

Information Brochure
for
Post Graduate Admissions in

M.Tech. & Ph.D.

May 2019



INDIAN INSTITUTE OF INFORMATION TECHNOLOGY
PUNE

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I. Important Guidelines

- i. Please read the instructions given in the brochure carefully before filling up the application form.
- ii. Application Form & Information Brochure is available on the Institute website www.iiitp.ac.in.
- iii. Eligible and interested candidates are required to send the scanned copy of completely filled application form along with the necessary documents and the copy of the receipt for a non-refundable processing fee of Rs. 500/- (for GEN/OBC) and Rs. 300/- (for SC/ST/PwD) payable directly to **State Bank of India A/C No.- 35664554591**, IFSC code - SBIN0007339, MICR Code - 411002016, of Indian Institute of Information Technology Pune, to **academics.iiitp@gmail.com** . Please do not send the hardcopy of any documents.
- iv. Employed candidates are required to submit the No Objection Certificate (NoC) from the respective organization
- v. Incomplete applications, applications without prescribe fee and received after last date are liable to be rejected and will not be considered.
- vi. No TA/ DA will be provided by the institute for attending written test and/or interview.
- vii. Shortlisted candidates called for selection process (written test/interview) should bring the following with them:
 - a. Photo ID Card,
 - b. Hard copy of the application form submitted.
 - c. Receipt of the processing fee
 - d. Thesis / dissertation / report / publications
 - e. Copy of certificates and mark-sheets along with originals and
 - f. Two passport size photographs
- viii. Any queries related to admissions may be directed to academics.iiitp@gmail.com.

I. Important Dates

- | | |
|--|-------------------------|
| i. Last date for submission of completed application forms | June 30, 2019 |
| ii. Display of list of eligible candidates for written test on institute website | First week of July 2019 |
| iii. Written test and interview | First week of July 2019 |
| iv. Declaration of Results | July 10, 2019 |
| v. Offer acceptance & payment of fees on or before | July 15, 2019 |
| vi. Course registration & Instruction begins | July 31, 2019 |
| vii. Course registration & Instruction begins | July 31, 2019 |

I. General Information

i. About the Institute:

Indian Institute of Information Technology Pune (IIIT Pune), is an institute of national importance set up under the Indian Institute of Information Technology (PPP) Act, with a view to develop new knowledge in information technology and to provide manpower of global standards for the information technology industry. IIIT Pune was established by Ministry of Human Resource Development, Govt. of India in 2016 on not for profit basis in public private partnership (PPP) with Government of Maharashtra and industry partners. The Institute offers B.Tech. and M.Tech. programmes through its Departments of Electronics & Communication Engineering (ECE) and Computer Science & Engineering (CSE), and Ph.D programmes through the Departments of ECE, CSE and Mathematics.

The permanent campus of the Institute is being developed on a 100-acre land in the serene surroundings of village Nanoli situated on the banks of Indrayani river in Pune district. The present campus is situated approximately 30 km from Pune railway station in the leased premises of Siddhant College of Engineering at Sadumbare, Tal. Maval, Pune, with natural and calm surroundings perfectly required for research and higher education. IIIT Pune is a residential Institution and provides residential facilities to students on availability basis.

ii. About Departments

a. Electronics & Communication Engineering: The Department of ECE offers B.Tech., M.Tech., and Ph.D. programmes having young and experienced faculties carrying out research in various sub-disciplines.

Dr. Nagendra Kushwaha (Ph.D. DIAT Pune): Antenna, Microwave, Communication

Dr. Sandeep Kumar Singh (Ph.D. IIT Delhi): Security in the Internet of Things space, Cyber-physical security of smart grid, Advance wireless communication, Information theory.

Dr. Pankaj Sharma (Ph.D. IIT Indore) Nanotechnology, Optoelectronics, Photovoltaics, Materials fabrication & Characterizations.

Dr. Ranjith Nair (Ph.D. IIT Kanpur) Multi-Robot/ Multi-Vehicle Systems, Nonlinear distributed Control, Intelligent Control, Multi-Agent Systems, Cyber-Physical systems

Dr. Mayur Parate (Ph.D. NIT Nagpur) Image Processing, Computer Vision, IoT.

Dr. Sandeep Mishra (Ph.D. NIT Meghalaya) VLSI design, Memory design & architecture, Mixed signal design

Dr. Parul Sahare (Ph.D. NIT Nagpur): Signal Processing, Image Processing, Pattern Recognition, Document Image Analysis, Machine Learning.

b. Computer Science & Engineering: The Department of CSE offers B.Tech., M.Tech., and Ph.D. programmes with faculties performing research in following areas

Dr. Sourabh Shrivastava (Ph.D. Jaypee Uni.) Digital Image Processing

Dr. Tanmoy Hazra (Ph.D. DIAT Pune) Applications of Game Theory, Machine Learning.

Dr. Bhupendra Singh (Ph.D. DIAT Pune) Operating Systems, Digital Forensics, Python Programming, Data Mining, Machine Learning.

Dr. Darshan Vishwasrao Medhane (Ph.D. VIT Vellore) Computational Intelligence, Software Modeling and Design, Machine Learning Analysis of Algorithms, Parallel and Distributed Computing.

Dr. Sanjeev Sharma (Ph.D. IIIT Gwalior) Soft Computing, Robotics, Nature Inspired Algorithms, Biometrics.

Dr. Renu Kachhoria (Ph.D. IIIT Allahabad) Computer Networks, Wireless Sensor Networks, Internet of Things(IoT), Cloud computing, Mobile Ad-Hoc Network.

c. Mathematics

Dr. Chandrakant Narayan Guled (Ph.D, D.BATU, Lonere) Analytical and numerical methods of solving nonlinear ODEs and PDEs, simulation and modeling, Fluid Mechanics

Dr. Anagha Khiste ((Ph.D, Pune University) Lattice theory (in particular ordered sets)

iii. M.Tech Programmes:

The Masters of Technology (M.Tech.) programmes are designed to impart students with latest aspects technology through introductory and advanced level courses, followed by the research within their field of specialization. The Institute offers M.Tech. programmes through its department of CSE with specializations in **Artificial Intelligence** (AI) and department of ECE with specializations in **Internet of Things** (IoT). M.Tech. programmes are two years structured programmes with credit components from one year of course work and one year of project/thesis. These programmes are interdisciplinary where students with different background are eligible to be admitted to the programme. Seat distribution in the M.Tech. programmes is as given below:

Table 1: M.Tech. programme seat distribution

Programme & specialization	Seats	
	GATE	Non-GATE *
M.Tech. (CSE) in Artificial Intelligence	12	8 (Sponsored)
M.Tech. (ECE) in IoT	12	8 (Sponsored)

* The institute does not provide any assistantship or fellowship to Non-GATE students.

a. Minimum qualifications and procedure for admission

Table 2: Minimum qualifications required for admission to M. Tech. programmes

Programme & Admission type	Seats	Qualifying Degree	Minimum performance in qualifying degree	Examination Requirement

M.Tech. CSE (GATE)	12	B.E./ B.Tech. /M.Sc. or equivalent	60% marks or 6.0 CGPA on a 10- point scale	Admission through CCMT 2019
M.Tech. CSE (Non - GATE)	8	B.E./ B.Tech. /M.Sc. or equivalent	60% marks or 6.0 CGPA on a 10- point scale	Institute written test & Interview
M.Tech. ECE (GATE)	12	B.E./ B.Tech. /M.Sc. or equivalent	60% marks or 6.0 CGPA on a 10- point scale	Admission through CCMT 2019
M.Tech. ECE (Non - GATE)	8	B.E./ B.Tech. /M.Sc. or equivalent	60% marks or 6.0 CGPA on a 10- point scale	Institute written test & Interview

1. Institute follows the reservation in admission as per Government of India rules. All shortlisted candidates applying for admission under the reserved categories are required to produce the relevant certificate at the time of interview.
2. For all B.Tech. students graduating from IITs/NITs with a CGPA of 8.0 or above and applying for sponsored seats will be given preference.

b. Additional requirements for admission to sponsored M. Tech. seats.

The following additional eligibility conditions and relaxations apply for the sponsored fulltime programmes.

1. Employees of Public Sector Undertakings or Government Departments or Research and Development Organizations or Private Industries are eligible for admission to these programmes.
2. The minimum experience required after qualifying degree and as on date of registration is 2 years for M.Tech. Programmes.
3. Sponsored candidates seeking admission to an M.Tech. programme on the basis of study leave, must submit a sponsorship certificate (Annexure – I)on a proper letterhead from the appropriate authority in the organization clearly stating the following:
 - for the period of his/her studies in the programme, the candidate would be treated as on duty with usual salary and allowances, and
 - that he/she will be fully relieved and granted study leave for a minimum period of 1 year for course work.

iv. Ph.D. Programmes:

The Doctor of Philosophy (Ph.D.) programme is aimed at assisting students acquiring proficiency in their chosen area of research. The academic programme leading to the Ph.D. degree is broad-based and involves a course credit requirement and a research thesis submission. The Institute encourages research in interdisciplinary areas through a system of joint supervision and interdepartmental group activities. Research activities in IIT Pune are carried out under the ambit of academic departments ECE, CSE, Mathematics and research centres (a) Centre of Robotics and Security in IoT Space, (b)

Centre of Indian Languages and Computational Intelligence, (c) Centre of VLSI and Nanotechnology (d) Centre for Biomedical Engineering & Bio-Informatics. With an aim to develop new knowledge in all aspects of teaching and research, IIIT Pune offers admission to the Ph.D. programme of the Institute. IIIT Pune plans to develop world class research facilities in areas of Mobile Computing, Information Security, IoT, Robotics, Machine Learning, Speech & Image Processing, Medical Informatics, Cyber Physical Systems, Wireless Networks, VLSI Design and Nanotechnology.

a. Admission Categories

The admissions are offered under below mentioned categories.

- i. Govt. Fellowship Awardees (FA)
- ii. Sponsored candidates (SP)
- iii. External candidates (EX)
 - iii. (a) Candidates sponsored from R&D organizations
 - iii. (b) Institutional faculty

b. General Eligibility Criteria

Computer Science and Engineering	B. Tech./ B.E. in CSE/ IT or relevant area with a CGPA of at least 7 on a scale of 10 (or equivalent) or 65%. OR MCA/M.Sc. in CSE/IT and allied areas degree considered equivalent to the B.Tech./B.E. degree OR M.Tech./ M.S./ M.E. in CSE/ IT or relevant area with a CGPA of at least 7 on a scale of 10 (or equivalent) or 65%.
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Electronics and Communication Engineering	B. Tech./ B.E. in ECE/ EE or relevant area with a CGPA of at least 7 on a scale of 10 (or equivalent) or 65%. OR MCA/M.Sc. in ECE/EE and allied areas degree considered equivalent to the B.Tech./B.E. degree OR M.Tech./ M.S./ M.E. in ECE/ EE or relevant area with a CGPA of at least 7 on a scale of 10 (or equivalent) or 65%.
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Mathematics	A master's degree in the Mathematics/Statistics OR bachelors in engineering OR Mathematics (4-year programme) with a minimum of 55 percent marks/ CPI of 5.5/10. The candidate either preferably have a valid GATE score or have qualified JRF.
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c. Admission category specific criteria

- i. Govt. fellowship awardee (FA): Applicants who have qualified UGC/CSIR NET-JRF exam or have obtained INSPIRE PhD fellowship, will be admitted based on their performance in the entrance test and subsequent interview. The institute does not provide any assistantship or fellowship to such a student.
- ii. Sponsored candidates (SP): Applicants who are sponsored by their employers for doing research work in the Institute. They are expected to be released for full-time

course-work and full time research at the institute for a minimum period of three years. They will not receive any financial support from the Institute. Sponsorship letter (Appendix I) should be submitted at the time of written test and/or interview.

iii. External candidates (EX): A student in this category is sponsored by a recognized R&D institution or industry or academia for doing research in IIIT Pune. He/ She must be a regular employee of the sponsoring organization with at least two years of professional experience in respective field. The institute does not provide any assistantship or fellowship to such a student.

iii (a) The candidates employed in recognized R&D organizations and desirous of pursuing Ph.D. programme while in employment may apply for admission as external candidates. After fulfilling the coursework requirement at the Institute, these candidates will be allowed to register for Ph.D. with a Supervisor (internal) from the Institute and a Co-supervisor (external) from their parent organization/ Academic field/ Industry where they will be doing the research work. The admissions are based on the following norms:

- The competence of these candidates will be assessed along with the regular candidates.
- The candidate should submit at the time of application, a Endorsement Certificate (Appendix II) from the organization in which he / she is employed giving an undertaking that the candidate would be released from the normal duties to fulfil the coursework requirement. The certificate should also provide details of facilities relevant to the research programme and available to the candidate.
- The candidate is required to be at the Institute as a full-time student for the coursework of his/her Ph.D. Programme. The coursework requirement is likely to be a period of 1- 2 semesters. Depending on the student's background and the programme requirements, an additional semester may be needed to complete the coursework.
- To promote interaction between the internal supervisor and external co-supervisor, meeting between them should be arranged at least twice in a year in the Institute or in the sponsoring organization.
- The Ph.D. registration of an external candidate would be reviewed at the end of each year from the date of registration in terms of his progress in courses / seminars / approved research programme by a Research Progress Committee (RPC) nominated by Academic Progress Evaluation Committee (APEC).
- The option of external registration is for applicants who are working in well-equipped scientific institutions, laboratories, R&D establishments and industrial organizations engaged in research based activities.
- At the time of joining the programme, the students will have to produce a “Relieving certificate” from his / her employer that he / she has been fully relieved from normal duties during the semester(s) to complete the course work and other academic work at IIIT Pune.

iii(b) Institutional Faculty: The candidates employed as faculty members in Colleges and Universities and desirous of pursuing Ph.D. Programme while in employment and without availing study leave may apply for admission under this Category. The admissions are based on the following norms:

- The competence of these candidates will be assessed along with the regular candidates.
- The candidate should submit at the time of application, an undertaking duly signed by head of the institute, that the candidate would be relieved from the normal duties to fulfil the coursework requirements.
- The candidate is required to fulfil the coursework requirement (and qualifier examination, if applicable) of his/her Ph.D. Programme which is likely to be a period of 1-2 semesters. Depending on the student's background and the programme requirements, an additional semester may be needed to complete the coursework.
- After fulfilling the coursework requirements, these candidates will be allowed to register for Ph.D. with a Supervisor (internal) from the Institute and a Co-supervisor (external) from their parent organization. Appointment of external co-supervisor is optional based on recommendations of the supervisor and research progress committee.
- Place for research will be treated as IIIT Pune even though candidate may be carrying out part of the work at their Institute. These candidates are required to be available with the Supervisor (internal) for interaction during weekends, holidays and vacations

II. Admission Procedure

Admission to the postgraduate programmes M.Tech. and Ph.D. will be on the basis of written test and interview. Merely satisfying the general eligibility criterion as well as criterion set for each admission category is no guarantee for being called for test and interview. Depending on the number of applications received and considering the constraints of time and other resources for conducting written test and interview, the academic units may put additional academic performance based shortlisting criterion. No TA/DA will be paid for attending the written test and interview. The procedure will be as follows.

Stage 1: Written test: Eligible candidates are required to appear for the written test.

Stage 2: Interview: Candidates qualifying the written test are required to appear for the Personal Interview.

Syllabus for Written test: The question paper for written test shall be based on GATE Syllabus for respective categories as follows (including but not limited to)

For Electronics and Communication Engineering Branch: Engineering Mathematics, Networks, Signals and Systems, Electronic Devices, Analog Circuits, Digital Circuits, Control Systems, Communications, Electromagnetics

For Computer Science and Engineering and Information Technology Branch: Engineering Mathematics, Digital Logic, Computer Organization and Architecture, Programming and Data Structures, Algorithms Theory of Computation, Compiler Design, Operating System, Databases, Computer Networks

For Mathematics: Linear algebra, Real analysis & Complex analysis, Differential equations : ODE & PDE, Discrete mathematics, Probability theory, Topology

III. Registration, Coursework & other requirements

All the registered M.Tech. & Ph.D. candidates are required to complete a minimum coursework requirements based on their admission category. The coursework is mandatory in order to develop the breadth of fundamental training or proper foundation for advanced research work. These courses are offered by various Departments and the lectures are given either by a faculty member, or by guest speakers and specialists in the profession. For award of an M.Tech. degree, normally a candidate is required to complete 52-60 credits including coursework, seminar and thesis/dissertation. For Ph.D. degree, normally, candidates having a B.E./ B. Tech./ M.Sc., or equivalent degree are required to complete a coursework of a minimum of 16-20 credits whereas M.E./M. Tech. or equivalent degree holders are required to complete a minimum of 12-15 credits.

All students are required to report for Orientation and Registration before the commencement of each semester according to the schedule/procedure notified in advance. The students register themselves for the courses in consultation with the Course Coordinator. The courses to be run by the Departments are made known to the students before registration. On admission, the students should go through carefully the Departmental advice of courses for their discipline. They should also go through the Prospectus as well as the Rules and Regulations/Courses of Study regarding the rules governing their academic duties and performance. The minimum duration for M.Tech. degree will be two (02) years, from the date of joining the programme. The minimum duration for Ph.D. thesis submission will be three (03) years for candidates with M.Tech. Degree and four (04) years for candidates with B.Tech. / M.Sc. degree, from the date of joining the programme. The Ph.D. registration will be valid for a period of six (06) years for M.Tech. degree holders and seven (07) years for B.Tech. /M. Sc. degree holders, from the date of registration and no further extension will be granted under normal circumstances. The minimum requirement for submitting the Ph.D. thesis will be one (01) SCI indexed journal and one (01) Scopus indexed journal publications (paid journals not allowed).

IV. Fee Structure

a. M. Tech. (ECE & CSE) for All Students for 2019-21 Batch

Particulars	Sem – I	Sem – II	Sem – III	Sem – IV
One Time fee (A)				
Caution Deposit (Refundable)	10,000	---	---	---
Admission Fee	5,000	---	---	---
Alumni Fee	2,000	---	---	---
Semester Fee (Academic) (B)				
Tuition Fee	60,000	60,000	60,000	60,000
Registration Fee	2,000	2,000	2,000	2,000
Library Fee	2,000	2,000	2,000	2,000
Exam Fee	2,000	2,000	2,000	2,000
Student Gymkhana Fee	1,000	1,000	1,000	1,000
Institute Development Fee	5,000	5,000	5,000	5,000
Student Insurance Fee	500	---	500	---
Students Benevolent Fee	2,000	2,000	2,000	2,000
Total (A + B)	91,500	73,500	74,500	73,500

Semester Fee (Hostel)				
Hostel Fee *	18,000	18,000	18,000	18,000
Mess Charges #	18,000	18,000	18,000	18,000

* The Hostel fee is approximate and will be charged based on availability of hostel rooms.

Mess Charges are tentative and will be required to pay to the caterer directly.

Note:

1. The fee structure is tentative, and is subject to revision as per the recommendation of Board of Governors.
2. An amount of Rs. 10,000 per semester is chargeable towards transport fee, if transport facility is provided.

b. Fee Structure for Ph.D. (ECE, CSE, Mathematics) for All Students for 2019-20 Batch

Particulars	Sem – I	Sem – II	Sem – III	Sem – IV
One Time fee (A)				

Caution Deposit (Refundable)	10,000	---	---	---
Admission Fee	5,000	---	---	---
Alumni Fee	2,000	---	---	---
Semester Fee (Academic) (B)				
Tuition Fee	25,000	25,000	25,000	25,000
Registration Fee	2,000	2,000	2,000	2,000
Library Fee	2,000	2,000	2,000	2,000
Exam Fee	2,000	2,000	2,000	2,000
Student Gymkhana Fee	1,000	1,000	1,000	1,000
Internet fee	5,000	---	5,000	---
Institute Development Fee	5,000	---	5,000	---
Laboratory Fee	5,000	---	5,000	---
Student Insurance Fee	500	---	500	---
Students Benevolent Fee	2,000	2,000	2,000	2,000
Total (A + B)	66,500	34,000	49,500	34,000

Hostel Fee *	18,000	18,000	18,000	18,000
Mess Charges #	18,000	18,000	18,000	18,000

* The Hostel fee is approximate and will be charged based on availability of hostel rooms.

Mess Charges are tentative and will be required to pay to the caterer directly.

Note:

The fee structure is tentative, and is subject to revision as per the recommendation of Board of Governors. An amount of Rs. 10,000 per semester is chargeable towards transport fee, if transport facility is provided.

Sponsorship Letter
(To be typed on letterhead of the sponsoring organization)

To,

The Director,
Indian Institute of Information Technology Pune.

Sub: Sponsoring of an Employee for M.Tech./Ph.D. programme

Dear Sir,

We hereby sponsor the candidature of Shri. /Smt. _____, employed in our organization as _____ (designation) for his / her joining M.Tech./Ph.D. programme in _____ (department) at your Institute as a full-time candidate. He/ She is employee of our organization since _____. We shall bear the total expenses of his / her studies. We shall fully relieve him/ her of his/ her duties in the organization during the entire period of the programme, to enable him/ her to devote full-time to his/ her studies in the Institute.

Signature and Seal of the Sponsoring
Authority

Endorsement Certificate for Ph.D. External Registration (EX)
(To be typed on letterhead of the Sponsoring Organization)

Name of the sponsoring organization:
Address:

Present Designation of the applicant:

Present status of the applicant: (Permanent/Quasi Permanent/Temporary)

_____ Division where research work is proposed to be done:

_____ Name of supervisor from the sponsoring

organization: _____ (Bio-data of supervisor to be enclosed

giving details of designation, qualification, research experience etc.)

Details of facilities relevant to the research problem which will be made available to the candidate by the organization:

Statement of proposed Co-supervisor (external)

If Shri / Kum. / Smt. _____ is registered for the doctorate degree, I agree to act as his/ her research Co-supervisor along with the research Supervisor from IIIT Pune.

Signature of proposed Co-supervisor
(external)

If Shri./ Kum./ Smt. _____ is admitted to the Ph.D. programme, we shall allow him/ her to undergo the programme of studies at IIIT Pune. Further, if Shri./ Kum./ Smt. _____ is admitted to the Ph.D. programme, we shall fully relieve him/her from normal duties to complete the course-work requirement at IIIT Pune. During the period of Doctoral programme, the candidate will be permitted to carry out his / her research work at our laboratories / organization and will be given the required facilities. We also give our consent to _____ of our organization to be the Co-supervisor (external) of the Ph.D. thesis, along with a faculty member of IIIT Pune as the Supervisor.

Signature and Seal of the Sponsoring Authority

APPENDIX III

STATEMENT OF PURPOSE

Statement of Purpose (SOP) is your opportunity to share with the admission committee your thoughts and feelings about research studies at IIIT Pune including your preparation for the same. Briefly describe past project/ research work done by you. Restrict yourself to 500-600 words. The personal SOP will aid the admission committee in evaluating your application.