

INDIAN INSTITUTE OF TECHNOLOGY **INDORE**

Ph.D. Programme



Information Brochure **2011-2012**

PLEASE READ THE INSTRUCTIONS GIVEN IN THE BROCHURE CAREFULLY BEFORE YOU FILL IN THE APPLICATION FORM

Candidates applying for Ph.D. Programme in different disciplines must submit one application for each discipline separately.

Application forms for admission to Ph.D. Programme can be downloaded and submitted throughout the year and will be processed from time to time.

Candidates can submit the applications by email:

- (i) Engineering Disciplines - hose@iiti.ac.in**
- (ii) Science Disciplines - hoss@iiti.ac.in**
- (iii) Humanities and Social Sciences - hosh@iiti.ac.in**

Please see the details of area of specialization of the faculty members and send your application to the concerned Head of the School.

For hard copy submission please submit duly filled Application Form (*in ONE big size envelope 27 cm x 20 cm without folding the application form*) to the following address:

“Application for PhD Admission in the Discipline of _____”

**Academic Section, Indian Institute of Technology Indore
M-Block, IET- DAVV Campus, Khandwa Road
INDORE (M.P.) 452 017**

Phone: +91 731 2438 719/ 718

Website: www.iiti.ac.in

IMPORTANT NOTE:

Ragging is not allowed at IIT Indore, and is strictly prohibited.

As per the directives received from the Honourable Supreme Court of India, the student (s) involved in ragging shall be given liberty to explain, and if his/ her explanation is not found satisfactory, the Institute authority would expel him/her from the Institute.

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GENERAL

1) THE INSTITUTE

Indian Institute of Technology Indore (IITI), in MP, is one of the new IITs established in 2009. IITI started functioning with a sanctioned intake of 120 students for its B.Tech. Programme through IIT-JEE. Initially three engineering disciplines viz. Computer Science and Engineering, Electrical Engineering and Mechanical Engineering programmes have commenced. Temporarily the Institute is functioning from the Institute of Engineering & Technology (IET), IET-DAVV Campus, Khandwa Road, Indore (MP) - 452017. IIT Bombay is the mentoring institution for IITI.

2) SOME IMPORTANT FAQs FOR STUDENTS

Q. Where is IET the temporary campus for IIT Indore is located?

A. The Institute of Engineering & Technology (IET) where IIT Indore is located temporarily is at M-Block, IET-DAVV Campus, Khandwa Road, Indore. IITI is approximately 7 kms from the Airport and 10 kms from Indore Railway Station.

Q. How does one reach IET from Indore airport or railway station?

A. Taxi, Auto Rickshaw, City Bus facility is available. Typical fare from Indore railway station to IET by Auto Rickshaw is Rs. 80 to Rs.100.

Q. How far are facilities like a post office and banks from the IIT?

A. A post office is located within walking distance from the IIT. There are several banks within half a kilometer radius from the Institute.

Q. Will there be Internet facility in the temporary premises? What about computer terminals?

A. Yes, adequate Internet facility will be available. There is a computer laboratory operating within the premises.

Q. What is the climate like in Indore?

A. Indore generally has dry climate apart from the monsoon months of June to September. March to June is hot summer with an average maximum temperature of about 36 degree Celsius while the months of November to February are winter with temperature ranging between 15-25 degree Celsius, which can occasionally drop to 5 degree Celsius.

ACADEMICS

Q. In what way is IIT Bombay associated with IIT Indore?

A. IITI is being mentored by IIT Bombay. Each of the new IITs that are being established are mentored by an existing IIT. Initially, IIT Bombay will be responsible for developing high quality academic programmes of international standard.

Q. Do we have faculty to teach?

A. Several faculty members have already been recruited and others likely to join the Institute by 2011-2012 academic session. The Undergraduate academic programmes are being conducted by the new faculty and by deputed faculty members from IIT Bombay and other reputed Institutes.

Q. What about laboratories?

A. The laboratories are partially established for research programmes.

Teaching laboratories in fundamental sciences and engineering disciplines for Undergraduate and Post-graduate programmes are also being set up as required.

