior scientists. The project work is evaluated by a committee. The evaluation procedure includes a presentation by the students also visit various nuclear installations as a part of their course work. Students from Health Sciences practice in hospitals as a part of their academic programs. Viz. MD/ DM/ MCh/ Nursing etc.

<p>Examination and Evaluation</p>	<p>A meritocratic admission policy with predefined minimum standards are followed. It has two steps as follows i. National level test (On line or Offline) ii. Interview by a Committee appointed by Head of the CIs/OCC. For different courses number of number of examination centres is different. For low applicant/ intake capacity, the examination centre is mainly at the CIs. For high applicant/intake capacity, the examination centres are at National level.</p>
<p>Human Resource Management</p>	<p>The quality improvement strategies in human resources across all the CIs/ OCC are focused to meet the intended objectives of the RD centres and activities are focused to achieve the objectives . The CIs/ OCC have the following in place: Faculty Empowerment Strategies: All the faculty members have excellent academic and research credentials and many of them have fellows of prestigious academies. The faculty are encouraged to publish in the peer reviewed journals and participate in the national/ international conferences. Faculty members are also encouraged to pursue most advanced research, in the national and international institutions with the aim that they bring value addition research in their specialised areas and sector. The faculty are also encouraged to participate in the international collaborative research projects for Example, CERN, ITER, FERMI Lab etc. Faculty are also allowed to pursue research through extramural grants available with other DAE institutions viz., BRNS etc. With the objective to bring in quality perspectives and trends to other peer institutions. The HBNI faculty also serve on the governance bodies, academic bodies and such other statutory bodies of various educational institutions. The research fellows also extended foreign travel assistance for presenting their research work and publication in the national and international scientific for a, symposium with the support of DAE/ HBNI grants. This provides ample opportunity to interact with their international peers and exchange ideas. Conducive Green Living campus facilities: The campuses of all the CIs/ OCC are spread in vast sprawling</p>

green campus with all modern amenities for the living of faculty and their family. They are self contained with all amenities including children education until the higher secondary level. The school is affiliated to CBSE and quality education is being imparted to them. The campus has hospital, market place and community centre for all social gathering and such events. The campus is also eco friendly where possible have adopted such technologies of biogas, waste utilization/ recycling processes and water recharge resources.

All the campuses are equipped with adequate sports and recreation facilities for use of the staff, faculty and members in the colony.

Faculty Promotion Policies: The promotion policies for the faculty are fair and transparent, which are based on the merit based. The individuals are appraised annually and interviewed for promotions in accordance with the set procedures (approved by the apex body). The merit based promotion schemes have ensured that the performers are able to move up and not merely based on the seniority. The grant in aid institutions have well formulated promotion policy for the faculty, which are decided based on the recommendations of the Promotion Committee comprising of internal and external experts, which are again based on the performance and recommendations of the experts (peers) through letters.

Admission of Students

A meritocratic admission policy with predefined minimum standards are followed. It has two steps as follows
 i. National level test (On line or Offline) ii. Interview by a Committee appointed by Head of the CIs/OCC. For different courses number of number of examination centres is different. For low applicant/ intake capacity, the examination centre is mainly at the CIs. For high applicant/intake capacity, the examination centres are at National level.

6.2.2 – Implementation of e-governance in areas of operations:

E-governance area	Details
Student Admission and Support	Online fee payment has been introduced from the previous year. All students have access to the online portal for fee payment. This is also as per the

	policy of the Govt. of India s digital initiative.
Finance and Accounts	Use of such software for accounting as per govt. of India guidelines are followed. HBNI is following the govt. of India s guidelines for the application of such software and processing of student matters including the Foreign Travel Assistance.

