



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY  
2019

# PROSPECTUS

## Contact:

**Address:**

IIT Bombay, Powai, Mumbai 400 076, Maharashtra, India

**Phone:**

+91 (22) 2572 2545

**Academic Homepage**

[www.iitb.ac.in/acad](http://www.iitb.ac.in/acad)

**Website:**

[www.iitb.ac.in](http://www.iitb.ac.in)





### National Institutional Ranking framework (NIRF)

IIT Bombay has secured third position in 'Overall' category, second position in 'Engineering' category and fifth position in 'Management' category of the National Institutional Ranking Framework (NIRF), which was announced by the Ministry of Human Resource Development, Government of India today.

### Quacquarelli Symonds (QS) World University Rankings

IIT Bombay has moved significantly up from 179th rank last year to 162nd rank in the year 2018 in the Quacquarelli Symonds (QS) World University Rankings. The Institute was ranked 34<sup>th</sup> in the QS Asia University Rankings in the year 2017.

### Education

With 17 Undergraduate and 58 Postgraduate disciplines the programmes and courses offered at the institute have the flexibility to evolve and change in response to new requirements. They serve the dual purpose of building a solid foundation of knowledge and of enhancing confidence, creativity and innovation in its students.

A unique attribute of IIT Bombay's academic structure is the autonomy enjoyed by the faculty in designing and structuring courses and curriculum.

Credit-based academic programmes offer flexibility to students to progress at their own pace. This system ensures academic programmes which are dynamic and constantly evolving and which reflect the institute's commitment to stay in tune with the expanding frontiers of knowledge worldwide.

### Campus

IIT Bombay is a small township in itself. Rich in natural flora and fauna to begin with, the campus' green cover has been maintained and even increased over the years. An island of green in the otherwise concrete jungle that is Mumbai, the campus at Powai nestles among hills and is flanked by the Powai and Vihar lakes. It is special both in terms of its physical beauty and location — a place where you can be away from the busy world, yet still be a part of it. Education and research are the twin pillars of this institute and the ambience is one in which new ideas and creativity can flourish.

### Research

IIT Bombay has made concerted efforts to align its R&D focus with the national goal of achieving technological self-reliance. Students and faculty conduct research projects in thrust areas of science and engineering. The institute has ongoing academic and research collaborations with many national and international universities, governments and industries in order to keep pace with expanding frontiers of knowledge and global developments; it is also constantly in touch with national needs. Its pre-eminent position at the cutting-edge of research is reflected in its impressive list of research projects, which cater to both our national needs and global developments. The institute houses several advanced R&D facilities, including sophisticated state-of-the-art laboratories furnished by industry. The research funding and industrial interactions of the institute is managed by the Industrial Research and Consultancy Center (IRCC)

## Competitions

**Sophia**  
Hanson Robotics, Hong Kong

## Lecture Series - 2018

**His Holiness The Dalai Lama**  
Noble Peace Prize Winner

**Simon Taufel**  
ICC Elite Empire Panel

**Charles Severance**  
Chief architect, Sakai Project

**Shanta Devrajan**  
Chief economist, World Bank

**John C. Mather**  
Noble Prize, 2006

**Gaur Gopal Das**  
Munk at ISRO, Mumbai

## Exhibition

**B-Human**  
Germany

**Furhat Robotics**  
Sweden

**Ubiquity Robotics**  
USA

**Mission Arm Japan**  
Japan

### Established: 1958

Established in 1958, the second of its kind, IIT Bombay was the first to be set up with foreign assistance. The funds from UNESCO came as Roubles from the then Soviet Union. In 1961 Parliament decreed the IITs as 'Institutes of National Importance'. Since then, IITB has grown from strength to strength to emerge as one of the top technical universities in the world.

### Campus Size: 550 acres +

IIT Bombay is a small township in itself. An island of green in the otherwise concrete jungle that is Mumbai, the campus at Powai nestles among hills and is flanked by the Powai and Vihar lakes. It is special both in terms of its physical beauty and location — a place where you can be away from the busy world, yet still be a part of it. Education and research are the twin pillars of this institute and the ambience is one in which new ideas and creativity can flourish.

### Students (Indian): 10000 +

With an increase in undergraduate (UG) and postgraduate (PG) intake, the student population has undergone significant changes in the last 10 years. Presently, the Institute has over 10,000 students of which 41% are UG and 59% are PG.

### Disciplines: 25+

IIT Bombay is academically organised into 14 Academic Departments, 10 Centres, 2 Schools and 3 Interdisciplinary Programmes.

### Facilities:

IIT Bombay has a variety of instructional facilities and teaching aids, which help in delivery of academic content. IIT Bombay has well-equipped laboratories with state-of-the-art facilities. There are excellent recreational facilities for sports, including gymnasiums, a swimming pool, courts for tennis, basketball, volleyball, hockey, football and cricket, athletics tracks and much more.

### CALENDAR

Academic Year-----July-June

1<sup>st</sup> Semester-----July-Nov.

Summer Vacation-----Early May – Late June

Institute Foundation Day-----March, 10

2<sup>nd</sup> Semester-----Jan.-Apr.

Winter Vacation-----Early Sept. – Late Dec.

Convocation (Interim)-----Last week of Feb.

Convocation (Annual)-----2nd Week of Aug.

### SPECIAL EVENTS

Mood Indigo-----December

Techfest-----December

# Undergraduate Study Areas

## Bachelor of Technology

- Aerospace Engg
- Chemical Engg.
- Civil Engg.
- Computer Science & Engg.
- Electrical Engg.
- Mechanical Engg.
- Met. Engg. & Mat. Sci.
- Physics (Engg. Physics)

## Dual Degree (B.Tech.+ M.Tech.)

- Electrical Engg.
- Energy Science & Engg.
- Environmental Science & Engg.
- Mechanical Engg.
- Met. Engg. & Mat. Science

## Bachelor of Design (B.Des.)

- Design

## Bachelor of Science (B.S.)

- Chemistry
- Economics
- Mathematics



# Undergraduate Entry

## Entry: B.Tech, DD (B.Tech.+ M.Tech.), B.S.

Admission to these program is based on the performance of the candidate in JEE Advanced examination.

## Entry: B.Des.

Admission to this program is based on the performance of the candidate in UCEED examination.

## Duration:

B.Tech.	4 Years
D.D.	5 Years
B.S.	4 Years.
B.Des.	4 Years.

## Fees:

With Hostel:	Rs. 1,15,100/- per semester *
Without Hostel:	Rs. 1,05,700/- per semester *

**\* Tuition fee of Rs. 1,00,000/- included above is waived off for SC/ST/PD Category.**

**\* Note: Above fee structure is not applicable to international students**

# Postgraduate Study Areas

## Master of Technology

- Aerospace Engg
- Biomedical Engg.
- Chemical Engg.
- Civil Engg.
- Computer Science & Engg.
- Earth Sciences
- Electrical Engg.
- Energy Science and Engg.
- Mechanical Engg.
- Met. Engg. & Mat. Sci.
- MMM (Cross Departmental)
- Industrial Engg. and Operations Res.
- Systems and Control Engg.
- Environmental Science & Engg.
- Geoinformatics and Natural Resources
- Technology and Development

## Master of Design

- Design

## Master of Philosophy

- Humanities and Social Sciences.

## Master of Management

- Management

## Master of Urban Design and Engg.

- Urban Science and Engg.

## Master of Public Policy

- Policy Studies

## Master in Business Administration (Executive)

- Management

## Master of Science

- Biotechnology
- Chemistry
- Applied Geology
- Applied Geophysics
- Mathematics
- Applied Statistics & Informatics
- Physics

## Dual Degree (M.Sc. + M.Ph.D.)

- Environmental Science & Engg.
- Energy Science and Engg
- Operations Research



# Postgraduate Entry

## Entry: M.Tech, M.Des., M.Phil., M.Mgt., MBA (Exec.)

Admission to these programmes is based on the performance of the candidate in GATE / CEED / MET / CAT / UGC-JRF / UGC-NET examinations

## Entry: M.Sc., DD (M.Sc. + Ph.D.)

Admission to these programmes is based on the performance of the candidate in the JAM examination.

### Duration:

M.Tech.	2 Years
M.Des.	2 Years
M.Phil.	2 Years
M.Mgt.	2 Years
M.Sc.	2 Years
DD (M.Sc.+ Ph.D.)	7 Years
MBA (Executive)	18 Months

### Fees: M.Tech, `M.Des., M.Phil.

With Hostel:	Rs. 50,700/- per semester
Without Hostel:	Rs. 41,300/- per semester

### Fees: M.Mgt.,

With Hostel:	Rs. 2,27,700/- per semester
Without Hostel:	Rs. 2,18,300/- per semester

### Fees: M.Sc., DD (M.Sc.+Ph.D.)

With Hostel:	Rs. 30,700/- per semester
Without Hostel:	Rs. 21,300/- per semester

### Fees: MBA(Exec.)

Rs. 36,00,000/- 18 months.

# Research Programme

<p><b>Doctor of Philosophy (Ph.D.)</b></p> <ul style="list-style-type: none"> <li>→ Aerospace Engg</li> <li>→ Biosciences and Bioengg.</li> <li>→ Chemical Engg.</li> <li>→ Chemistry</li> <li>→ Civil Engg.</li> <li>→ Computer Science &amp; Engg.</li> <li>→ Earth Sciences</li> <li>→ Electrical Engg.</li> <li>→ Energy Science and Engg.</li> <li>→ Humanities and Social Sciences</li> <li>→ Mathematics</li> <li>→ Mechanical Engg.</li> <li>→ Met. Engg. &amp; Mat. Sci.</li> <li>→ Physics</li> <li>→ Industrial Engg. &amp; Operations Res.</li> </ul>	<p><b>Doctor of Philosophy (Ph.D.)</b></p> <ul style="list-style-type: none"> <li>→ Systems and Control Engg.</li> <li>→ Education Technology</li> <li>→ Climate Studies</li> <li>→ Environmental Science &amp; Engg.</li> <li>→ Industrial Design</li> <li>→ Studies in Resources Engg.</li> <li>→ Research in Nanotechnology &amp; Science</li> <li>→ Technology Alternatives for Rural Areas</li> <li>→ Urban Science and Engg.</li> <li>→ Management</li> <li>→ Policy Studies</li> </ul>
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## Doctoral Prog. Entry

<p><b>Entry:</b> Admission to Ph.D. programmes is based on the performance of the candidate in written test / interview and also in national examinations of GATE / CEED / JRF of CSIR / UGC / NBHM / DBT / ICAR / ICMR / ICPR or DST INSPIRE Fellowship / UGC-NET Lectureship (LS). For details pls see: <a href="http://www.iitb.ac.in/newacadhome/brochurePhd201809March.pdf">http://www.iitb.ac.in/newacadhome/brochurePhd201809March.pdf</a></p>	
<b>Duration:</b>	5 Years.
<b>Fees:</b>	Rs. 52,700/- per semester
<b>Tuition Fee (Incl.): Rs. 25,000/-</b>	
<b>Tuition fee is waived off for SC/ST/PD Category.</b>	

# International Students

## Entry:

<p><b>B.Tech., Dual Degree, B.S.</b></p> <p>International students interested in pursuing their undergraduate studies at IIT Bombay i.e. B.Tech., Dual Degree, B.S. programs, have to appear for the Joint Entrance Examination conducted by the IITs. For more details, please visit : <a href="http://www.jee.iitb.ac.in">http://www.jee.iitb.ac.in</a></p>
<p><b>M.Sc.</b></p> <p>International students interested in pursuing various M.Sc. programs are required to appear for the Joint Admission Test for M.Sc. conducted by the IITs. For more details, please visit : <a href="http://jam.iitb.ac.in">http://jam.iitb.ac.in</a></p>
<p><b>M.Tech., M.Phil., M.Des., M.Mgt. &amp; Ph.D.</b></p> <p>International students can seek admission to various Postgraduate and Research Programmes (M.Tech., M.Phil., M.Des., &amp; Ph.D.), under the following categories:-</p> <ul style="list-style-type: none"> <li>→ Self-financing Students</li> <li>→ ICCR Scholarship (Government of India)</li> <li>→ Foreign Government Sponsorships</li> </ul> <p>Students seeking admission in any one of the aforesaid categories are required to satisfy the minimum eligibility criteria for admission to the programmes as prescribed by the Institute. For more details, please visit: <a href="http://www.iitb.ac.in/newacadhome/toadmission.jsp">http://www.iitb.ac.in/newacadhome/toadmission.jsp</a></p>

## Fees:

- A) Fees payable at the time of admission: **US\$ 500**
- B) Per semester (2 semester per year) Tuition Fee:
  - **US\$ 2000** (For students other than SAARC)
  - **US\$ 1000** (For Students from SAARC Countries)
  - **INR 5000** (For foreign nationals under MOU/FRN-TA scheme at par with the rate applicable to IITB-TA students)

Please refer the following link for up-to-date information:  
<http://www.ir.iitb.ac.in>

# Scholarships

## Undergraduate

Scholarship	Awarded to	Amount
Merit-cum-Means	B.Tech., B.S., Dual Degree (B.Tech + M.Tech.), M.Sc. students.	Rs.1000/ per month for 10 months. Benefit of free tuition fee.

## Postgraduate

Scholarship	Awarded to	Amount
Instt. Teaching Assistantship	Ph.D.	Rs. 25,000/-
	M.Sc.+Ph.D.	Rs. 25,000/-
	M.Sc.+M.Tech.	Rs. 12,400/-
	DD (B.Tech.+M.Tech.) (Applicable in the 5 <sup>th</sup> yr. only)	Rs. 6,000/-
PG Teaching Assistantship	M.Tech.	Rs. 12,400/-
	M.Des.	Rs. 12,400/-
	M.Phil.	Rs. 12,400/-
CSIR Fellowship	Ph.D students	Rs. 25,000/-
CSIR SPMF	Ph.D students	Rs. 29,000/-
UGC Scholarship	Ph.D. students	Rs. 25,000/-
	M.Phil. students	Rs. 25,000/-
	Engg. & Tech.	Rs. 25,000/-
	M.Sc. + Ph.D.	Rs. 25,000/-

## Govt. Fellowship / Scholarship

Scholarship	Awarded to	Amount
National Board of Higher Mathematics (NBHM)	Ph.D.	Rs. 25000/-
Dept of Biotechnology, Jr. Research Fellowship (DBT-JRF)	Ph.D.	Rs. 25000/-
DST-Inspire	Ph.D.	Rs. 25000/-
Indian Council of Medical Research (ICMR)	Ph.D.	Rs. 25000/-
Maharashtra Pollution Control Board (MPCB)	Ph.D.	Rs. 18000/-
PM Doct. RF	Ph.D.	Rs. 70000/-
DAE (Board of Research in Nuclear Science BRNS)	M.Tech.	Rs. 35000/-
Atomic Energy Regulatory Board (AERB)	M.Tech.	Rs. 35000/-

### Ph.D. Scholarship for International Students:

Application fee (non-refundable)		US \$ 20
Teaching Assistantship (First 2 yrs.)	Rs. 25,000/-	US \$ 385 Approx.
Teaching Assistantship (after 2 yrs. until the 5 <sup>th</sup> year)	Rs. 28,000/-	US \$ 430 Approx.

**Please refer the following link for up-to-date information:**

<http://www.iitb.ac.in/newacadhome/foreign201515jan.jsp>

## Message from the Director

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*“Indian Institute of Technology Bombay has a rich tradition of pursuing excellence and has continually re-invented itself in terms of academic programmes and research infrastructure. Students are exposed to challenging research-based academics and a host of sport, cultural and organizational activities on its vibrant campus. The presence of world class research facilities, vigorous institute-industry collaborations, international exchange programmes, interdisciplinary research collaborations and industrial training opportunities help the students of IIT Bombay to excel and race ahead in the competitive professional environment. I am pleased to state that the Institute continues to be ranked as one of the top universities of the country and among the best in the world. With our theme - ‘Research that makes a difference’, IIT Bombay has made concerted efforts to align its R&D focus with the national goal of achieving technological self-reliance.*

*We aspire to see IIT Bombay among the top ranks of technical universities, known for its outstanding undergraduate programme and for its contributions to research and participate in solutions of problems facing the nation and the world by providing new ideas and talent.”*

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Prof. Devang V. Khakhar  
Director, IIT Bombay

*“IIT Bombay is a premier technical institute of India that attracts the best faculty and students to its undergraduate and postgraduate programs. We provide a rigorous academic environment, which both invigorates and challenges our students. While our faculty members set high standards for students, they are also accommodating of individual concerns and needs, often spending considerable time engaging with students outside of classes as well. We believe that the diversity of our academic program, and the cutting edge research at IIT Bombay, results in a professionally enriching experience for both undergraduate and postgraduate students”.*



Prof. Prita Pant  
Associate Dean  
Academic Programmes



Prof. Amitava De  
Dean  
Academic Programmes



*“IIT Bombay is an institute where students come for high quality academics. However along with academic and intellectual growth, the campus environment and facilities promote the growth of an individual in terms of physical activities (sports), cultural activities and co-curricular activities (various science and technology clubs). All of these together help in building perseverance, character, interpersonal skills and leadership skills, which are important for a happy, productive and successful life beyond the student days.”*

Prof. Soumyo Mukherji, Ph.D.  
Dean of Students Affairs. Institute Chair Professor

## Contact Information

Undergraduate Admission	Postgraduate Admission	
<b>JEE (Advanced), UCEED</b>	<b>A) Graduate Aptitude Test in Engineering</b>	<b>B) Common Entrance Exam for Design (CEED)</b>
Chairperson, JEE (Advanced), UCEED & CEED Address: JEE Office, IIT Bombay, Powai, Mumbai 400076 Phone: +91 (22) 2576 4063 / 9093/ 9094 Fax: +91 (22) 2572 0305 E-mail: jeeadv@iitb.ac.in / uceed@iitb.ac.in Website: www.jeeadv.ac.in   www.uceed.iitb.ac.in	Chairperson GATE Address: GATE Office, IIT Bombay, Powai, Mumbai 400076 Phone: +91 (22) 2576 7068 Fax: +91 (22) 2572 3706 E-mail: gateoffice@iitb.ac.in Website: www.gate.iitb.ac.in	Chairperson, JEE (Advanced), UCEED & CEED Address: JEE Office, IIT Bombay, Powai, Mumbai 400076 Phone: +91 (22) 2576 4063 / 9093/ 9094 Fax: +91 (22) 2572 0305 E-mail: ceed@iitb.ac.in Website: www.ceed.iitb.ac.in