Q. Will there be a library?

A. The library holds a good collection of text and research references. Several e-resources are also subscribed by the Library for accessing research journals. The Central Library is a member of the INDEST (Indian National Digital-Library of Engineering, Science & Technology). Necessary steps are in progress for procurement of e-books and other user friendly software in the Library.

LIVING

Q. What about hostel facilities?

A. There are two hostels for students. Hostel Kshipra at Navlakha and Hostel Narmada at Peace Point Colony, Limbodi Gram.

Q. Is there accommodation for girl students?

A. Yes. Separate accommodation for girl students is also available.

Q. What is the arrangement for food?

A. Mess facility in the Hostel premises for students is available.

Q. What will be the living expenditure?

A. The expenditure pattern is similar to that of other big cities. Apart from the Institute fees which are payable every semester, the anticipated expense per month may be about Rs.3000/- per month.

Q. Are there recreational facilities available in the Institute?

A. Yes, sports facilities are available. For those interested in outdoor games the Institute has a tie-up with DAVV for playgrounds. From time to time cultural programmes, discussions and debates are also organized.

Q. What about medical facilities?

A. Primary medical facilities through OPD is available. Health insurance (on payment) to all students for their

medical needs is offered. The Institute has tie-up with major hospitals in the city.

3) Ph.D. PROGRAMME

The academic programme leading to the Ph.D. degree is broad-based and involves a minimum course credit requirement and research thesis. Interdisciplinary work through a joint system of supervision is also encouraged and interdepartmental group activities. The presence of a strong research oriented faculty provides opportunity for excellent research training. The Institute aims to undertake sponsored research and development projects from industrial and other organizations in public as well as private sector. The required research laboratories are also being set up. The Ph.D. Programme is running in the following disciplines: Chemistry, Computer Science and Engineering, Electrical Engineering, Humanities and Social Sciences, Mathematics, Mechanical Engineering and Physics.

4) MINIMUM QUALIFICATIONS FOR ADMISSION

Candidates must have at least one of the following qualification for admission in appropriate discipline:

Ph.D. in Engineering:

(Computer Science and Engineering, Electrical Engineering, and Mechanical Engineering)

For admission to the Ph.D. Programme in Engineering Disciplines, a candidate must satisfy **one** of the following criteria:

1. Masters degree in the relevant branch of Engineering/ Technology with a minimum Cumulative Performance Index (CPI) of 6.5 or 60% marks (55% for SC/ST candidates).
2. Masters degree in the relevant branch of Science with a minimum Cumulative Performance Index (CPI) of 6.5 or 60% marks (55% for SC/ST candidates) and a valid GATE score.
3. B. Tech. degree from an Indian Institute of Technology (IIT) with a minimum CPI of 8.0.
4. Bachelors degree in engineering or technology from any Institute a minimum Cumulative Performance Index (CPI) of 6.5 or 60% marks (55% for SC/ST candidates) and a valid GATE score.

*Eligibility Committee will examine applications from candidates with foreign qualification(s).

Ph.D. in Sciences:

(Chemistry, Physics and Mathematics)

For admission to the Ph.D. Programme in Science Disciplines, a candidate must satisfy **one** of the following criteria:

1. M.Phil degree in relevant branch of science with a minimum Cumulative Performance Index (CPI) of 6.5 or 60% marks (55% for SC/ST candidates).
2. Masters degree in a Science subject with a minimum CPI of 6.5 or 60% marks (55% for SC/ST candidates) with CSIR-JRF or NET; or UGC-JRF or NET; or valid GATE score.

3. Masters degree in relevant branch Engineering/ Technology with a minimum CPI of 6.5 or 60% marks (55% for SC/ST candidates) with a valid GATE score.

4. B.Tech. from an Indian Institute of Technology (IIT) with a minimum CPI of 8.0.

*Eligibility Committee will examine applications from candidates with foreign qualification(s).

Ph.D. in Economics, English and Philosophy:

(Economics, English and Philosophy)

For admission to the Ph.D. Programme in Economics, English and Philosophy, a candidate must satisfy **one** of the following criteria:

1. M.Phil degree in relevant discipline of Arts or Commerce with a minimum Cumulative Performance Index (CPI) of 6.5 or 60% marks (55% for SC/ST candidates).