6.3 – Faculty Empowerment Strategies

6.3.1 – Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

Year	Name of Teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2015	Faculty of HBNI	Various national and International conferences, symposium, scientific meets in the respective theme areas relating to Nuclear Sciences Engineering and Technology	DAE BARC and respective CIs/ OCC of HBNI	1500000
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6.3.2 – Number of professional development / administrative training programmes organized by the University for teaching and non teaching staff during the year

Year	Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	From date	To Date	Number of participants (Teaching staff)	Number of participants (non-teaching staff)
2015	Office Management documentat ion	Training programme on Art of writing	05/08/2015	07/08/2015	1	2
2016	Office Management documentat ion	Advanced T echnoManag ement Programme	18/01/2016	19/02/2016	2	3
2016	Workshops on Personnel matters	Workshop on Retirement benefits	18/02/2016	18/02/2016	50	4

2015	Workshops on Personnel matters	Workshop on Retirement benefits	16/07/2015	17/07/2015	52	4
2015	Workshops on Personnel matters	Workshop on Retirement benefits	06/08/2015	06/08/2015	52	4
2015	Scientific theme meeting planning management	Quality Circle Annual Meet (QCAM2016)	08/09/2015	08/09/2015	30	0
2016	Office Management	Art of Writing	22/02/2016	24/02/2016	20	5
2015	Scientific theme meeting planning management	IndoUK Workshop on MSSMNA2 015" during December 1617, 2015	16/12/2015	17/12/2015	150	0
2015	Scientific theme meeting planning management	National Workshop on "Luminescence Material Devices and Applications (LM DA2015)" during August 1920, 2015	19/08/2015	20/08/2015	60	0
2015	Scientific theme meeting planning management	DAE BRNS Theme Meeting: "Chemistry in Nuclear Technology CHEMNUT 2015"	30/07/2015	31/07/2015	60	2
2016	Office Management Art of Technical Writing	Noting and Drafting, rules and procedures	26/03/2016	26/03/2016	25	2
2016	Management Procedures	Capacity Enhancement Workshop	18/07/2016	22/07/2016	18	4
2015	Office Management	Training in Translation [STAGE I]	20/04/2015	24/04/2015	1	5

2015	Office Management	Noting and Drafting	22/06/2015	24/06/2015	3	6
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6.3.3 – No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

Title of the professional development programme	Number of teachers who attended	From Date	To date	Duration
Office Management documentation	2	18/01/2016	19/02/2016	20
Workshops on Personnel matters Workshop on Retirement benefits	10	18/02/2016	18/02/2016	1
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6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
66	0	24	40

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
<p>The campus in the R and D Centres of the CIs/ OCC are provided with residences for majority of the staff and faculty. These government accommodations are in the vicinity of the Institutes. There are welfare schemes for medical as per the government regulations, guidelines, including their family is covered under the Contributory Health Services Scheme. A family welfare scheme following the government of India is also applicable to them. The campuses have schools for kids of all faculty and staff members. Recreational facilities, yoga room, indoor games facilities, and student</p>	<p>The campus in the R and D Centres of the CIs/ OCC are provided with residences for majority of the staff and faculty. These government accommodations are in the vicinity of the Institutes. There are welfare schemes for medical as per the government regulations, guidelines, including their family is also covered under the Contributory Health Services Scheme. A family welfare scheme following the government of India scheme is also applicable to them. The campuses also have school education for their kids of all faculty and staff members.</p>	<p>All the campus have own hospitals, student Centres and activities as per the plans of the institute. Students have access to these facilities as per their needs and choices.</p>

focussed cultural activities form part of the campus life for teachers and staff.

6.4 – Financial Management and Resource Mobilization

6.4.1 – Institution conducts internal and external financial audits regularly (with in 100 words each)

HBNI academic and related activities are audited as per the statutory functions. The Planning and Monitoring Board of HBNI reviews the academic plans envisaged for the year and reviews the progress made in the previous year. The Planning and Monitoring Board also advice on the future vision, directions and road map for all the academic activities. As per the statutory provision, statutory auditor for financial procedures and process are undertaken. The Finance Committee also recommends the statutory provisions for the institute and the recommendations are placed before the Council of Management for concurrence. Thus the Council of Management serves as an apex body for the institute functions and activities.

6.4.2 – Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year(not covered in Criterion III)

Name of the non government funding agencies /individuals	Funds/ Grnats received in Rs.	Purpose
Various NOGs, Philonthropic organization, corporate houses, CSR funds for cancer research, patent care and related activities	785587596	cancer research, patent care and related activities , drug design, development and testing
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6.4.3 – Total corpus fund generated

1100000

6.5 – Internal Quality Assurance System

6.5.1 – Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	Planning Monitoring Board and the Council of Management is the apex body having external members to review the academic activities	Yes	Planning Monitoring Board, Academic Council
Administrative			Yes	The Council of Management, Finance Commitee and other statutory

bodies as appointed by the Vice Chancellor to review the management and related functions of the University

6.5.2 – What efforts are made by the University to promote autonomy in the affiliated/constituent colleges? (if applicable)

not applicable

6.5.3 – Activities and support from the Parent – Teacher Association (at least three)

The programmes offered in the CIs are at the post graduate level and primarily the interaction with the parents of the students happen as per needs and demands, as the CIs are dealing with matured students who are capable of putting their perspective as per the requirements. Efforts through Alumni are also made to actively interact with parents.

6.5.4 – Development programmes for support staff (at least three)

The support staff are guided to undertake short courses conducted by the Govt. of India institutions and ATI, Mumbai in a variety of areas such as RTI, purchase procedures, managing the staff personal matters as per the rules and regulations of the govt. of India announced time to time, and education management courses conducted by IIMs etc. with the aim to upgrade their skills and knowledge in office management. Emphasis is also made for use of Hindi typing and office management purposes.

6.5.5 – Post Accreditation initiative(s) (mention at least three)

Introduction of new courses as per demand having emphasis on employability 2. Student Centric Initiatives including digital initiatives for online fee payment, streamlining the academic progress and their processes 3. Institution Digital Initiatives covering recording of lectures and making available in the form of e lectures for access to all, providing NPTEL based courses and SWAYAM courses as part of main courses

6.5.6 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	Yes
b) Participation in NIRF	Yes
c) ISO certification	Yes
d) NBA or any other quality audit	Yes

6.5.7 – Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting IQAC	Duration From	Duration To	Number of participants
2015	Meeting regarding Quality Initiatives in academic programmes of HBNI and awareness to	01/10/2015	01/10/2015	01/10/2015	40

Deans on
Quality
matters

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CRITERION VII – INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 – Institutional Values and Social Responsibilities

7.1.1 – Gender Equity (Number of gender equity promotion programmes organized by the institution during the year)

Title of the programme	Period from	Period To	Number of Participants	
			Female	Male
Workshop on Retirement benefits (BARC)	18/02/2016	18/02/2016	10	15
Workshop on Gender Sensitization (IMSc)	03/03/2015	04/05/2015	15	4
office Management & Hindi Pakwada	20/04/2015	20/04/2015	1	0

7.1.2 – Environmental Consciousness and Sustainability/Alternate Energy initiatives such as:

Percentage of power requirement of the University met by the renewable energy sources

The contribution of power requirement met by renewable/ alternate energy sources: All the CIs/ OCC have implemented the Govt. of India regulations to meet the power/ energy requirement using solar energy, alternate energy systems as per the norms. CIs accordingly have set up solar panels for power generation to meet the institutional energy needs. Clean Green Campaign: All the CIs/ OCC are following the Government of India guidelines and have implemented generation and utilization of renewable energy sources. Each CI/ OCC have adopted the use of renewable energy as per the policies, accordingly budgets were made available. All the students in the Constituent institutions are engaged in Swachaata Abhiyan, tree planting in the campus and common places in their regions to commemorate notified days which have direct contribution to SDGs. These activities helped students inculcate a habit for conservation of environment and natural resources. All institutions of DAE are extremely conscious about environment as can be seen from the greenery in the campuses. At Trombay campus of BARC, a Nisurgaruna plant has been operating to generate and process waste generated in the kitchen. It generates cooking gas and manure. A water harvesting scheme has also been implemented in the Trombay campus. For disposal of hazardous chemical waste, a plant has been set up in BARC. The chemistry laboratories encourage use of 'green chemistry' methodologies. Similar to BARC, another Nisurgaruna plant to process kitchen waste is installed at RRCAT Indore. Tree planting and growing of flowers is given special emphasis on all campuses and this has resulted in beautiful ambience in the campuses. Tree cover attracts birds. Greenery of IoP attracts hundreds of migratory birds every winter enroute to Chilka lake of Odisha. As part of environmental monitoring programme, studies on physio chemical, biological and geo chemical characteristics of coastal environment (water, biota and sediment) were conducted at IGCAR to meet MoEF regulation. Results of studies on biofouling organism, phytoplankton, zooplankton and fish diversity in the coastal water indicated high diversity and high density indicating the

