

**INDIAN INSTITUTE OF TECHNOLOGY
BOMBAY**

Information Brochure (For Foreign TA)



Ph.D. Programme for Foreign Students
(updated as on 24.01.2024)

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I IMPORTANT GUIDELINES FOR PH.D. PROGRAMME FOR THE FOREIGN NATIONAL CATEGORY

Please refer to the Institute website <https://portal.iitb.ac.in/intadm/login> for Online Application Portal for details about application process.

II GENERAL INFORMATION

THE INSTITUTE

The Indian Institute of Technology Bombay (IIT Bombay) is one of the higher Institutes of Technology in the country set up with the objectives of making available facilities for higher education, research and training in various fields of Science and Technology. The Institute was established in 1958. It is located at Powai in a campus extending over 220 hectares amidst picturesque surroundings with Vihar and Powai lakes on either side.

At present, Undergraduate (B.Tech.), Postgraduate (M.Tech.) and Doctoral (Ph.D.) programmes are offered at IIT Bombay on the Institute website <https://www.iitb.ac.in/newacadhome/toadmission.jsp>

The listing of all the Master's programmes and Ph.D. programmes offered in various academic units are given below,

| Programmes | Discipline [Academic Unit : Department, Centre, Interdisciplinary Group] |
|--------------------------------------|--|
| M.Tech./M.Tech.+Ph.D. (Dual Degree) | Aerospace Engineering, Biomedical Engineering, Chemical Engineering, Civil Engineering, Computer Science & Engineering, Earth Sciences, Electrical Engineering, Energy Systems Engineering, Environmental Science & Engineering, Geoinformatics and Natural Resources Engineering, Industrial Engineering & Operations Research, Mechanical Engineering, Metallurgical Engineering & Materials Science, Materials, Manufacturing and Modeling, Systems and Control Engineering, Technology and Development, Educational Technology, Urban Systems |
| M.Des. | Industrial Design Centre |
| MBA | Shailesh J. Mehta School of Management |
| MBA (Executive) | Shailesh J. Mehta School of Management |
| M.Sc.-Ph.D. (Dual Degree) in Energy | Energy Science and Engineering |
| MPP | Centre for Policy Studies |
| M.S. by Research | Computer Science & Engineering, Data Science and Artificial Intelligence |
| MA+Ph.D. (Dual Degree) in Philosophy | Humanities & Social Sciences |
| Master of Arts by Research (MA.Res.) | Humanities & Social Sciences |
| Department of Economics | Humanities & Social Sciences |
| Ph.D. | Aerospace Engineering, Biosciences and Bioengineering, Chemical Engineering, Chemistry, Civil Engineering, Climate Studies, Computer Science and Engineering, Industrial Design Centre, Earth Sciences, Educational Technology, Electrical Engineering, Energy Science & Engineering, Environmental Science and Engineering, Geoinformatics and Natural Resources Engineering Humanities and Social Sciences, Industrial Engineering & Operations Research, Management, Mathematics, Mechanical Engineering, Metallurgical Engineering and Materials Science, Nanotechnology & Science, Physics, Policy Studies, Systems & Control Engineering, Technology and Development, Urban Science & Engineering, Digital Health, Machine Intelligence and Data Science |

The Institute on an average admits 1415 candidates for the Undergraduate programmes and 1717 candidates for different Postgraduate and Doctoral programmes every year. Students from Bangladesh, Egypt, Ethiopia, Fiji, Iran, Iraq, Pakistan, Jordan, Mauritius, Malaysia, Nepal, Palestine, Sri Lanka, Vietnam and Yemen are also undergoing training in various programmes. In addition to these academic programmes, the Continuing Education Programme (CEP) organizes short, intensive courses in specialized topics both for practicing engineers as well as for teachers from engineering colleges; and also conducts seminar and conferences on current scientific and technological developments. Further, teachers from various engineering colleges also join Institute for the postgraduate and doctoral programmes. under Quality Improvement Programme (QIP).

RESEARCH FACILITIES

All the Academic Units of the Institute have well equipped research laboratories and workshop facilities. In addition, there are a number of central facilities such as Central Workshop, Central Library and Computer Centre. The Central Library has more than 3 lakhs books, a large collection of back volumes of periodicals, standard specifications and other literature. It subscribes to over 1500 current journals in Science, Engineering, Humanities and Social Sciences. The Computer Centre provides high-end networked computing facilities.