2. Masters degree in Arts/ Commerce with a minimum of 60% marks or equivalent (55% for SC/ST candidates) with UGC-JRF or NET.

3. Masters degree in Science/Engineering/Agriculture/Environmental Science/ International Business with a minimum CPI of 6.5 or 60% marks (55% for SC/ST candidates) with UGC-JRF or NET / CSIR-JRF or NET may be considered for research areas consistent with the academic background and special interests.

4. B.Tech. from an Indian Institute of Technology (IIT) with a minimum CPI of 8.0.

*Eligibility Committee will examine applications from candidates with foreign qualification(s).

Additionally, there may be requirements of individual disciplines.

5) REQUIREMENTS FOR Teaching Assistantship (TA):

All Indian citizens with any of the aforementioned qualifications are eligible for Teaching Assistantship (TA) as full time scholars. The terms and conditions for TA-ship will be as per the norms of MHRD.

6) DURATION / FELLOWSHIP AND CATEGORIES OF Ph.D. CANDIDATES

Duration of the programme: Minimum 2 yrs. from the date of registration and maximum 6 yrs.

FELLOWSHIP

Fellowships will be payable for duration fixed by the MHRD or date of submission of thesis, whichever is earlier.

The Institute may admit Ph.D. candidates under the following categories:

6.1. Full-time Research Scholar:

i. Institute Research Scholars with Teaching Assistantship-TA

ii. Govt. / Semi Govt. Fellowship Awardees (FA) (CSIR, UGC, DAE, DST, DBT, NBHM, etc.)

iii. Foreign Scholars (FS) (Indian Council for Cultural Relations (ICCR) Awardees)

FULL-TIME RESEARCH SCHOLAR

6.1.1 Institute Research Scholars (Teaching Assistants -TA):

Students under this category are entitled for Institute Teaching Assistantship. *(Please refer Item No. 9 for financial support)*

6.1.2 Govt./ Semi Govt. Fellowship Awardees (CSIR, UGC, DAE, DST, DBT, NBHM, commonwealth, Nehru Memorial Scholarship, etc.)

These candidates are financially supported under various Govt. / Semi Govt. schemes. The admission procedure and

other requirements are same as applicable to Institute Research Scholars.

6.1.3 Foreign Scholars (FS) (Indian Council for Cultural Relations)

These students are sponsored by their Governments and awarded scholarship by them. They should apply for admission through Indian Embassy in their country.

7) ADMISSION PROCEDURE

7.1 Admission is offered on the basis of an interview held usually a month before the commencement of the semester for which admission is sought. The interview may be supplemented by a written test, if necessary.

Only the candidates appearing for the Written Test / Interview under Teaching Assistantship (TA) category will be **paid to and fro single second class railway fare** by the shortest route from their place of residence to the Institute / venue of the Test / Interview. They have to produce evidence (railway ticket) in support of their claim.

Other category candidates are NOT eligible for Travelling Allowance.

8) PAYMENT OF FEES AND DEPOSITS

Various fees and deposits for the programme are given in Appendix II.

9) FINANCIAL SUPPORT

Students joining Ph.D. programme will be considered for Teaching Assistantship based on the following norms:

9.1 Institute Teaching Assistantship (TA):

(On roll employees of any organizations with or without pay, are not eligible for admission under this category).

9.1.1 Those students having B.E. / B.Tech. / B.Arch / B.Sc. (Engg) or equivalent and who have either a valid GATE or National Level test-UGC-JRF / CSIR-JRF / NBHM / DBT etc.

will be considered for monthly assistantship of Rs. 16,000/- for first 2 years and @ enhanced rate of Rs. 18,000/- for remaining 3 years.

9.1.2 Those students having M.Sc./M.A./M.Comm or equivalent with UGC-NET/CSIR -NET/ equivalent exam qualified will be considered for monthly assistantship of Rs. 16,000 for first 2 years and @ enhanced rate of Rs. 18,000 for remaining 3 years.