healthiness of the Kalpakkam coastal environment. Among antifouling paints screened, one was found suitable for use at MAPS water intake gate. Studies on dissolved heavy metal in Kalpakkam sea water indicated that the coastal water is not polluted with heavy metals. A new fish species to the world of fishery science has been identified and named as *Scolopsis igcarensis*, in recognition of IGCAR's contribution to marine diversity study.

7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Provision for lift	Yes	5
Ramp/Rails	Yes	5
Rest Rooms	Yes	5

7.1.4 – Inclusion and Situatedness

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date	Duration	Name of initiative	Issues addressed	Number of participating students and staff
2015	5	5	16/07/2015	5	Emotional Intelligence at Work place for scientist and technologist	Work place issues overcoming work pressure	18
2015	5	5	18/08/2015	5	Capacity Enhancement Workshop	Workplace efficiency improvement	10

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7.1.5 – Human Values and Professional Ethics Code of conduct (handbooks) for various stakeholders

Title	Date of publication	Follow up(max 100 words)
Code of Ethics for publications in all CIs/OCC	10/08/2015	The researchers at all levels pursue scientific and technological activities in a harmonious and fair atmosphere. The research and development activities carried out in all CIs/OCC, result in publications of papers reports in national/international journals, newsletters, newspapers, conferences, symposia, seminars and workshops. Reputation of the institute and the

credibility of the scientific research, rest on the quality and integrity of our publications. Hence, it is important to adhere to the highest ethical standards while publishing research work. All Scientists in all CIs/ OCC owe it to themselves, their colleagues, their institute, the society and the world scientific community at large to scrupulously abide by a Code of Ethics in letter and spirit. This Code of Ethics is applicable to all Scientific / Technical publications where one or more of the authors are affiliated to BARC. Papers or articles in journals, conferences, seminars, workshops, symposia, newsletters, etc. M. Tech./ PhD Thesis etc. Reports, monograms, books etc. All serving scientists/ researchers are required to abide by this Code of Ethics. It is also applicable to those scientists who are enrolled as students of HBNI/other universities. Wherever there is a conflict or overlap between this Code and prevailing rules, the provisions of the rules will apply.

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Emotional Intelligence at Work place for scientist and technologist	18/06/2015	22/06/2015	18
Capacity Enhancement Workshop improving efficiency in workplace	20/07/2015	22/07/2015	10

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7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

All CIs/ OCC of HBNI are extremely conscious about environment carbon footprint, as can be seen from the greenery in the campuses. In the Trombay campus of BARC, a Nisurgaruna plant has been operating to generate and process the waste generated from the kitchen. It generates cooking gas and organic manures. (i) A water harvesting scheme has also been implemented in the Trombay campus. For disposal of hazardous chemical waste, a plant has been set up at the BARC campus. (ii) The Chemistry laboratories encourage use of 'green chemistry' methodologies. A Nisurgaruna plant to process kitchen waste is installed at BARC, a CI of HBNI. (iii) Tree planting and growing of flowers is given special emphasis on all campuses and this has resulted in beautiful ambience in the campuses. Tree cover attracts birds. Greenery of IoP attracts hundreds of migratory birds every winter when they are on their way to the Chilka lake of Odisha. (iv) As part of environmental monitoring programme, studies on physiochemical, biological and geochemical characteristics of coastal environment (water, biota and sediment) were conducted at IGCAR to meet MoEF regulation. Results of the studies on biofueling organism, phytoplankton, zooplankton and fish diversity in the coastal water indicated high diversity and high density indicating the healthiness of the Kalpakkam coastal environment. Among antifouling paints screened, one was found suitable for use at MAPS water intake gate. Results of studies on dissolved heavy metal in Kalpakkam seawater indicated that the coastal water is not polluted with heavy metals. A new fish species to the world of fishery science has been identified and named as *Scolopsis igcarensis*, in recognition of IGCAR's contribution to marine diversity study. (v) Water quality studies on ground water samples from Kalpakkam region were carried out for fluoride and nitrate content, fluoride content were below permissible limit, however, nitrate contents were beyond the limit in some of the areas. Ambient air quality monitoring at different places of IGCAR was continued to meet MoEF and AERB requirements. (vi) At TMC (Kharghar Campus), a biogas plant is installed that processes kitchen waste. Biological and toxic waste is collected separately for disposal. Vermiculture is practiced on the campus that generates manure. The animal facility has solar heating panels that provide hot water. The campus has several medicinal plants and trees.

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

(i) Facilitating academic research using advanced experimental facilities available with DAE Institutions (ii) Capacity building in cancer treatment to meet national need

Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

http://www.hbni.ac.in/main/dsp_doc.html?nm=agar/inst_bst_prctcs.pdf

7.3 – Institutional Distinctiveness

7.3.1 – Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust in not more than 500 words

One of the major distinguishing characteristics of HBNI lies in its uniqueness as a research university, imparting knowledge and skills in the areas of nuclear sciences and engineering, in addition to science and engineering disciplines, with a mission to pursue excellence to propel/boost indigenous nuclear and related technological capabilities. Nuclear science and engineering is an interdisciplinary subject and any institute involved in its development

should have expertise in several branches, viz. physical sciences, chemical sciences, life science, engineering sciences, health sciences and mathematics. The eleven institutions under DAE which are the Constituent Institutions (CIs) and one offcampus centre (OCC) pursue R D in such domains, taking advantage of their academic strength in specific areas. To pursue research by inquisitive and fresh minds for achieving breakthroughs, the CIs and OCC have established 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 faculty are well trained to build own instrumentation and facilities. Doctoral students are from all branches of science and engineering having a relation with nuclear technology. They work on problems related to the mandate and deliver a lot in terms of research output. Increased intake of doctoral students has contributed a lot towards realizing the full potential of the research infrastructure available and helped in accelerating the pace of developing indigenous technologies. The success indicators in the advancement of knowledge in nuclear science and technology through research and innovation are illustrated below: • The publication profile of the University is very impressive in its content and also admirable in terms of its diversity. The average total number of journal publications is around 2300 per year with an hindex of the institute is 76. • The total number of students completing the PhD program per year is around 200 and the same number for M.Tech. is 100. • A large number of faculty members are Fellows of different academies and have received various awards and recognition for their work including Academic Fellowships, and prestigious Civilian awards. • Technology control regime is an established practice in the nuclear field. Such embargo has been used as an opportunity to develop advanced tools and experimental facilities indigenously. The academic programs of HBNI have been able to make a distinctive impact in several domains critical for the advancement of the country's nuclear program. Examples of such important contributions include studies related to the safety of various reactor systems, development of novel materials and development and demonstration of processes that form part of the nuclear fuel cycle. The above examples clearly illustrate the success in academic terms, of the distinctive approach pursued by HBNI.

Provide the weblink of the institution

http://www.hbni.ac.in/main/dsp_doc.html?nm=agar/inst_dstntvns.pdf

8.Future Plans of Actions for Next Academic Year

Homi Bhabha National Institute (HBNI) has significantly contributed to the indigenous development of nuclear science and technology by adding to the knowledge bank in the unique domain, generating valuable human resources and providing useful inputs to mission programs. The academic programs in the area of medical and health sciences have led to a significant addition to the Nation's strengths in medical oncology. The University has a great potential to ramp up its contributions, expand its scope and coverage of programs and provide required human resources for nuclear energy program, comprehensive cancer care, mega science research, research in the frontier areas of science and technology and research and development in key areas that can provide benefits to the society. The plans of actions for the next academic year include (i) Introduction of MTech and MSc Engg. programmes at IPR (2) New courses in Integrated MSc Programmes in Mathematics at NISER (3) Outreach programmes in science and mathematics for the benefits of school and college students and teachers in the vicinity of CIs/ OCC.