The Institute has many research collaborations with leading universities in USA, Europe, Japan, and other East Asian countries. As part of these collaborations, the postgraduate students get opportunities to carry out joint research projects with faculty and students from them.

The location of IIT Bombay, in close proximity to several leading R&D Centers and major industrial establishments, offers excellent opportunities to interact with them and plan research programmes in collaboration with them. The Industrial Research and Consultancy Centre (IRCC) coordinates collaborative projects with industry and other research organizations such as BARC, TIFR and CSIR labs. The Institute is actively collaborating with several organizations of other countries on a bilateral basis.

STUDENTS AMENITIES

The Institute is fully residential and has 18 hostels for students. Each hostel is an independent entity with its own mess facilities, recreation areas, etc. However students may be permitted to have their own arrangements for accommodation outside campus. Some flatlets are available for married research scholars.

Extra-curricular activities are provided by the Students' Gymkhana. These activities include Sports, Cultural programmes and Social Service. Various clubs of the Gymkhana encourage individual talents of students in hobbies such as painting, modeling, music, photography, aeromodelling and fabrication of electronic devices. A swimming pool is an additional facility. A well-planned Student Activities Centre (SAC) routinely organizes several vibrant extra curricular events.

Ph.D. PROGRAMME

With extensive infrastructural facilities and a sound research base, the Institute offers Ph.D. programme in a wide range of areas in Engineering, Sciences and Humanities & Social Sciences. The broad objectives of the Ph.D. programme are to contribute to expanding the frontiers of knowledge and to provide research training.

The academic programme leading to the Ph.D. degree is broad-based and involves a course credit requirement and a research project leading to thesis submission. The Institute also encourages research in interdisciplinary areas through a system of joint supervision and interdepartmental group activities. The Institute undertakes sponsored research and development projects from industrial and other organizations in public as well as private sector.

Facilities for research work leading to the Ph.D. degree are available in the departments of Aerospace Engineering, Biosciences and Bioengineering, Chemical Engineering, Chemistry, Civil Engineering, Computer Science and Engineering, Earth Sciences, Electrical Engineering, Energy Science & Engineering, Humanities and Social Sciences, Mathematics, Mechanical Engineering, Metallurgical Engineering and Materials Science, Physics, Industrial Design Centre, Environmental Science and Engineering Department, Centre of Studies in Resources Engineering, Centre for Research in Nanotechnology & Science and Centre for Technology Alternatives for Rural Areas, Centre for Urban Science and Engineering, Interdisciplinary Groups in Climate Studies, Educational Technology, Industrial Engineering & Operations Research and Systems & Control Engineering and in Shailesh J. Mehta School of Management.

1. ELIGIBILITY AND PROCEDURE FOR APPLICATION

Students holding foreign passports (including persons with OCI or PIO cards) will be eligible to apply for this scheme.

(a) Eligibility for Ph.D. programme

For Engineering disciplines, a 4-year bachelor's degree is the minimum qualification. For graduates in Science disciplines, a Masters degree or equivalent is a must for applying. The candidate must have valid GRE and TOFEL examination scores and should be sent along with their applications. Persons who are in the final year of their degree are also eligible to apply.

In addition to the above eligibility criterion, the applicant must satisfy the general eligibility criteria specified for the respective Departments/Centres/Schools / Interdisciplinary Groups, and the eligibility criteria for admission (available at <http://www.iitb.ac.in/newacadhome/phd.jsp> under Ph.D. Information Brochure).

(b) Procedure for Application

Please refer to the Institute website <https://portal.iitb.ac.in/intadm/login> for Online Application Portal for details about application process.

(c) Schedule for Admission

Admission in Ph.D. program for foreign nationals will be made twice a year and admission in Postgraduate program for foreign nationals will be offered once a year.

| Admission | Application Deadlines |
|--|---------------------------------------|
| M.Tech., M.B.A., M.Des, etc. and Ph.D. (Admission for Autumn Semester) | 1 January - 31 March (every year) |
| Ph.D. Programme (Admission for Spring Semester) | 1 September - 31 October (every year) |

2. APPLICATION CATEGORIES AND FINANCIAL SUPPORT

2.1 APPLICATION CATEGORY

Foreign Nationals can seek admission to various Postgraduate and Research Programmes under the following categories at IIT Bombay.