9.1.3 Those student having M.Tech. / M.E. / M.Arch / M.Sc. (Engg) /M.Phil / M.B.B.S / MD / MS / or equivalent and Management students with M.B.A. qualification with Engineering / Technical background will be considered for monthly assistantships of Rs. 18,000/- for first 2 years and @ enhanced rate of Rs. 20,000/- for remaining two years.

9.1.4 Management students with M.B.A. qualification with Science /Commerce background with UGC-NET qualification will be considered for monthly assistantships of Rs. 16,000/- for first 2 years and @ enhanced rate of Rs.18,000/- for remaining three years.

9.1.4 The assistantship is payable for maximum period of 5 years for candidates with B.E./ B.Tech./ M.Sc. as qualifying degree & maximum period of 4 years for candidates with M.E. / M.Tech. as qualifying degree or date of submission of thesis, whichever is earlier.

9.1.5 To get Teaching Assistantship, the students concerned must assist in teaching or research work, as assigned by the Institute, **to the extent of 8 hours of work per week.**

The continuation of the assistantship (TA) will be subject to satisfactory performance of the duties assigned by the institute and satisfactory academic performance.

As per MHRD directives, the employees of any organizations undergoing Ph.D. / Post- Graduate

programmes by availing study leave with or without pay are NOT eligible for Teaching Assistantships.

Students getting assistantship (TA) from the Institute can join projects sponsored by external agencies like Aeronautics Research & Development Board (ARDB), Department of Science & Technology (DST), and Council for Scientific & Industrial Research (CSIR), etc. and obtain corresponding fellowships in lieu of TA-ship.

10) REGISTRATION FOR THE Ph.D. DEGREE

After a candidate has been admitted to the Institute, he/she has to make an application on a prescribed form for registration for the Ph.D. degree. This application will be considered by the Institute Postgraduate Programmes Committee (IPGPC), which will make appropriate recommendations to the Academic Council regarding (a) the course work prescribed for the candidate and (b) the date of registration.

The period of validity of Ph.D. registration for all candidates is six years from the date of confirmation of registration. (Registration is confirmed as per rules, after successfully completion of course credit requirements).

11) SUBMISSION OF THESIS AND AWARD OF DEGREE

Subject to fulfilling the course credit requirements and other conditions as may be laid down from time to time, the candidate may submit the Ph.D. thesis after two years from the date of registration. The thesis is examined by two referees from outside the Institute. The Academic Council examines the reports of the referees and on acceptance of the thesis, appoints a Board of Examiners to conduct a viva-voce examination at which a candidate is required to defend the thesis. On the basis of the report of the Board of Examiners, the Academic Council decides the

student's eligibility for award of the degree of Doctor of Philosophy.

12) DISCIPLINE WISE ELIGIBILITY FOR ADMISSION

In addition to the eligibility requirements given in 4 above, following are the eligibility requirements for admission for each discipline.

1. CHEMISTRY {CH} ELIGIBILITY FOR ADMISSION

First Class or 60% marks (55% for SC / ST) in:

M.Phil or M.Sc. or equivalent degree in Chemistry / Physics / Biochemistry / Life Sciences / Pharmacy / Materials Science / Biotechnology.

Candidates with M. Sc. degree must have a valid GATE score / CSIR-NET or JRF/ UGC-NET or JRF to become eligible for the Teaching Assistantship provided by the Institute.

2. COMPUTER SCIENCE AND ENGINEERING {CS} ELIGIBILITY FOR ADMISSION

First Class or 60% marks (55% for SC / ST) in:

M.E. / M.Tech or M.Sc. / MCA or B.E. / B.Tech or an equivalent degree from a recognized university.

Candidates without a masters' degree in engineering are required to have a valid GATE score in order to be eligible for the Teaching Assistantship provided by the Institute. Applicants with B.Tech from an IIT with a minimum CPI of 8.0 are exempted from GATE requirement.

3. ELECTRICAL ENGINEERING {EE} ELIGIBILITY FOR ADMISSION

First Class or 60% marks (55% for SC / ST) in:

(i) M.E. / M.Tech. or B.E. / B.Tech or equivalent degree in Computer Science, Computer Science & Engineering, Computer Engineering, Electrical Engineering, Electronics Engineering, Engineering Physics, Telecommunication Engineering, Instrumentation Engineering, Biomedical Engineering. Such candidates are eligible for research areas consistent with their academic background and special interests OR

(ii) Master of Science in Mathematics, Physics, Electronics with an interest in Electrical Engineering Sciences.

iii. B.Tech from an IIT with a minimum CPI of 8.0 may be considered for research areas consistent with the academic background and special interests.

Candidates with Bachelors degree in engineering or masters' degree in science must have a valid GATE score to become eligible for the Teaching Assistantship provided by the Institute. Applicants with B.Tech from an IIT with a minimum CPI of 8.0 are exempted from GATE requirement.

4. HUMANITIES AND SOCIAL SCIENCES {HS}

ELIGIBILITY FOR ADMISSION

First class or 60% marks (55% for SC / ST) or equivalent letter grade in:

i. M.Phil degree in relevant discipline from a recognised university or

ii. M.A. / M.Com. or equivalent degree with UGC-JRF or NET or

iii. Masters degree in Science / Graduate Degree in Engineering / Technology with CSIR-NET or JRF/ UGC-NET or JRF/ valid GATE score may be considered for research areas consistent with the academic background and special interests or

iii. B.Tech from an IIT with a minimum CPI of 8.0 may be considered for research areas consistent with the academic background and special interests.

5. MATHEMATICS {MA}

ELIGIBILITY FOR ADMISSION

First Class or 60% marks (55% for SC / ST) in :

i. M.Phil in Mathematics / Statistics/ Computer Science or

ii. M.A. / M.Sc. in Mathematics / Statistics / Computer Science or M.Stat with a valid GATE score.

Candidates with masters' degree in Arts/science must have a valid GATE score to become eligible for the Teaching Assistantship provided by the Institute.

6. MECHANICAL ENGINEERING {ME}

ELIGIBILITY FOR ADMISSION

i. M.E./ M.Tech. or equivalent degree in Mechanical Engineering/ Production Engineering/ Industrial Engineering/ Aerospace Engineering with first class or 60% marks (55% for SC / ST) or

ii. B.E./ B.Tech. degree or equivalent in Mechanical Engineering/ Production Engineering / Industrial Engineering/ Aerospace Engineering with first class or 60% marks (55% for SC / ST) with a valid GATE score OR

iii. B.Tech from an IIT with a minimum CPI of 8.0 may be considered for research areas consistent with the academic background and special interests.

iv. M.E./ M.Tech. degree in other branches of Engineering / Technology with an outstanding academic record may also be considered for research areas consistent with their academic background and special interests of the Discipline. Candidates with Bachelors degree in engineering must have a valid GATE score to become eligible for the Teaching Assistantship provided by the Institute.

7. PHYSICS {PH}

ELIGIBILITY FOR ADMISSION

First Class or 60% marks (55% for SC / ST) in :

i. M.Phil in Physics/ Chemistry/ Mathematics or

ii. M.Sc. in Physics/ Chemistry/ Mathematics with UGC-NET or JRF/ CSIR NET or JRF/ valid GATE score

iii. B.Tech. or equivalent degree in Aerospace Engineering / Chemical Engineering / Civil Engineering / Electrical Engineering / Mechanical Engineering / Metallurgical Engineering/ Computer Science / Engineering Physics with valid GATE score.

iv. B.Tech from an IIT with a minimum CPI of 8.0 may be considered for research areas consistent with the academic background and special interests.

13. APPLICATION PROCEDURE

- **The application form duly completed should be sent at the given address.**
- **Please do NOT attach any photocopies of the certificates, however, those need to produced at the time of interview.**
- **There is no Application Fees.**
- **Incomplete Application Forms will be rejected.**

After carefully reading the instructions given in the Brochure, fill in the Application Form in all respect. You may apply for maximum of Three Disciplines and submit the three applications separately.

One set of application containing application form should be submitted in ONE big envelope without folding the documents.

“Application for PhD Admission in the Discipline of _____”

**To
Academic Section
Indian Institute of Technology Indore
M-Block, IET- DAVV Campus, Khandwa Road, Indore
(M.P.) 452017.**

Applications are accepted round the year.

Form should be filled in neatly and clearly hand-written or typed in Black or blue ink.

OBC/ SC / ST /PC candidates are requested to bring their Caste / Tribe / Disability certificate at the time of interview along with other certificates.

**Appendix I
Fees, Deposits and Hostel Rent**

Sr. No	Particulars	Fee payable (Rs.)			
		GN/OBC		SC/ST	Institute Staff
		Non-Sponsored Category #	Sponsored Category @		
A) One time payment at the time of Admission					
a.1	Admission Fee	1000	1000	1000	1000
2.	Grade Card	00	00	00	00
3.	Medical Examination	100	100	100	00
b.1	Provisional Certificate	100	100	100	100
2.	Student Welfare Fund	500	500	500	500
3.	Modernisation	1000	1000	1000	1000
4.	Identity Card	250	250	250	00
5.	Courses of Study Bulletin	100	100	100	100
6.	Institute Day Celebration	100	100	100	100
7.	Valedictory Function Fee	200	200	200	200
8.	Thesis Fee	950	950	950	950
	Total (A)	4200	4200	4200	3850
B) Per Semester Fees					
a.1	Tuition Fee- Statutory Fees	5000	5000**	00	00
2.	Examination Fee	350	350	350	350
3.	Registration Fee	200	200	200	200
4.	Gymkhana Fee	500	500	500	00

*5.	Hostel Seat Rent	500	500	500	00
*6.	Elect. & Water Charges	2000	2000	2000	00
b.1	Medical Fee	500	500	500	00
2.	Student Benevolent Fund	500	500	500	00
*3.	Hostel Establ. Charges	1000	1000	1000	00
4.	Medical Fund	00	00	00	00
*5.	Contribution to Hostel Subsidy	3000	3000	3000	00
6.	Internet Fee	00	00	00	00
*7.	Hostel Maint. Fees	00	00	00	00
	Total (B)	13,550	13,550	8550	1050
C)	Annual Med. Insu. Premium (once in a year)	126	126	126	00
D) Deposits (Refundable) to be paid at the time of admission					
1.	Institute Security Deposit	1000	1000	1000	00
2.	Library Security Deposit	1000	1000	1000	00
*3.	Mess Security Deposit	1000	1000	1000	00
	Total (D)	3000	3000	3000	00
	Total Fees (A+B+C+D)	20,876	20,876	15,876	4,900

* Students not staying in Hostel are exempted from the payment of Hostel fees.

** Tuition fee likely to be revised.

Non-Sponsored categories:

(1) Teaching Assistantship (TA)

(2) Govt./Sem-Govt. Fellowships awardees (UGC/ CSIR/ DAE/ DST/DBT/ NBHM etc.)

@ Sponsored categories: FS Foreign Scholars Category

Students who have been permitted temporarily withdrawal from the programme are required to pay Rs.1000/- as continuation fee per semester.

Fees (except deposits) are not refundable under any circumstances.

In addition to the above, refundable Mess Deposit of Rs. 2,500/- and Semester Mess Advance of Rs. 10,000/- are also required to be paid by the candidate opting to stay in the institute hostel.

Candidates from reserved categories (SC/ST) are fully exempted from paying the Tuition Fees.

Appendix II

Faculty-wise - List of Research Interests

A. School of Engineering

1. Computer Science and Engineering

Faculty Name	Research Area
Prof. N. S. Chaudhari	<i>Computer Science</i> High Performance Computing, Algorithms, Artificial Intelligence, Data Base Management Systems

2. Electrical Engineering

Faculty Name	Research Area
Dr. Abhinav Kranti	<i>Microelectronics/ Nanoelectronics</i> Novel Nanoscale MOSFETs (Physics, Modeling and Simulation), Low power device and circuit design for analog/RF/digital applications.

Dr. Vipul Singh	<i>Microelectronics/Nanoelectronics</i> Organic/molecular electronics. OLEDs, OPVs, OTFTs, Si Nanodevices, Single Electron Transistors (SETs)
Dr. Santosh Vishvakarma	<i>Microelectronics/Nanoelectronics</i> VLSI/ULSI Circuit Design
Dr. Shaibal Mukherjee	<i>Microelectronics/Nanoelectronics</i> Fabrication processes, Optoelectronic device simulation
Dr. Ram Bilas Pachori	<i>Signal Processing</i> Speech Processing, Biomedical Signal and Image Processing

3. Mechanical Engineering

Faculty Name	Research Area
Prof. N. K. Jain	<i>Manufacturing Engineering</i> Unconventional/Advanced Machining Processes, Hybrid Machining Process, Manufacturing Process Selection and Optimization
Dr. S. K. Sahu	<i>Thermal</i>

	Heat Transfer, Fluid mechanics
Dr. Anand Parey	<i>Noise and Vibration</i> Condition monitoring, noise and vibration isolation, mechanical systems signal processing.
Dr. R. Kumar	<i>Thermal Engineering</i> Heat Transfer, Refrigeration and Air Conditioning

B. School of Sciences

1. Chemistry

Faculty Name	Research Area
Dr. Anjan Chakraborty	Photophysics of drug molecules in biological media
Dr. Apurba K Das	Synthesis and applications of peptides
Dr. Suman Mukhopadhyay	Metal Organic Framework
Dr. Tridib Kumar Sarma	Nano structures materials and development of MRI contrast agent
Dr. Rajneesh Mishra	Organic electronics/Organic Photonic
Dr. Tushar Mukherjee	Single molecule fluorescence imaging and spectroscopy
Dr. Sampak Samanta	Organocatalytic mediated asymmetric transformation, metal mediated synthetic transformation, green chemistry, and total synthesis of biologically important molecules

2. Mathematics

Faculty Name	Research Area
Dr. Safique S. Ahmed	Numerical Linear Algebra and Stability Analysis for Stochastic Differential Equations
Dr. Antony Vijesh	Applied Functional Analysis

Dr. Swadesh Kumar Sahoo	Complex Analysis (in particular: Geometric Function Theory, Hyperbolic-type Metrics, Quasiconformal Mappings and Univalent Function Theory).
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3. Physics

Faculty Name	Research Area
Dr. Raghunath Sahoo	Experimental Relativistic Heavy Ion Collisions (ALICE Experiment at Large Hadron Collider, CERN, Geneva); Phenomenology of Quark Gluon Plasma (QGP): related to global properties of the plasma, heavy flavor production and application of statistical thermal model to heavy ion physics.
Dr. Subhendu Rakshit	Particle Physics Phenomenology: Beyond Standard Model Explorations with Supersymmetry, Extra Dimensions, Grand Unified Theories. Neutrino Physics, LHC Phenomenology, Physics studies with India-based Neutrino Observatory.
Dr. Sarika Jalan	Synchronization, spatially extended systems, time delay systems : applications to brain dynamics; Complex biological and social networks: spectral vs statistical properties; random matrix theory, graph theory; Evolution, adaptive dynamics; Cytoplasmic flow

Dr. Ankhi Roy	Experimental Hadron Physics.
Dr. Manavendra Mahato	Applications of string theory to magnetohydrodynamics, holographic condensed matter, supergravity and properties of black holes in string theory.

C. School of Humanities and Social Sciences

1. English

Faculty Name	Research Area
Dr. Joe Varghese	African American Literature Fiction and History Critical geographies and the text
Dr. Amarjeet Nayak	Indian Writing in English Postcolonial Studies Translation Studies Comparative Literature.

2. Philosophy

Faculty Name	Research Area
Dr. C. Bharath Kumar	Social and Political Philosophy
Dr. C. Upendra	Moral Philosophy (Moral Epistemology) Philosophy and History of Ideas

3. Economics

Faculty Name	Research Area
Dr. Ruchi Sharma	Intellectual Property Rights Technology Transfer (Trade and FDI) Technological Change, Research and Development (R&D) International Economics
Dr. Pritee Sharma	Agricultural Economics (Trade, Food Security, Economics of Land and Water, Climate Change and Agriculture) Development Economics (Rural Poverty, Social Infrastructure, Public Spending)