(I) FRN IITB TA (Teaching Assistantship)

Students holding foreign passports (including persons with OCI or PIO cards) will be eligible to apply under this scheme. TAship as applicable to FRN IITB-TA students will be available from the Institute upon admission to Ph.D. programmes of the Institute.

2.2 FINANCIAL SUPPORT

Financial Support is dependent on qualifying degree and satisfying the requirement of TAship. Students under this category are entitled to financial support as per MoE norms.

- i. For Students under Teaching Assistantship (TA) category the teaching assistantship (TA-ship) is for a maximum duration of 5 years or up to the thesis submission, whichever is earlier. The monthly rate of assistantship is Rs.37,000/- for first two years and enhanced rate of Rs. 42,000/- for the remaining period.
- ii. To get Teaching Assistantship, the students concerned must assist in teaching or research, as assigned by the respective Academic Unit to the extent of 8 hours of work per week.
- iii. The continuation of the Assistantship will be subject to satisfactory performance of the duties assigned by the Academic Units as well as satisfactory academic performance.
- iv. Employees on the rolls (with or without pay) of any organization are not eligible for admission under this category. As per MoE directives, the employees of any organizations with or without pay are not eligible for admission under TA category. Such candidates may be considered under SW/SF category, if found suitable. Students getting assistantships from the Institute may join projects sponsored by external agencies and obtain corresponding fellowships in lieu of TA ship.

3. DOCUMENTS REQUIRED

Foreign students applying for the Ph.D. Programmes require to submit the following documents:-

- 1) Application form as available on the Academic homepage/ Dean (International Relation's Office):
 - a) For Ph.D. Application Form-
http://www.ir.iitb.ac.in/?page_id=26
- 2) Bio-Data / Curriculum Vitae / Resume
- 3) Personal particulars of Foreign Scholars coming to India (**Appendix1**).
- 4) Copy of the grade transcripts with the explanation of the assigned grades.
- 5) Statement of purpose.
- 6) Three recommendation letters – at least one recommendation should be about the student's academic performance issued by a faculty member.
- 7) Documentary proof to illustrate fluency in English language.
If English is not the first language or language of medium of instruction (during secondary & higher education), passing any of the following tests will be required. Test scores more than two years old will not be accepted for consideration.
 - i. The Test of English as a foreign language (TOEFL), administered by the Educational Testing Service in the US, in which scores of at least 580 overall and 4.0 in the Test of Written English are required. The computer based test requires scores of at least 240 overall and 4.0 in essay writing. The internet based test requires scores of at least 95 overall with a minimum score of 20 in writing.
 - ii. The International English Language Testing Service (IELTS) test, administered by the British Council, in which scores of 6 or more in each section and an overall score of 6.5 are required.
 - iii. TOFEL/IELTS scores more than two years old will generally not be considered. However if the candidate is otherwise found to be of very good credential in the core subject, he/she may be considered subject to qualifying English Language test to be conducted by the Institute within one semester of his/her admission.
- 8) GRE / GMAT Scores are desirable for all categories
- 9) Copy of the passport (page showing your nationality and personal details).

4. VISA REQUIREMENTS

Students admitted for Ph.D. programmes must have a Research Visa.

5. MEDICAL FITNESS REQUIREMENT

It is advisable that the candidates get a general check up done before departure, to ensure that he/she do not suffer from any major ailments. They should get vaccinated against the following diseases, before reporting to IIT Bombay,

- i. Typhoid
- ii. Hepatitis A
- iii. MMR – 1 dose after age of 15 years
- iv. Chickenpox
- v. dT (diphtheria and tetanus)

Only those candidates in whom vaccination is medically contraindicated, would be exempted from these vaccinations on production of medical certificate. They are also requested to submit the "Vaccination Certificate/Vaccination Exemption Certificate" at the time of registration. They may be allowed to register with the partial vaccination, if done. However, he/she will be required to complete the vaccination during the first semester. Registration for the second semester will be subject to complete vaccination as required. Please refer to <http://www.iitb.ac.in/newacadhome/phd.jsp> for proforma of "Vaccination Exemption Certificate".

After admission formalities are completed, Full-Time students will be provided with full medical facilities as applicable to Indian students at IIT Bombay.

6. FORMALITIES AFTER FOREIGN STUDENTS JOIN THE INSTITUTE

6.1 PAYMENT OF FEES AND DEPOSITS

FEE STRUCTURE

Please refer link : <https://www.iitb.ac.in/newacadhome/FeesStructure.jsp>

7. ACCOMMODATION AND STUDENT ACTIVITIES

Hostel accommodation with messing is available on the IIT Bombay campus for Ph.D. students, together with facilities for sports and cultural activities, in addition to the academic infrastructure.

Students can contact the Office of International Relations (<http://www.ir.iitb.ac.in>) for more information regarding the stay of International students in India and on the IIT Bombay campus.

8. REGISTRATION FOR THE Ph.D. DEGREE

After a foreign national has been admitted to the Institute, he/she has to make an application in the prescribed form for Ph.D. Registration. This application will be considered by the Departmental Post- Graduate Committee (DPGC) which will make appropriate recommendations to the Senate 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 FIVE/SIX years from the date of confirmation of registration (Registration is confirmed as per rules, after successfully completion of course credit requirements)

9. CONFIRMATION OF REGISTRATION

All Ph.D. Admission are provisional until the “Confirmation of Registration” is completed. This confirmation takes place after completing the prescribed course work (within six months to a year after admission) and only if academic performance criterion set by the academic unit is met. Some academic units (Departments / Interdisciplinary groups / Centres/ Schools) prescribe a qualifier examination for the Ph.D. Programme. These must be completed successfully prior to the date of confirmation of registration. Failure to meet satisfactory performance criterion may lead to termination of studentship [Ref:”Rules & Regulations for Ph.D. Programme” available at <http://www.iitb.ac.in/newacadhome/rules.jsp>]

10. 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/three referees from outside the Institute. The Senate examines the reports of the referees and only on acceptance of the thesis, appoints a Board of Examiners to conduct a viva-voce examination at which the candidate is required to defend his/her thesis.

On the basis of the report of the Board of Examiners, the Senate decides the student's eligibility for award of the degree of Doctor of Philosophy.

PERSONAL PARTICULARS OF FOREIGN SCHOLARS

| | | |
|----|---|--|
| 1 | Full Name (expanding the initials) | |
| 2 | Nationality | |
| 3 | Date & Place of Birth | |
| 4 | Parentage (names of the parents) | |
| 5 | Present address | |
| | | |
| | | |
| | | |
| 6 | Permanent address | |
| | | |
| | | |
| | | |
| 7 | Passport number date and place of issue & validity | |
| 8 | Whether previously in India if so dates & place | |
| 9 | Occupation | |
| 10 | Purpose of visit | |
| 11 | Expected duration of stay (in IIT Bombay) | |
| 12 | Places in India likely to be visited | |
| 13 | Name of the Indian Mission abroad at which the foreigner will apply for visa authorization | |
| 14 | Source of funding and terms/ conditions of funding / appointment | |
| 15 | Whether accompanied by spouse/ dependents, and if, full personal particulars & sources of funding should be indicated | |

STATEMENT OF PURPOSE (SoP)

Statement of Purpose (SoP) is an opportunity for the student seeking admission to share his/her thought/feelings with the admission committee about Postgraduate studies at IIT Bombay and also to highlight his/her preparation for the same. The candidate is required to briefly describe his/her past project / research work done by him/her in 500-600 words. The personal SoP will aid the admission committee in evaluating the application.

- (i) If the candidate is applying for more than one academic discipline, he/she has to include separate SoP for each discipline.
- (ii) If the candidate is applying to **CTARA**, he / she has to give a SoPa research proposal.
- (iii) If the candidate is applying to **Shailesh J. Mehta School of Management**, he/she is required to submit a sample of his/her recently published writings on a relevant topic or an **essay proposal (1500 words) on a topic of research interest in place of Statement of Purpose**. The proposal should contain (a) problem identification, (b) brief review of literature, and (c) methodology.

1. Name of the candidate: