

INFORMATION BROCHURE

(First Semester 2016-2017)

for admission to

Ph.D. , M.Tech., M.S.(R), and M.Des. PROGRAMMES



INDIAN INSTITUTE OF TECHNOLOGY DELHI

HAUZ KHAS, NEW DELHI-110016

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Message to the Applicants from Dean, Academics

Dear Applicant,

I am very happy to note that you are planning to pursue your post graduate education and particularly that you are considering IIT Delhi as one of your choices. India is fast emerging as a knowledge economy and in the next decade or so would emerge as a major centre for research and technology development. In this context your decision to pursue post graduate education would definitely have a significant impact on your long term career prospects. IIT Delhi with its 38 M.Tech., 26 Ph.D, 9 M.S.(R), 3 M.Sc, 3 MBA and an M.Des. programmes offers you an extensive choices of specialization. The strength of the Institute is its 450+ highly qualified faculty due to which it is continuously ranked among the top 50 technical institutions globally.

In the last few years we have been constantly working towards making our rules, regulations and policies governing post graduate education flexible and attractive to potential candidates. I am writing this letter to make you aware of some major policy changes in the last couple of years.

1. At IIT Delhi most of the academic departments/centres/schools offer M.Tech. and Ph.D. programmes while some of them also offer an M.S.(R) programme. Major policy changes now permit the student to switch from one programme to another anytime after one semester of joining. For example, a candidate joining an M.Tech. programme can apply for switch to a Ph.D. programme in the same department (or even in another eligible department) after completing 12 credits of courses with a minimum GPA of 8.0. All his/her credits, if relevant to the new programme, can be transferred and thus make his/her transfer to the new programme as a student with advanced standing. Similar flexibility exists for switching between other programmes.
2. Last year IIT Delhi initiated sponsored research activity worth approximately Rs.100 crores which is expected to grow further this year. Candidates wanting to gain project experience along with post graduate education can apply and join one of the sponsored projects simultaneously with admission to the post graduate degree. Apart from gaining experience, various schemes may provide for much higher assistantship amounts with your participation in the sponsored research projects. One significant policy change that has been adopted is that the recruitment for the project can also be carried out by the same department research committee (DRC) that admits students to the post graduate programmes.
3. IIT Delhi is striving towards ensuring each of its Ph.D students to have an opportunity to present a paper and attend at least one international conference before they graduate. A number of initiatives taken in the last couple of years have yielded significant results. Visit <http://www.iitd.ac.in> for other details.

There are many more things I would like to share with you upon your joining IIT Delhi. I am looking forward to see you in the Orientation / Registration Programme during 22-23 July, 2016 with you being accepted for admission in one of your preferred postgraduate programmes.

Yours sincerely

Prof. Anurag Sharma
Dean, Academics, IIT Delhi

Important Dates

Submission of online application commences on	March 09, 2016 (12.00 Noon)
Last date for submission of online application and application fee	March 31, 2016 (04.00 P.M.)
Range of dates for Test / Interview	May 12 , 2016 - June 09, 2016
Date of Orientation for new Students	July 22, 2016
Date of Registration for new Students	July 23, 2016
Commencement of classes	July 25, 2016

1. INTRODUCTION

Indian Institute of Technology Delhi is one of the seven established Institutes of Technology in India, the others being Kharagpur, Bombay, Madras, Kanpur, Guwahati and Roorkee. Recently, Government has set up nine more Institutes of Technology. These Institutes have been created as centres of excellence for higher training, research and development in science, engineering and technology. Established as a College of Engineering in 1961, the Institute was declared an Institute of National Importance under the “Institutes of Technology (Amendment) Act, 1963” and renamed “Indian Institute of Technology Delhi”. It was then accorded the status of a university with powers to decide its own academic policy, to conduct its own examinations and to award its own degrees.

The Institute offers undergraduate and postgraduate programmes through its Departments, Centres and Schools. The Institute admits about 850 students for the undergraduate (B.Tech) programmes and about 1400 students for the postgraduate (M.Sc./M.Tech./ M.S.(Research)/ M.Des./ M.B.A./Ph.D.) programmes every year.

Intellectual alertness, creativity and talent for innovation go into the making of an engineering leader today and continue to be essential for professional competence tomorrow. The candidates selected for admission live in pleasant surroundings of intellectually stimulating campus, use the most modern equipment and laboratory facilities available and go through the specialised courses designed to meet the challenge of the future. The teaching methods rely on direct personal contact between the teachers and the students. Living in such an environment with people having similar goals and aspirations is an exciting experience during one’s academic life and is of considerable value in one’s professional career.

Location: IIT Delhi is situated at Hauz Khas in South Delhi, bounded by the Sri Aurobindo Marg on the East, the Jawaharlal Nehru University complex on the West, the National Council of Educational Research & Training on the South and the outer Ring Road on the North. The Institute campus is about 19 Kilometers away from the Delhi Main Railway Station, 14 Kilometers from the New Delhi Railway Station, 21 Kilometers from the Inter State Bus Terminal, 22 Kilometers from Indira Gandhi International Airport and 10 Kilometers from the domestic terminal of Delhi Airport. The nearest Metro Station is Hauz Khas.

Campus: IIT Delhi is a residential Institution and provides residential facilities to the students as well as the teaching staff as per availability. The Institute campus area extends to 320 acres with many interesting topographical features, imaginatively laid out with picturesque landscape, numerous buildings and wide roads, the campus presents a spectacle of harmony in architecture and natural beauty.

The main academic building houses various teaching, research and Library facilities. Though each Department/Centre/School is a separate entity, all the Departments/Centres/Schools together constitute an integrated complex. Lecture theatres with modern amenities and equipment for projection have been located adjacent to two or more Departments for common use. The campus also provides such amenities as staff clubs, hospital, shopping centres, banks, ATMs, post office, community centre, stadium and playing fields.

The Students Activities Centre provides all facilities for students’ extracurricular and physical development. The central two-storeyed block with a swimming pool and a gymnasium hall has amenities such as squash courts, hobbies workshop, seminar rooms, music rooms and other multipurpose rooms for reading and indoor games. The amphitheater constructed in modern style is an added amenity at the centre.

2. CREDIT SYSTEM

Education at the Institute is organised around the credit system of study. The prominent features of the credit system are a process of continuous evaluation of a student's performance, and a flexibility to allow a student to progress at an optimum pace suited to his/her ability or convenience subject to fulfilling minimum requirement for continuation.

Each course has a certain number of credits which describe its weightage. A student's performance is measured by the number of credits that he/she has completed satisfactorily. A minimum Grade Point Average is required to be maintained for satisfactory progress.

The minimum academic requirements for the various degrees including minimum and maximum credits to be registered in a particular semester are indicated in the Prospectus for the year 2016-2017 which will be made available to the admitted candidates on the date of Orientation.

Every course is co-ordinated by a member of the teaching staff of the Department which offers the course in a given semester. This Faculty member is called the Course Coordinator. (S)he has full responsibility for conducting the course, co-ordinating the work of the other members of the faculty involved in that course and for holding tests and assignments and awarding grades. For any difficulty a student is expected to approach the Course Co-ordinator for advice and clarification.

3. ADMISSION PROCEDURES AND REQUIREMENTS

I. Ph.D. Programmes

The award of the Ph.D. degree is in recognition of high achievements, independent research and application of scientific knowledge to the solution of technical and scientific problems. Creative and productive inquiry is the basic concept underlying the research work. The details of research programmes in various Departments/ Centres/Schools are given in **Annexure-I**.

Course work and other academic requirements: In order to overcome any deficiency in the breadth of fundamental training or proper foundation for advanced work, special make up or pre-doctoral courses are given by each Department/ Centre/School. These courses are given either by faculty member or by guest speakers and specialists in the profession. Normally candidates having a B.Tech./M.Sc./M.A. or equivalent degree are required to complete a minimum of 12* credits with a minimum required GPA of 7.5. M.Tech. or equivalent degree holders are required to complete a minimum of 6* credits with a minimum required GPA of 7.5.

Admission to the Ph.D. Programmes: Admission to the Ph.D. programmes is normally made on the basis of an interview of eligible candidates conducted by the Department/Centre/School concerned through its Department Research Committee (DRC) / Centre Research Committee (CRC). DRC/CRC may decide to conduct a written test as well to screen the candidates. Applications are invited from candidates by advertising the programmes in Employment News/leading newspapers in March for the first semester and in October for the second semester every year.

**A Department/Centre/School may specify a higher credit requirement for all their Ph.D. programmes and/or require an individual scholar to complete a larger number of credits based on his/her background and preparation level.*

Admission schedule: Normally, Ph.D. programmes are advertised in the month of March and October each year in the Employment news as well as in leading newspapers and admissions are carried out in the months of May and December. Further, admission to Ph.D programme is possible **any time in the year** through DRC/CRC/SRC. Ph.D. scholars can join the institute at any time of the year though the course registration will be possible only at the beginning of the subsequent semester. Such candidates must also fulfill the required academic qualification/ experience at the time of interview. They must join the institute within 4 weeks after the issue of admission offer unless specifically permitted otherwise. Admission is subject to vacancy being available in the relevant specializations.

Duration of the programmes: Minimum period of registration required for students with M.Tech. or equivalent qualifications is 2 years whereas those with B.Tech. or equivalent qualifications is 3 years. All candidates are allowed a maximum of 14 registered semester for submission of their thesis.

I(a) Minimum Qualifications for admission to Full-time Ph.D. Programmes:

Table-1 defines the minimum qualifications required for admission to fulltime Ph.D. programmes at IIT Delhi for **General/OBC (Non-creamy Layer)** category students. Please note:

- These are Institute minimum requirements and any Department/Centre/School operating through their DRC/CRC/SRC can specify higher short-listing criteria than what is specified in Table1.
- This table includes most of the degrees but each DRC/CRC/SRC is free to specify the qualifications and disciplines acceptable for admission to their programmes.
- Candidates in the final year of their programmes and who expect to complete all their qualifying degree requirements before the date of registration are also eligible to apply for admissions. For short-listing purposes, their performance until the preceding semester (preceding year if their programmes are year based) would be considered but their admission would be provisional, subject to their meeting the minimum eligibility criteria after their final qualifying examination results are announced.

Table 1: Minimum Qualification for Admission to full-time Ph.D. Programmes

Qualifying Degree	Minimum performance in Qualifying degree for General/OBC (Non-Creamy Layer) category students	Qualification through national level examination requirements
M.Tech./M.E./M.D. or equivalent	60% marks or 6.75 CGPA on a 10-point scale	Nil
M.Sc./MBA/M.A./M.B.B.S. or equivalent	60% marks or 6.75 CGPA on a 10-point scale	GATE score \geq 300 or qualifying or equivalent score whichever is higher CSIR/UGC NET/ICAR/ICMR/DST INSPIRE fellowship
B.E./B.Tech. or equivalent	70% marks or 7.5 CGPA on a 10-point scale	Qualified GATE/CSIR/UGC NET/ICAR/DST INSPIRE fellowship

Exemptions, relaxations and clarifications:

1. For **SC/ST/PH category students**, minimum performance in the qualifying degree with postgraduate qualifications (first two rows) is relaxed from 60% to 55% (6.75 to 6.25) and GATE score requirement from 300 to 200.
2. Qualifying degree performance is computed by **aggregating performance over all the semesters/years** of the qualifying degree.
3. In respect of M.A., M.Sc. and/or **B.Techs. from IITs** graduating with a CGPA of 8.0 or above, the requirement of qualification through a national examination (col three in Table 1) is waived off.
4. Students from CFTIs (Centrally Funded Technical Institutions (IIT's, NIT's, IIIT's, etc)) having CPI/ CGPA 7.00 (at 10.00 scale) at the end of 3rd year are also eligible for admission to Ph.D. The requirement of qualification through a national examination (col three in Table 1) is waived off.
5. For assistantship purposes, candidates with **M.B.B.S. qualification** will be considered equivalent to M.Tech.
6. For candidates with M.A. degree in English, a 5% relaxation in marks or 0.5 relaxation in CGPA may be permitted for admission to the Ph.D. programme in Humanities and Social Sciences.
7. Candidates holding MBA degree, are eligible for applying to the Ph.D. programme in the Department of Management Studies.

I(b) Minimum Qualifications for admission to Part-time and Sponsored (full-time) Ph.D. Programmes:

The following eligibility conditions apply for the Part-time and sponsored full-time programmes.

1. Only employees of Public Sector Undertakings or Government Departments or Research and Development Organizations or Private Industries (approved by Faculty Boards) are eligible for admission to these programmes.
2. All candidates should have a minimum experience of two years (full time) after B.Tech./M.Sc./M.A. or equivalent as on date of registration.
3. Minimum qualification for these candidates is the same as for full-time candidates except that the requirement of qualifying in a national examination (column 3 in Table 1) is waived off.
4. For part-time candidates from outside NCR (or at a radial distance of more than 50 Kilometers from IIT Delhi), there is a minimum residency requirement of 6 months. DRC/ CRC/SRC may specify a higher residency requirement based on the courses recommended as well as the background.
5. **Sponsored (full-time) candidates** seeking admission to a Ph.D. programme on the basis of study leave, must submit a "Sponsorship Certificate" 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 3 years (2years for M.Tech. and equivalent degree holders).
- 6. **Part-time candidates** are required to submit a “No Objection Certificate” on a proper letter head from the appropriate authority in the organization clearly stating the following:
 - the candidate is permitted to pursue studies on a part-time basis
 - that his/her official duties permit him/her to devote sufficient time for research.
 - facilities for research in the candidate’s field of research are available at the candidate’s place of work; and
 - he/she will be fully relieved from duty and permitted to reside at the Institute for the period required residency (This is not a requirement for candidates who are working in NCR or in organizations located within a distance of 50 Kilometers from the Institute).

II. M.Tech./ M.S.(Research)/M.Des. Programmes

The Institute runs a number of M.Tech. and M.S. (Research) programmes offered by various Departments, Centres and Schools. M.Tech. and M.S.(R) programmes mainly differ in the fraction of course and project/thesis credits. M.Tech. programmes may have upto two-thirds of the credits for the course work while M.S.(R) programmes have two-thirds of the credits for the thesis component. Some of these programmes are interdisciplinary programmes (IDP) where multiple academic units are involved in running of each of these programmes. Also in these IDPs, students with different backgrounds are eligible to be admitted to the programme. IDPs are administered through a Programme Executive Committee or PEC. Master of Design (or M.Des. Programme) in Industrial Design is also offered as an Interdisciplinary Programme. IIT Delhi also offers a number of industry-sponsored programmes. In these programmes either industry supports full-time students recruited by the Institute or sponsors their employees for the programme. In either case, regular Industry feedback is obtained to adopt and improve the curriculum to the needs of the industry. Industry sponsors also play a significant role in defining the projects. The listing of all the Masters' programmes is given in **Annexure-II**.

Flexibility of movement: IIT Delhi has adopted major changes in its rules and regulations to enable easy mobility of students from M.Tech. to Ph.D., M.Tech. to M.S.(R), M.S.(R) to M.Tech. and M.S.(R) to Ph.D. With these changes, it is now possible for a student to join M.Tech./M.S. (R) at IIT Delhi and then they can apply for change to a research programme if they feel confident. In this process they save considerable amount of time to complete Ph.D.

Eligibility for programmes: B.Tech. or M.Sc. degree holders of a particular discipline are eligible for admission to one or more programmes. The list of programmes to which a graduate of a specific discipline is eligible to apply, is given in **Annexure III**.

Programme duration: The minimum duration of M.Tech., M.S.(Research) and M.Des. programmes is 4 semesters (24 months) for full time and 6 semesters (36 months) for part-time programmes.

Admission schedule: Normally, Ph.D./M.Tech./M.S.(R)/M.Des. programmes are advertised in the month of March each year in the Employment news as well as in leading newspapers and admissions are carried out in the month of May. M.S.(R) programmes are also advertised in the month of October followed by admissions in December.

Further, just like Ph.D., admission, admission to M.S.(R) programmes is also possible at **any time in the year** through DRC/CRC/PEC. They can be admitted to the institute at any time of the year, though the course registration in such cases will be possible only at the beginning of the subsequent semester. Such candidates must also fulfill the required academic qualifications /experience at the time of interview. They must join the institute within 4 weeks after the issue of admission offer unless specifically permitted otherwise. Admission is subject to vacancy being available in the relevant specializations.

Part-Time programmes: IIT Delhi also offers most of its M.Tech. /M.S.(R) programmes in the part-time mode for working professionals. They are expected to complete their credit requirements in six semesters (maximum of ten semesters) by registering for a lower load than full-time students in each semester. Departments /Centres/Schools offer most of the core courses between 8:00 AM to 10:00 AM to enable these working professionals to attend classes as well as continue with their full-time employment.

Please note it may not always be feasible to slot all courses of the programme in the morning and those candidates applying for part-time programmes should be flexible to take courses at other times, if required.

II(a) Minimum qualifications and procedure for admission to Full-time M.Tech./ M.S.(R) /M.Des. Programmes:

Table 2 defines the minimum qualifications required for admission to full-time M.Tech./ M.S.(R)/ M.Des. programmes at IIT Delhi for **General/OBC (Non-creamy Layer)** category students. In this context please note:

- These are Institute minimum requirements and any Department/Centre/School operating through their DRC/CRC/PEC can specify higher short-listing criteria than what is specified here.
- This table includes many degrees for eligibility but each DRC/CRC/PEC is free to specify the qualifying degree disciplines as well as GATE disciplines acceptable for admission to their programmes.
- Admission to M.Tech./M.S.(R)/M.Des. programmes are carried out by first short-listing the eligible candidates (meeting the minimum performance in their qualifying degree - Column 3 of Table 2) and scoring above a GATE / CEED cut off specified for that programme and then conducting written test / interview at IIT Delhi. GATE / CEED cut offs for various Programmes last year (admission year 2015) are tabulated in **Annexure IV**. In such cases, GATE score is given a minimum weight of 70% in judging the overall performance of the candidates appearing for interview.
- DRC/CRC/PEC is empowered to offer direct admission for M.Tech./M.S.(R) programmes without interview to exceptionally meritorious students. The minimum performance required by such candidates is also listed in Table 2. This is the Institute minimum and the DRC/CRC/PEC is free to set higher eligibility criteria for direct admissions without interview. DRC/CRC/PEC may also decide not to offer any direct admissions without interviews.
- Candidates in the final year of their programmes and who expect to complete all their qualifying degree requirements before third week of July 2016 are eligible to apply for admission. For short- listing purposes, their performance till the preceding semester (preceding year if their programmes are year based) would be considered but their admission would be provisional, subject to their meeting the minimum eligibility criteria after their final qualifying examination results are announced.

Table 2: Minimum Qualification for Admission to full-time M.Tech./M.S.(R)/M.Des. Programmes

Programme & Admission type	Qualifying Degree	Minimum performance in the qualifying degree for General/OBC (Non-Creamy Layer) category students	National level examination requirements
M.Tech./ M.S.(R) (Direct Admission without test/interview)	B.E./B.Tech./ M.Sc. or equivalent	75% marks or 8.5 CGPA on a 10-point scale	GATE score > = 300 or qualifying score whichever is higher
M.Tech./ M.S.(R) (Admission with test/interview)	B.E./B.Tech./ M.Sc. or equivalent	60% marks or 6.75 CGPA on a 10- point scale	GATE score > = 300 or qualifying score whichever is higher
M. Des. (Direct Admission without test/interview)	B.E./B.Tech./ B. Arch. or equivalent	75% marks or 8.5 CGPA on a 10-point scale	CEED Percentile >=75
M. Des. (Admission with test/interview)	B.E./B.Tech./B. Arch. or equivalent	60% marks or 6.75 CGPA on a 10- point scale	CEED Percentile >=75

Exemptions, relaxations and clarifications

1. For Direct admission of **SC/ST/PH category students** (row 2 & 4 of Table 2), minimum performance in the qualifying degree is relaxed from 75% to 70% (8.5 to 7.5) and GATE score requirement from 300 to 200. For M.Des programme CEED score is relaxed from 75 percentile to 50 percentile.
2. For admission with interview of **SC/ST/PH category students** (row 3 & 5 of Table 2), minimum performance in the qualifying degree is relaxed from 60% to 55% (6.75 to 6.25) and GATE score requirement from 300 to 200. For M.Des programme CEED score is relaxed from 75 percentile to 50 percentile.
3. Qualifying degree performance is computed by **aggregating performance over all the semesters/years** of the qualifying degree.
4. For all **B.Techs. from IITs** graduating with a CGPA of 8.0 or above, the requirement of qualification through GATE is waived off.
5. Candidates with AMIE or Grad. IETE qualifications may also be considered for admission to the M.Tech. Programmes; however, if provisionally selected for admission based on their AMIE/Grad IETE performance, they would be required to complete 24 valid undergraduate credits prescribed by the concerned DRC/CRC/ PEC and clear the GATE examination before being actually admitted to the M.Tech./ M.S.(R)/M.Des. Programmes.

II(b) Minimum Qualifications for admission to Part-time and Sponsored (full-time) M.Tech./M.S.(R) Programmes:

The following additional eligibility conditions and relaxations apply for the Part-time and sponsored full-time programmes.

- (i). Only employees of Public Sector Undertakings or Government Departments or Research and Development Organizations or Private Industries (approved by Faculty Boards) are eligible for admission to these programmes.
- (ii). Employees of only those organizations which are located within 50 Kilometers radius of IIT Delhi are eligible to be considered for admission to part-time M.Tech./ M.S.(R) programmes
- (iii). All candidates should have a minimum experience of one year after qualifying degree and as on date of registration.
- (iv). Minimum qualification for these candidates is the same as for full-time candidates except that the requirement of qualifying in a national examination (column 4 in Table 2) is waived off.
- (v). **Sponsored (full-time) candidates** seeking admission to a M.Tech./M.S.(R)/M.Des. programme on the basis of study leave, must submit a “Sponsorship certificate” on a proper letterhead from the appropriate authority in the organization clearly stating the following:
 - a. for the period of his/her studies in the programme, the candidate would be treated as on duty with usual salary and allowances, and
 - b. that he/she will be fully relieved and granted study leave for a minimum period of 2 years
- (vi). **Part-time candidates** are required to submit a “No Objection Certificate” on a proper letter head from the appropriate authority in the organization clearly stating the following:
 - the candidate is permitted to pursue studies on a part-time basis
 - that his/her official duties permit him/her to devote sufficient time for studies
 - that he/she will not be transferred to any other place during the period of study

4. RESERVATION OF SEATS:

- (a) 15% seats are reserved for SC and 7.5% for ST candidates.
- (b) 27% seats are reserved for Non-Creamy layer OBC candidates. All candidates applying for admission under this category should produce the OBC (Non-Creamy Layer) Certificate applicable for OBC's in the Central list at the time of interview. For details and specimen form visit : <http://www.iitd.ac.in>.
- (c) 3% seats are reserved for the physically handicapped persons in the Postgraduate courses and Ph.D. Programmes.

Note : All shortlisted candidates applying for admission under the reserved categories are required to produce the relevant certificate at the time of interview.

5. REGISTRATION FOR COURSES

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 courses to be run by the academic units are made known to the students before registration. The students register themselves for the courses in consultation with the Course Coordinator. They should also go through the **Prospectus** regarding the rules governing their academic duties and performance.

6. HOSTEL ACCOMMODATION

All post-graduate students admitted on full-time basis can, subject to availability, avail of residential facilities in the hostels. Delhi based and sponsored students admitted to M.Tech./M.S.(R)/M.Des. programmes have a lower priority in hostel accommodation. The Institute has nine boys' hostels, two girls' hostels and a hostel for married students. For married students, only a limited accommodation is available. Each hostel, except Married Research Scholar accommodation, is self-contained with amenities such as a reading room, an indoor games room, a lounge and a dining hall with mess. Hostel rooms are adequately furnished. The hostel for married students has one/two-room suite(s) with an attached bath and a kitchen .

7. FEES AND PAYMENTS

(a) INSTITUTE DUES PAYABLE BY 2016 ENTRY PH.D./M.Tech/M.S.(R)/M.Des STUDENTS

Table 3: Schedule of fee applicable for different programmes in July 2016 admission.

Programme	M.Sc.	M.Tech./M.S.(R)/M.Des. (Institute/Project Assistantship or Teaching Position Holder)	M.Tech./M.S.(R)/M.Des. (Sponsored, Full Time, Part Time or Non Teaching Position Holder)	Ph.D. (Full Time/ Part Time)	MBA	
					Full Time	Part Time
Tuition Fee	2500	5000	25000	2500	100000	66667
Other Fee	15300	15300	15300	15300	15300	15300
Total	17800	20300	40300	17800	115300	81967

Note:

- Non-Hostlers/Part Time sponsored students need not to pay the Hostel Seat Rent of Rs. 5300/-
- **Part Time & sponsored students need not to pay Rs. 50 of Medical Fee & 500 towards T&P.**
- SC/ST students are given 100% exemption from payment of tuition fee.
- The exact amount of fees and mode of payment will be indicated in the offer of admission.

(b) MESS DUES PAYABLE BY 2016 ENTRY STUDENTS

Membership of associated mess is compulsory for those allotted Hostel accommodation. They will be required to pay Mess Dues at the time of joining as detailed in Table 4.

Table 4: Mess Dues applicable at the time of joining the Mess for July 2016 admissions.

Details	Boys	Girls
Mess Security Deposit (Refundable)	Rs. 10,000	Rs. 10,000
Mess Admission (one time payment Non -Refundable)	Rs. 3,500	Rs. 3,500
Mess Advance (one time payment adjustable against mess dues)	Rs. 16,500	Rs. 15,500
Total	Rs.30,000	Rs.29,000

8. FINANCIAL ASSISTANCE AND OTHER SUPPORT

I. Ph.D. Programme

A scheme for the award of Teaching/Research Assistantship for providing financial assistance to the students exists. In terms of this scheme, those non-sponsored students who are admitted on full-time basis are considered for the award of Teaching/Research Assistantship. These rates have been significantly enhanced by the MHRD recently and are as indicated below:

Table 5: Assistantship amounts for Full-time Institute Ph.D. students

Period of assistantship	Assistantship amount	Hours/week assistance to be provided
	With B.Tech/B.E./M.Sc. or equivalent qualifications	
First 2 years of registration (JRF)	Rs. 25,000/- p.m.	8
Next 3 years of registration (SRF)	Rs.28,000/- p.m.	8

Other conditions and benefits: In addition, the full-time students enjoy a number of benefits but are also required to satisfy academic performance requirements for continuation of assistantship from semester to semester.

- The maximum duration for which assistantship can be awarded to a Ph.D. student is 5 years.
- In the first instance, the assistantship is awarded for one semester. Continuation of the assistantship during the subsequent semesters is contingent upon satisfactory academic performance and satisfactory performance in the discharge of responsibilities assigned under the assistantship scheme.
- All fulltime students participating in a sponsored project/consultancy project (in addition to their assistantship work) can be paid an honorarium of upto Rs. 10,000/- p.m. by the PI/CI of the project. All such work can be undertaken only with the consent of their supervisor(s).

- The faculty of an Engineering/Science College sponsored by his/her institution for pursuing Ph.D. at IIT Delhi and meeting all the academic requirements of full-time Institute assistantship can be considered by the DRC/CRC/PEC for the award of Institute Assistantship. This assistantship would be over and above the emoluments he/she may be getting from his/her parent institution.
- Apart from Institute assistantship, IIT Delhi has a number of assistantships sponsored by national as well as international institutions and/or industries. All students including faculty of engineering/science colleges meeting the academic qualifications for admission as full-time students with Institute assistantship are also entitled to apply for these. For more information on the availability of such scholarships in your area, please contact your respective department/centre.
- In exceptional cases with the approval of the Chairman, Senate, Sponsored (Fulltime) candidates employed in CSIR/DRDO/PSUs may also be offered assistantship provided they have qualified either GATE or any other national level examination like CSIR/UGC NET/ICAR etc. and fulfill the requirement for award of assistantship and their employer has no objection to the same.
- Institute provides a seed money of Rs. 20,000/- once during the program as partial financial assistance for presenting papers abroad in good academic conferences
- Institute is in the process of formalizing a number of agreements with leading foreign institutions or agencies for supporting upto 6 months long research visits by Ph.D. students. This would enable interested students with the consent of their supervisor and DRC/CRC to undertake a research visit which would increase his/her exposure while adding value to his/her work.
- It is expected that all assistantship holders will have good general physique. He/She will have to produce on the date of Central Registration, a certificate to that effect in the prescribed format. A copy of the format would be given along with the admission offer letter. The admission is subject to his/her being found medically fit.

II . M.Tech./M.S. (R) / M.Des. STUDENTS

A scheme for the award of Teaching/Research Assistantship for providing financial assistance to the students exists. The present scheme is described below:

- Students admitted to M.Tech./ M.S. (Research) and M.Des. Programmes on full-time basis are considered for the award of Teaching Assistantship under which they will be paid Rs.12,400/- per month and would be required to provide assistance of 8 hours/week to the Department/Centre.
- The maximum duration for which Assistantship can be awarded to M.Tech./ M.S.(R) / M.Des. students is 4 semesters.
- Only full-time non-sponsored students who have qualified GATE/CEED are eligible for assistantship.
- In the first instance, the assistantship is awarded only for one semester. Thereafter continuation of the assistantship during each semester is contingent upon satisfactory academic performance and satisfactory performance in the discharge of responsibilities assigned under the assistantship scheme. For this purpose an SGPA of not less than 7.00 (6.75 in the case of SC/ST/PH) at the end of the semester is treated as satisfactory academic performance.
- All full-time M.Tech./M.S.(R)/M.Des. students participating in a sponsored project/ consultancy project (in addition to their assistantship work) can be paid an honorarium of upto Rs. 3,000/- p.m. by the PI/CI of the project. All such work can be undertaken only with the consent of their

supervisor(s).

- Candidates qualified for CSIR JRF will not be allowed to avail fellowship for doing M.Tech./M.S.(R) programmes. However, they can avail the CSIR fellowship for doing the Ph.D. programme.
- Apart from the above mentioned scheme for teaching/research assistantships, there are a number of fellowships/scholarships instituted by Industries/Individuals. (For more information on these scholarships/ assistantships/fellowships please contact the respective department).
- A number of DAAD scholarships under the Sandwich System may be available. Indian Students pursuing M.Tech./M.S. (R) at IIT Delhi are eligible for this scholarship for doing their thesis work for about 6 months at one of the nine German technical Universities
- Institute is pursuing a number of other collaborative agreements with leading research laboratories and universities to enable such research visits by post-graduate students
- It is expected that all assistantship holders will have good general physique. He/She will have to produce on the date of Central Registration, a certificate to that effect in the prescribed format. A copy of the format would be given along with the admission offer letter. The admission is subject to his/her being found medically fit.

9. GENERAL GUIDELINES

- (a) The minimum eligibility criteria indicated above for each programme is only an enabling clause. The Deptt./Centre/School may fix higher criteria at the time of short listing keeping in view the number of candidates, minimum background expected to cope with the programme etc.
- (b) The minimum prescribed 60% marks in aggregate (of all the years/semesters of the qualifying examination) is calculated by IIT Delhi as per example given below:

Years	1st Semester (%)		IInd Semester (%)	
Ist year	250/400	62.50	290/400	72.50
IInd Year	205/400	51.25	280/400	70.00
IIIrd Year	210/400	52.50	350/400	87.50
IVth Year	240/400	60.00	150/200	75.00
	Total	905/1600	1070/1400	

Aggregate (% age.) $1975/3000=65.83\%$ (of all the years/semesters)

- (c) Admission on part-time basis is further subject to the availability of seats for part-time and decision of the respective DRC/CRC/PEC.
- (d) Candidates who are in the final year of their qualifying examination can be considered for admission only if they complete the requirement of their final examination including Viva-Voce by 23 July, 2016. Candidates must inform P.G. Section, IIT Delhi in writing by 23 July, 2016, if the requirements of their qualifying degree including Viva-Voce, if any, are not met by 23 July, 2016. Failure to inform the P.G. Section about non-completion shall result in forfeiture of entire fees deposited by them in addition to cancellation of their admissions.
- (e) The applications will be scrutinized by the Department/Centre/School concerned. The Department/Centre/School will call an adequate number of eligible candidates for a written test/interview which may be held as per dates mentioned above. The exact date for the test/interview will be communicated by the Department/Centre/School. For any query regarding date of interview, selection result and operation of waiting list please contact the concerned Deptt./Centre/School at

the Telephone Nos. given on page 19 of this brochure.

- (f) Application incomplete, in any respect, is liable to be rejected.
- (g) The Ph. D. candidates called for appearing in test and/or interview will be paid to and from II Class Railway Fare by shortest route. However, this provision will not apply to the sponsored and part-time candidates.
- (h) No TA/DA will be paid to the candidates applying for M.Tech./M.S.(R)/M.Des. Programmes.
- (i) A provisional list of applicants selected for admission and of applicants selected for the award of Assistantship alongwith those placed on waiting will be displayed on the Department/Centre/School notice board within a day of the test/interview. The selected candidates would be required to pay the first installment of fees soon after the admission offer letter is issued to the candidates failing which seats will be offered to those on the waiting list.

10. APPLICATION PROCEDURE

Submission of Application is only through online procedure. Candidates are **NOT** required to send hard copy of the application form and bank challan. Online submission of application form may be made by accessing the Institute website <<http://www.iitd.ac.in>>. Candidates belonging to General/OBC category are required to pay for each application form a fee of Rs. 200/- and the candidates belonging to SC/ST/PH categories are required to pay Rs. 50/-. The bank charges will be borne by the candidate. For payment of application fee the candidate will use "State Bank Collect" utility of State Bank of India. (<https://www.onlinesbi.com/prelogin/institutiontypedisplay.htm>)

11. REFUND OF FEES

The whole amount of fees/other charges deposited by the students will be refundable after deduction of Rs.1,000/- if the candidates do not join the programme after paying the dues and leave the Institute by applying for refund on or before the date of registration. On resignation after registration only security deposit will be refunded.

For refund of fees and/or security deposit the student must apply on the prescribed form available from the P.G. Section, IIT Delhi or the Institute Website : [http:// www.iitd.ac.in](http://www.iitd.ac.in).

12. IMPORTANT INSTRUCTIONS FOR FILLING APPLICATION FORM

- (a) Separate application form should be filled for Ph.D. programme for each Department/Centre/School.
- (b) Separate application form should be filled for each M.S.(R) programme.
- (c) Separate application form should be filled for M.Des. programme.
- (d) Separate application form should be filled for each interdisciplinary M.Tech. programme.
- (e) The applicant seeking admission to M.Tech. programme of a particular department/centre/school should fill a separate application form. He/she may give upto **four choices** in order of preference for the M.Tech. Programmes available in that department. However, he/she will be considered only for two choices for which he/she is eligible in the order of preference given. In case a candidate is found to have filled more than one form of a particular department, his/her candidature will be cancelled.
- (f) GATE score cut off criteria used for short-listing candidates in different non-sponsored (full-time) M.Tech. programmes during the previous academic year is given in **Annexure IV**. This is only

for the candidate's reference and the criteria may even change substantially based on applications received for the current admissions i.e. academic year 2016-2017.

- (g) Part-time/Sponsored (full-time) candidates must submit NOC/Sponsorship Certificate from their employer at the time of interview.
- (h) Fill the programme code at the appropriate place in the Application Form. The Ph.D. programme codes are given in **Annexure-I** and M.Tech./M.S. (R)/M.Des. programme codes are given in **Annexure-II**.
- (i) Filling of false information will lead to rejection of application/cancellation of admission.

13. CONTACT TELEPHONE NOS.

1. For any query/clarification please contact **P.G. Section** at the following telephone Nos.:
Tel: 011-26591737 , 011-26591723
2. For query regarding date of interview, selection result and operation of waiting list please contact the concerned Deptt./Centre/School at the following Telephone Nos.

DEPARTMENTS	TELEPHONE
Applied Mechanics	26591201
Biochemical Engineering & Biotechnology	26591001
Chemical Engineering	26591021
Chemistry	26591501
Civil Engineering	26591241
Computer Science & Engineering	26591291
Electrical Engineering	26591071
Humanities & Social Sciences	26591371
Management Studies	26591171
Mathematics	26591471
Mechanical Engineering	26591051
Physics	26591331
Textile Technology	26591401
CENTRES	
Applied Research in Electronics	26591101
Atmospheric Sciences	26591301
Biomedical Engineering	26596132
Energy Studies	26591251
ITMMEC	26591281
Instrument Design Development	26591431
Polymer Science & Engineering	26591421
Rural Development & Technology	26591121
National Resource Centre for Value Education in Engineering	26596585
SCHOOLS	
Bharti School of Telecommunication Technology & Management	26596200
Amar Nath and Shashi Khosla School of Information Technology	26596056
School of Biological Sciences	26596104
INTERDISCIPLINARY R&D PROGRAMMES	
Opto-Electronics and Optical Communication	26591331
Transportation Research and Injury Prevention Programme	26591147
INTERDISCIPLINARY M.TECH. / M.DES. PROGRAMMES	
Industrial Tribology & Maintenance Engineering (ITMMEC)	26591280
Instrument Technology	26591437
Polymer Science & Technology	26561494
VLSI Design, Tools & Technology	26591085
Telecommunication Technology and Management	26596200
Opto-Electronics and Optical Communication	26591331
Energy Studies	26591251
Industrial Design (M.Des.)	26591431

RESEARCH PROGRAMMES : DOCTOR OF PHILOSOPHY (Ph.D.)

The Institute offers research programmes leading to the degree of Ph.D. in the following areas in the various Departments/Centres/Schools.

Department of Applied Mechanics [Code AMZ]

Large Deformations, Impact Mechanics, Elasticity, Piezothermoelasticity, Composite Materials and structures Plates and Shells, Non-linear Dynamics and Chaos, Railway Vehicle Dynamics, Off-Shore Structures, Smart Structures, Structural Stability, Snow Mechanics, Dynamic Plasticity, Nano Composites, Damage Mechanics, Experimental and Computational Methods in Solids and Fluids. Soft materials, structural Health Monitoring, Functionally Graded Structures, Active Vibration Control, Biomechanics/Cell Mechanics.

Internal and External Flows, Pipeline Engineering, Solid-Liquid Flows, Computational Fluid Dynamics, Hydrodynamic Stability; Turbulence, Aerodynamics; Turbulent Heat Transfer Compressible Flows, Fluid-structure Interaction

Computer Aided Design, Design Engg., Reliability Engineering, Availability and Maintainability Engg.; Engineering Alternatives.

Physical and Mechanical Metallurgy, Crystal, Plasticity, Phase Transformations, Fracture Mechanics, Fatigue, Environmental Cracking, Failure Analysis, Mechanical Properties of Solids, Functionally Graded Materials, Residual Life Estimation, Nano Materials, Amorphous Materials, Metal Foams, Severe Plastic Deformation, Electron Microscopy.

Department of Biochemical Engg. & Biotechnology [Code BEZ]

Microbial and Enzyme Engineering: Analysis and design of microbial and enzyme reactors for production of industrially important products such as biofuels, industrial enzymes, biopolymers, organic solvents, biofertilizers and biopesticides etc.; development of bio-sensors for detection of various analytes; application of artificial neural networks for control of bio processes.

Bioseparation and down stream processing: Membrane separation techniques, chromatographic separation techniques, water purification etc.

Animal and plant cell culture: Development of cell culture techniques for cultivation of plant and animal cells in specialized reactors for production of therapeutic compounds.

Environmental Biotechnology: The development of reactors and processes for stabilization of organic and industrial wastes.

Biochemistry and molecular biology: Industrial enzymes, development of recombinant clones for over-production of enzymes and metabolites; development of expression systems in bacteria and yeasts; bioenergetics and biological molecular machines; chaperone-mediated proteins folding of native and recombinant proteins; protein conformation study and structure-function relationship using biophysical methods; application of bio-informatic tools for development of bioprocesses.

Department of Chemical Engineering [Code CHZ]

Mixing, Distillation and other separation processes, Particle Technology, catalysis and Reactor Engineering, Petroleum Refining Engineering, Membrane Synthesis & Processes, Waste Management, Environmental Engineering, Biomass, Fluidization, Computer Aided Design, Modeling Simulation and Optimization, Interfacial Engineering, Polymers, Computational fluid dynamics, control of Reactors, fuel cells, multiphase flow & reactors, Bioseparations and Bioprocessing complex fluids, Polymer Rheology, Process operations Planning and scheduling, Biosimilars, Quality by design, Protein Characterization,

Colloid Science, Nano Technology, Biosensors, Renewable hydrogen and Fuel Cells.

Department of Chemistry [Code CYZ] :

Asymmetric synthesis & catalysis, Biochemistry (Enzyme technology, Microbial Biochemistry, Fermentation & Bio-remediation, Cloning & Proteomics), Bio-inorganic chemistry, Bio-organic chemistry, Bio-physical chemistry, Carbohydrate chemistry, Coordination chemistry, Fluorescence Spectroscopy (Ensemble & Single molecule), Nano-materials (Optical Properties & Photovoltaics), Nano-catalysis in ionic liquids, NMR spectroscopy, Organometallic chemistry, Peptide synthesis, Quantum & Classical computer simulation on chemical & biological systems, Solid state chemistry, Supramolecular chemistry (Molecular Organisation & Recognition), Synthetic & Mechanistic organic chemistry, Theoretical Chemistry.

Department of Civil Engineering [Code CEZ]

Environmental Engineering : Urban air quality management; indoor air pollution; water and waste water treatment; Emerging water contaminants (Nano particles, Antibiotics); urban water and waste water Management; Non-point source Pollution; Membrane Biological Treatment Process; Modeling, simulation and optimization of Environmental systems; Environmental Impact Assessment; Human Health Risk Assessment; solid waste management; incineration; circulating fluidized bed operations; Landfill Management; Carbon sequestration; sustainable development (Urban cities/growth centres); Environmental Risk Analysis, GIS and Remote Sensing Applications for Environmental Management. Aerosol characterization, local air quality, climate change and health impact.

Geotechnical Engineering : Soil mechanics; Rock mechanics; Rock engineering; Foundation engineering; slope stability and dams; ground improvement; Geosynthetics; reinforced soil; geoenvironmental engineering; Offshore geotechnology; Underground structures; constitutive modeling; ash ponds and ash utilization; landfills; expansive soils; Geophysical methods; Engineering geology; soil dynamics and earthquake geotechnics; Ground response, Site specific studies, Hazard analysis, Seismic microzonation; Geotechnology for tracks and pavements; computational methods. Risk and reliability in Geotechnical and Geoenvironmental Engineering; Blast and impact analysis; Energy geotechnology; Non-linear soil-pile interaction; pile dynamics, Dynamic behavior of tunnels and slopes, Landslides and man movement in static and dynamic conditions.

Structural Engineering : Analysis and design of structures; tall buildings; bridges; earthquake engineering; wind engineering; offshore structures; masonry, RCC and steel structures; construction Management; Construction Technology; concrete Technology; structural dynamics; structural control; constitutive modeling; computational methods; modeling of damage, plasticity and creep of concrete; durability of concrete; rebar corrosion; modeling of cements; supplementary cementitious materials; composites; high performance concrete; self compacting concrete; financial analysis; contract administration, quantitative methods in construction management; Infrastructure Project Management Risk and Financial Management; structural health monitoring; smart materials and structures; tensegrity structures; biomechanics; engineered bamboo structures; artificial intelligence; damage assessment and strengthening; microstructural modeling; mechanics of composite materials; non-destructive testing and evaluation using ultrasound; subsurface imaging using ultrasonic wave propagation; piezoelectric energy harvesting

Transportation Engineering : Transport planning; Transport policy; Transportation Safety; Construction work zone safety; Heterogeneous traffic flow modeling; Traffic safety and capacity of hill roads; Mass transportation planning; Fuzzy systems; Urban transport infrastructure planning and design; Expert systems in transportation engineering; Environmental impact assessment; Non-motorized transport planning; Modeling of pedestrian behavior; Geometric design of transportation infrastructure; Characterization of pavement materials; Pavement design (flexible and rigid); Damage modeling of bitumen and bituminous mixtures; Constitutive modeling of pavement materials; Recycling of civil infrastructure materials; Rheology of asphaltic materials; Condition assessment of highway infrastructure;

Pavement management systems; Highway engineering; Airport infrastructure.

Water Resources Engineering : Hydrology in natural and urban environment; Hydrological modeling and simulation; Stochastic processes; Data mining in hydrology; Flood forecasting and modeling; Snow dynamics; Hydroclimatology; Climate change effects in water resources; Watershed modeling; Large river basin modeling; water resources systems, planning and management; Water allocation; Water resources conflicts; Irrigation management; Flow through porous media; Groundwater modeling; Ground water contamination; Contaminant transport modeling; Leachate pollution; Bioremediation; River water quality modeling; Environmental impact assessment of water resources projects; Surface and subsurface drainage; Hydraulic structures; Sediment transport; Application of numerical methods, CAD, CFD, AEM, GIS, and Remote sensing in Water Resources Engineering.

Department of Computer Science & Engineering [Code CSZ]

Computer Architecture, VLSI Design Automation, Embedded Systems, Hardware-Software Co-design, System level Design and Design Space Exploration, ASIP Synthesis, Computer Vision, Computer Graphics, Virtual environments, Geometric modeling, Model representation, 3D Visualization and Animation, Image Processing, Artificial Intelligence, Natural Language Processing, Databases, Data Mining, Computer Networks, High-Speed Networks, Wireless and mesh networks, WiFi/WiMax, adhoc and Sensor networks, Delay Tolerant Networks and Opportunistic communication, Multimedia systems, Peer-to-peer networking, Network measurement and modeling, Social networking, Protocol validation and verification, Analysis of algorithms, Randomized and Approximation algorithms, Graph algorithms, Computational Geometry, Combinatorial Optimization, Web-related computation, Parallel and Distributed Computing, Programming Language Semantics and Design, Semantics of Concurrency and Distributed Computation, Formal Methods and Verification, Compilers, Software Engineering, Service-oriented computing, Foundations and Models of Computing, Computational and Systems Biology, Cryptography, Operating System, Location based services, Security, Neuroimaging, HPC, Theoretical Computer Science, Software Systems, Data Analytics, ICD for Development

Department of Electrical Engineering [Code EEZ]

Electronic Engineering: Electronic Circuits, Microprocessor, Instrumentation, Microelectronics, VLSI, Digital Signal Processing, Computer Aided Circuit Design, Graph Theory, Biological and artificial, Neural Networks, Testing and Fault Diagnosis, Faulttolerant Design, Mixed-signal design.

Power Engineering : Electrical Machines, Energy Conversion, Power Electronics, Power Quality, Drives, Powers System, Protection, Stability, Optimisation, Energy Conservation, HVDC & FACTS, Computer Applications in Power (computational intelligence, microcomputer/DSP control, CAD software & application) Renewable Energy Systems (Small Hydro, PV, Wind), Energy Audit & Efficiency.

Communication Engineering : Signal Processing, Speech and Image Processing, Coding & Information Theory, Communication Systems, Optoelectronics, Optical Communications, Communication Networks, Wireless and Mobile Communications, Microwaves, Antennas.

Computer Engineering : Computer Vision, Multimedia Systems, Image Processing, Computer Networks, Computer Architecture, Embedded Systems, Mobile computing, soft computing, Pattern Recognition, Artificial Intelligence, Information Technology, Music information retrieval, Bioinformatics.

Control Engineering : Robust Control, Intelligent Control, Robotics, Optimal Control, System Identification, Neuro-Fuzzy Control, Reinforcement Learning Control, Nonlinear Systems and Control, Dynamical Systems, Applications to Biomolecular Circuits, Flight Control and Navigation, Adaptive Control, Cooperative Control and Path Planning, Sensor Fusion, Guidance, Sliding Mode Control, Interval Analysis in Control Design, Computational Methods for Simulation and Control, Modeling and Model Order Reduction, Attitude Control and Structural Control, Numerical Modeling and Simulation Embedded

Control System.

Department of Humanities & Social Sciences [Code HUZ]

Development Economics, Macroeconomics, Microeconomics, Endogenous growth, Labour economics, Trade Policy, Discrimination, Health and Nutrition, Empirical Economics, Health Economics, Economics of Education, Demography & Population Economics, Issues of Labour, Industrial Development, Regional Development, Indian Economics Macro and International Development, Sociology of Culture and Knowledge, Sociology of Development, Environmental Sociology, Sociology of Social Movements, Sociol Anthropology of Medicine, Globalization and Transnationalism, Civil Society and Democratizations Sociology of Religion and Violence, Sociology of Agriculture Technology and Rural Development Policy, Sociology of Information and Communication Technologies (ICTs) for Development, Visual Anthropology/Sociology, Economic Sociology, Technology, Work and Society, Gender Studies, Cultural Studies, Performance Studies, New Media Studies, Science and Technology Policy, Energy and Environmental Policy, Law, Technology, Society, Socio-Legal Studies, Regulation of Technology, Environmental Law + Policy, Climate Policy, Disaster Management and Risk Reduction, Modernist and Postmodernist Literature, Indian English Theatre, Indian Writing in English, Contemporary Fiction, Postcolonial Literature, Philosophy of Literature, Phonology, Language Education, Language Variation, Linguistics (Formal Syntax and Semantics, Language Acquisition), Cognitive Studies, Philosophy of Language, Epistemology, Metaphysics, Ethics, Aesthetics, Continental philosophy, Phenomenology, Hermeneutics, Philosophy of Science, Philosophy and Film, Philosophy of Mind and Cognition, Wittgenstein, Metaphysics of the Self, Religion and Development, Buddhism (including Buddhism in the Himalayas and Political Buddhism), Philosophy of Culture and History, Social and Political Philosophy. Tibet and Peace Studies, Positive Psychology, Social Psychology.

Note: (Shortlisted students will be required to submit a two pages research proposal).

Department of Management Studies [Code SMZ]

Production Management and Operations research, Enterprise Resources Planning, Project Management, System Analysis, Management of Information Technology, Network Security Management, Management Information System & Decision Support System, Electronic Commerce; Human Resource Management, Organization Management / Behaviour / Development, Business Ethics, Leadership, Financial analysis, Financial Management, International Financial Management, Capital Markets, Derivative Securities, Portfolio Management, Mutual Funds, Behavioural Finance, Managerial Economics, International Economics, Productivity and Efficiency Analysis, Business Forecasting, Economic Feasibility & Technoeconomic Analysis, Marketing Management, Industrial and Hi-Tech Marketing: Public Sector Management, Entrepreneurial Management, Management of Technology, Corporate Strategy, Global Competitiveness, Strategic Innovation, Entrepreneurship, Total Quality Management, Flexible Systems Management, Business Process Re- engineering, Strategic Business Management, Knowledge Management. International Business, Intellectual Property Rights.

Department of Mathematics [Code MAZ]

Pure Mathematics, Applied Mathematics, OR & Statistics and Theoretical Computer Science.

Department of Mechanical Engineering [Code MEZ]

Design Engineering: Mechanical Vibrations, Rotor Dynamics, Damped Structures, Composite Structures, Smart structures, Active Vibration Control, Experimental Modal Analysis & Identification, Structural Dynamic Modification, Finite Element Model Updating, Dynamic Design, Noise Engineering, Condition Monitoring, Bearing Dynamics, Lubrication, Mechanical System Design, Precision Machine Design, Computer Aided Mechanical Design, Computer Controlled Mechanisms, Vehicle Dynamics, Modelling the Impact of Vehicles, Impact Biomechanics, Concurrent Engineering Design,

Mechanisms, Robotics (including Medical Robotics) ,Medical Devices/instruments, Multibody Dynamics, Application of Multibody Dynamics in Design and analysis of Rural Engineering Systems, Computational Mechanics ,Fracture Mechanics, Fatigue & Failure analysis ,Experimental solid Mechanics, Mechatronics, Sensors and Actuator Design, MEMS, Design of Microsystems, Nanomechanics, Artificial Intelligence Applications in Mechanical Engineering & Expert Systems for Design & manufacturing and Mechanical Engineering Applications to Medical Science. Public policy and governance ,Transportation (Railways , Freight).

Thermal Engineering: Internal Combustions Engines, Phenomenological and Multi-dimensional modeling of engines, Combustion, Radiation from flames, Engine Simulation, Turbo charging, Combustion Generated Pollution, Alternate Fuels, Utilization of biogas, Biomass gasification, Energy efficient kilns, Energy flow through radial rectilinear cascades, Centrifugal and axial compressors Internal flow and Laser anemometry, Optimization of power plants, Sustainable Energy Systems, Computer Simulation and Design of Thermal Systems, Refrigeration & Air Conditioning Systems, Thermal Comfort, Fire Research, Air Water Spray Injection, Waste Heat Utilization, Energy Conservation, Renewable Energy Sources, Heat Transfer, High temperature natural convection Microchannel Heat Exchangers, Particle-laden Flow, Fluid Mechanics & Machines, Turbulence, Computational Fluid Dynamics (CFD), Turbo machines, Numerical modeling of radiation heat transfer in participating media; Heat and mass transfer in porous Media; Solar cooling; Micro/ nano scale heat transfer; Theoretical/computational modeling of mass transfer, Charge transfer; fluid flow in microfluidic/nanofluidic devices.

Production Engineering: Metal Cutting, Metal Forming, Welding, Metal Casting, Material Characterization, Nontraditional Manufacturing Processes, Measurements & Metrology, Grinding of Ceramics and Metal Matrix Composites, Processing of Polymers & Composites, Injection Molding, Microcellular Injection Molding, Finite Element Applications in Manufacturing, CAD/CAM, Rapid Prototyping, Intelligent Manufacturing, Micro & Nano-Manufacturing, Biomaterials and Medical Implants, Nanocomposites, Modeling of Material Behavior, Lean concepts in Machine Tool Design. Manufacturing Automation ,Magnetorheological Finishing .

Industrial Engineering: Quality, Reliability and Maintenance, Lean Manufacturing, Agile Manufacturing Productivity Management, Operations Research, Operations Management, Project Management, Supply Chain Management, Applied Probability Models, Decision Support Systems, Value Engineering, Flexible Systems, Healthcare Systems, Intelligent Manufacturing Systems, e-Business, Reverse Logistics, Financial Engineering, Wireless Systems.

Department of Physics [Code PHZ]

Materials and Condensed Matter Physics: Thin Films, Materials and Devices, Novel Functional Materials, Nanomaterials; Carbon nanotubes, Field emission, Nanocomposites; Lattice Dynamics, Semiconductors and Amorphous Materials, Electronic Ceramics, Microwave Materials, Microwave Processing, Quantum Functional Materials, Nanomagnetism and Spintronics, Superconductivity, 2D Materials ; Graphene, Topological Insulators, Material for next generation photovoltaic devices .

Optics and Photonics: Holography, High density Data storage, Liquid Crystals, Nonlinear Phase Conjugation, Optical Information Processing, Optical Data Security, Nonlinear Optics, Nonlinear guided Wave Optics, Singular optics , Solitons, Quantum Optics, Quantum photonics, Fiber Optics, Integrated Optics, Fiber Optic Sensors and Biosensors, Fibre Optic Components, and devices mid - IR, Terahertz (TH_z) in guided wave optics, Nanophotonics, Laser Spectroscopy and Applications, Terahertz Spectroscopy and Applications, Ultrafast Dynamics, Laser Processing and Fabrication, Green and

Biophotonics, Photonic Metamaterials, Bio-Medical Imaging, Inverse Problems in Imaging, Optoelectronics

Plasma Physics: Particle acceleration, Nonlinear Waves and Instabilities in Plasmas, Thermonuclear Fusion, Microwaves and Plasma Interaction, Solitons in Plasma, Space Plasmas, Terahertz (THz) Radiation Generation, Hall Thrusters, Interaction of Plasmas with Materials

Theoretical Physics: Mathematical Physics, Statistical Mechanics and Computational Physics, Theoretical studies in ultra-cold atoms, Nuclear and Particle Physics, Ultrafast Optics, Theoretical condensed matter , Quantum computation & information processing , Theoretical methods for Biological system.

Interdisciplinary: Optical Spectroscopy under extreme conditions, High Pressure-High Temperature Physics, Energy Storage and alternative Energy Materials, CO₂ sequestration, Mineral Physics

Department of Textile Technology [Code TTZ]

Textile Engineering: Design and analysis of yarn and fabric formation systems: rotor spinning, ring spinning, air jet spinning, friction spinning, weaving knitting, nonwovens, braiding etc.; structural mechanics of textiles; high stress elastic materials; apparels and garments; comfort, handle and other functional aspects of fibrous assemblies; design and development of technical textiles: geo-textile, filter fabrics, medical textiles, protective textiles, textile composites etc; systems analysis; textile production and marketing: operation management and supply chain managements; textile instrumentation and machine development; modeling and simulation of textile processes and products; quality management.

Textile Chemical Technology: Textile chemical processing: preparatory processes, dyeing, printing and finishing, surface functionalization by plasma and UV excimer lamp; micro and nano encapsulation; conducting textiles; natural dyes; bio active textiles; textile ecology and environment.

Fibre Science & Technology: Synthesis and characterization of advanced polymeric materials; fibre formation processes; Modelling and simulation; Structure-property correlation; Functional and responsive polymers, smart & intelligent textiles; modification of natural and synthetic fibres: Nanotechnology in Textiles: nanofibers by electrostatic spinning, nanomaterials; synthesis and application in textiles; coated textiles: polymer nanocomposites green composites; medical textiles, tissue engineering; sustainability and polymer recycling.

Centre for Applied Research in Electronics [Code CRZ]

Signal Processing; Underwater Acoustics, Speech and Audio, General Acoustics, Acoustic Imaging, Multi Sensor Data Fusion, Digital Communications, DSP Algorithms; Microwaves and RF: Active and Reconfigurable Circuits and Antennas, Millimeter Wave circuits and sub-systems, RF MEMS, Wideband Microwave Circuits, Modeling of Active Devices; Microelectronics: Micro-Electro-Mechanical Systems (MEMS) Technology, Nanoelectronic & Optoelectronic Devices, Thermal, Acoustic and Optical Non-Destructive Characterization.

Centre for Atmospheric Sciences [Code ASZ]

Meteorology, Oceanography, Air Pollution and Climate change.

Centre for Biomedical Engineering [Code BMZ]

Biotechnology, Instrumentation, Electronics and Electrical Engineering, Mechanical Engineering.

Electrical Engineering: Instrumentation: Biomedical Engineering: Physics: Mechanical Engineering/ Manufacturing/ Production Engineering: Bio-chemistry:: Chemistry, Polymer Chemistry: Pharmaceutical Sciences: Applied Mathematics.

Centre for Energy Studies [Code ESZ]

Energy Efficiency, Fuel Technology, IC Engines and Biofuels, Electrical Energy Systems, Heat & Mass Transfer, Renewable Energy Systems, Environmental Pollution and Control, Energy Economics & Planning, Plasma Science & Technology, Industrial Application of Plasmas, Energy Conservation and management.

Centre for Polymer Science & Engineering [Code PTZ]

Synthesis of speciality polymers; Structure-property correlation in polymeric materials; Rheology and processing polymers, polymer blend and alloys; Fibre/particulate filled thermoplastic/thermoset composites: Degradation and stabilization of polymers; Mechanical and thermal properties of polymeric systems, crystallization of polymers in blends/composites, Reactive Processing; Modification of polymers, photodegradable polymers. Morphological Studies of polymers; polymer nanocomposites. Smart polymers, Micro and nano hydrogels; high performance polymeric materials for fuel cells; Modelling and simulation in polymers processing; Computer analysis of mould filling; Design and stress analysis of engineering component form polymeric materials. Polymer electronics, Synthesis of conjugated organic materials, Olefin polymerization catalysts.

Centre for Rural Development and Technology [Code RDZ]

Artisanal technologies and rural industries; Bamboo technologies; Biogas production and enrichment, animal energy; Dairy and Food Processing; Biofuels, Biofertilizers and Biopesticides; Biomass production, conversion and utilization systems; Environmental microbiology and bioremediation; Natural products including aromatics, medicinal plants, nutraceuticals; Pesticide residue and food safety; Eco-friendly Grain Storage System; Renewable energy technologies; Rural energy systems; Biomass Combustion, Clean Cookstoves; Solid Waste Management, Treatment of Industrial/domestic waste; Wasteland reclamation; Tissue Culture; Mushroom Technology; Ethnoveterinary Medicine; Ecological Sanitation.

Industrial Tribology, Machine Dynamics & Maintenance Engineering Centre [Code ITZ]

Tribology: Tribology of Polymers & composites, nano-composites, ceramics and metals. Wear Mechanisms and modeling of metallic and non-metallic materials and surface engineering. Boundary and Hydrodynamic lubrication, E-HD lubrication, lubricant characterization and analysis, tribology of bearings and other machine elements. Pneumatic, conveying of bulk solids, operational problems like erosion and degradation.

Maintenance Engineering and Machine Dynamics: Condition based maintenance, signature analysis, vibration, acoustic emission, temperature and wear debris monitoring techniques, maintenance planning and control, computer aided maintenance audit, reliability, availability and maintainability (RAM) engineering, vibration & noise analysis and control, risk analysis and safety, non-destructive testing, residual life estimation, failure analysis, performance and dynamic study of machine elements and equipment like pumps, compressors, turbines, design for maintenance, etc.

Instrument Design & Development Centre [Code IDZ] Optical Metrology, Micro optics , Aspheric and freeform optics ,Human computer Interaction .

Amar Nath and Shashi Khosla School of Information Technology [Code ANZ]

Scalable & Dependable Computing, Information Security, Information Storage and Retrieval, High

Speed Networks, Internet of Things, Multimedia Systems, Embedded Systems and Sensor Networks, HCI (Human Computer Interfaces), Image Processing, Biometrics, Computer Vision, Robotics and Intelligent Systems, Medical Applications of IT, Assistive Technologies, Computational & System Biology, Computational Neuroscience, ICT for Development, Geographical Information Systems, Mobile and Web Based Computing.

Bharti School of Telecommunication Technology and Management [Code BSZ]

Telecom Networks, Telecom Software, Wireless Technologies, Optical Networks, Signal Processing, Telecom Systems Design, Planning and Management, Regulatory and Policy Aspects of Telecom Services and Systems, Embedded Telecom Systems, Telecom Network Management, Performance Analysis of Communication System and Resource Management.

School of Biological Sciences [Code BLZ]

Computational Biology, Systems Biology, Chemical Biology, Cellular Biophysics, protein folding & misfolding with focus on infectious diseases and non-communicable disorders, Chaperone assisted protein folding, Molecular biophysics of protein folding, unfolding and conformational properties, Cognitive and computational neuroscience, Viral diseases, Nanoparticle-based targeting, Structural Biology, Diagnostic Virology, Cancer Biology, Plant-based therapeutics, Marine Bioprospecting, insulin signaling and insulin resistant diabetes, Leishmaniasis

Transportation Research & Injury Prevention Programme [Code TRZ]

Transportation Planning; Traffic Flow Modelling and Optimization; Public Transport Systems; Sustainable Urban Transport; Highway Safety; Vehicle Crash Modeling; Road Traffic Injury Prevention. Pedestrian and Non-Motorised Vehicle Safety, Urban Freight.

National Resource Centre for Value Education in Engineering [NRZ]

Philosophy of Values; Professional Ethics; Interaction of Science, Technology and Human Values.

ANNEXURE -II

M.Tech./M.S.(Research) and M.Des. Programmes offered

Department/Centre/ Interdisciplinary Programme	Programme	Programme Code	
A. M.Tech. Programmes of Deptts./Centre			
Applied Mechanics	Engineering Mechanics	AME	
	Design Engineering	AMD	
Applied Research in Electronics	Radio Frequency Design and Technology	CRF	
Atmospheric Science	Atmospheric-Oceanic Science & Technology	AST	
Chemistry	Molecular Engineering; Chemical Synthesis and Analysis	CYM	
Chemical Engineering	Chemical Engineering	CHE	
Civil Engineering	Construction Engg. & Management	CET	
	Environmental Engineering and Management	CEV	
	Geotechnical and Geoenvironmental Engg	CEG	
	Rock Engineering and Underground Structures	CEU	
	Structural Engineering	CES	
	Transportation Engineering	CEP	
	Water Resources Engineering	CEW	
	Computer Science & Engineering	Computer Science & Engineering	MCS
	Electrical Engineering	Communications Engineering	EEE
		Computer Technology	EET
Control & Automation		EEA	
Integrated Electronics & Circuits		EEN	
Power Electronics, Electrical Machines & Drives		EEP	
Power Systems		EES	
Mechanical Engineering		Mechanical Design	MEM
	Industrial Engineering	MEE	
	Production Engineering	MEP	
	Thermal Engineering	MET	
Physics	Applied Optics	PHA	
	Solid State Materials	PHM	
Textile Technology	Fibre Science & Technology	TTF	
	Textile Engineering	TTE	
B. Interdisciplinary M.Tech. Programmes			
M.Tech. Programmes	Energy Studies	JES	
	Instrument Technology	JID	
	Industrial Tribology & Maintenance Engineering	JIT	
	Opto-Electronics & Optical Communication	JOP	
	Polymer Science & Technology	JPT	
	Telecom Technology & Management	JTM	
	VLSI Design Tools & Technology	JVL**	

Department/Centre/ Interdisciplinary Programme	Programme	Programme Code
C. M.S. (Research)	Applied Mechanics	AMY
	Amar Nath and Shashi Khosla School of Information Technology	SIY
	Bharti School of Telecommunication Technology and Management	BSY
	Biochemical Engg. & Biotechnology	BEY
	Chemical Engineering	CHY
	Civil Engineering	CEY
	Computer Science & Engineering	CSY*
	Electrical Engineering	EEY
	Mechanical Engineering	MEY
	School of Biological Sciences	BLY
	D. M.Des. Programme	Industrial Design

* Admission to M.Tech. programme in Computer Science & Engineering (MCS) is limited to candidates who have a Qualifying degree in Computer Science, Electrical Engineering, Information Technology, Electronics and Communication, M.Sc. Mathematics (with exposure to appropriate level course in Computer Technology) and MCA (with Math and Science at B.Sc. level).

* Admission to M.S. (Research) Programme in Computer Science & Engineering Department (CSY) is limited to candidates who have a Qualifying degree in Computer Science & Engineering, Electrical Engineering, Information Technology, M.Sc. Operations Research, Electronics and Communication, M.Sc. Statistics, M.A./M.Sc. Math, M.Sc. Math (with exposure to appropriate level course in Computer Technology) and MCA (with Math and Science at B.Sc. level).

In addition to the above, both the programmes (MCS and CSY) are limited to candidates who have appeared in GATE with Computer Science and Engineering or Information Technology.

** M.Tech. Programme in VLSI Design Tools and Technology is an interdisciplinary programme jointly offered by Electrical Engg. Deptt., Computer Science and Engineering Department & Centre for Applied Research in Electronics. The M.Tech. programme is wholly sponsored by industries such as Philips Semiconductors, Analog Devices, Temic Usha Ltd. Texas Instruments, SGS Thomson. The Students will get a monthly fellowship as per rules. Candidate applying for admission to this programme should have basic degree in Computer Science (B.Tech. or equivalent) or Electrical Engineering (B.Tech. or equivalent) or Physics with electronics specialization (M.Sc. or equivalent) plus GATE.

ANNEXURE-III

OPTIONS FOR M.TECH., M.S.(RESEARCH) & M.DES. PROGRAMMES ACCORDING TO THE DISCIPLINE IN WHICH THE CANDIDATE HOLDS THE QUALIFYING DEGREE

Programme Code (As defined in Annexure-II)	Disciplines of Qualifying Degree
AMD	Aeronautical Engineering, Automobile Engineering, Chemical Engineering, Civil Engineering, Industrial Engineering, Mechanical Engineering, Metallurgy, Manufacturing Science & Engg., Marine Engineering, Naval Architecture, Production Engineering,
AME	Aeronautical Engineering, Automobile Engineering, Chemical Engineering, Civil Engineering, Mechanical Engineering, Metallurgy, Manufacturing Science & Engg., Marine Engineering, Naval Architecture, Production Engineering,
AMY	Aeronautical Engineering, Chemical Engineering, Civil Engineering, Mechanical Engineering, Metallurgy, Manufacturing Science & Engg., Marine Engineering, Naval Architecture, Production Engineering,
AST	B.E./B.Tech. Agricultural Engineering, Chemical Engineering, Civil Engineering, Environmental Engineering, Mechanical Engineering ; M.Sc. Meteorology/ Atmospheric Sciences/ Oceanography, M.Sc. Physics/ Geo-Physics/ Marine Engineering/ Statistics/ Chemistry; M.A./ M.Sc. Maths (with physics at undergraduate level), MCA (with maths and physics at B.Sc. level), M.Sc. Environmental/Agricultural Sciences (with maths and physics at B.Sc. level), M.Sc. Geo-Information/Remote sensing (with maths and physics at B.Sc. level). Candidates having B.Tech./B.E. in other branches of engineering will be considered only if they have appropriate experience in related areas of atmospheric and oceanic sciences, meteorology, remote sensing, etc.
BEY	Biochemical Engineering/ Biotechnology, Chemical Engineering, Food Engineering Technology, Industrial Biotechnology
BSY	Computer Science/Computer Science & Engineering, Electronics & Communication, Information Technology, Instrumentation Engineering, M.Sc. Physics with specialization in Electronics, Electrical Engineering
CEC	Selection only jointly with L&T: Civil, Electrical, Mechanical
CEG	Civil Engineering,
CEP	Architecture, Civil Engineering, Mechanical Engineering,
CES	Civil Engineering,
CET	Architecture, Civil Engineering,
CEU	Civil Engineering, Mining Engineering,
CEV	Biochemical Engineering/ Biotechnology, Chemical Engineering, Civil Engineering, Environmental Engineering,

CEW	Agricultural Engineering, Civil Engineering,
CEY	Civil Engineering,
CHE	Chemical Engineering, Petrochemical Engg., Chemical Technology
CHY	Chemical Engineering, Petrochemical Engg., Chemical Technology
CRF	Electrical Engineering, Electronics & Communication, Engineering Physics,
CSY	Computer Science/Computer Science & Engineering, Electrical Engineering, Electronics & Communication, Information & Technology, M.Sc. Statistics, M.A./M.Sc. Maths, M.Sc. Mathematics/with an exposure to appropriate level course-in Computer Technology,
EEA	Aeronautical Engineering, Automobile Engineering, Biochemical Engineering/ Biotechnology, Chemical Engineering, Computer Science/Computer Science & Engineering, Electrical Engineering, Energy Engineering, Electronics & Communication, Instrumentation Engineering, Mechanical Engineering,
EEE	Computer Science/Computer Science & Engineering, Electrical Engineering, Energy Engineering, Electronics & Communication, M.Sc. Physics,
EET	Computer Science/Computer Science & Engineering, Electrical Engineering, Electronics & Communication, Information Technology, Instrumentation Engineering, M.Sc. Mathematics/with an exposure to appropriate level course-in Computer Technology, M.Sc. Physics with specialization in Electronics,
EEN	Computer Science / Computer Science & Engineering, Electrical Engineering, Energy Engineering, Electronics & Communication, Instrumentation Engineering, Informational Technology, Engineering Physics, M.Sc. Physics, M.Sc. Physics with specialization in Electronics
EET	Electrical Engineering, Electrical & Electronics Engineering, Electronics & Communication,
EES	Electrical & Electronics Engineering, Electrical Engineering, Energy Engineering,
EEY	Computer Science/Computer Science & Engineering, Electrical Engineering, Engineering Physics, Informational Technology, Instrumentation Engineering, M.Sc. Physics with specialization in Electronics, Electronics & Communication,
JDS	Architecture, Aeronautical Engineering, Agricultural Engineering, Chemical Engineering, Automobile Engineering, Biochemical Engineering/ Biotechnology, Civil Engineering, Computer Science/Computer Science & Engineering, Electrical Engineering, Food Engineering Technology, Industrial Engineering, Instrumentation Engineering, Mechanical Engineering, Metallurgy, Manufacturing Science & Engg., Naval Architecture, Textile Engg./Technology,
JES	B.Tech/B.Engg. in Biochemical Engineering and Biotechnology, Chemical Engineering, Electrical Engineering, Electrical and

	Electronics Engineering, Environmental Engineering, Engineering Physics, Energy Engineering, Mechanical Engineering, M.Sc. in Chemistry, Physics and Electronics
JID	Electrical Engineering, Engineering Physics, Instrumentation Engineering, Mechanical Engineering, M.Sc. Physics
JIT	Aeronautical Engineering, Automobile Engineering, Industrial Engineering, Mechanical Engineering, Mining Engineering, Manufacturing Science & Engg., Marine Engineering, Production Engineering,
JOP	Computer Science/Computer Science & Engineering, Electrical Engineering, Electronics & Communication, Engineering Physics, M.Sc. Physics with specialization in Electronics, M.Sc. Physics
JPT	Chemical Engineering, Engineering Physics, Industrial Engineering, Mechanical Engineering, M.Sc. Physics, Manufacturing Science & Engg., M.Sc. Chemistry, Polymer and Rubber Technology, Textile Chemistry, Fibre Science and Technology, Textile Technology, Nanoscience and Nanotechnology, Petroleum Engineering, M.Sc. Polymer Science, M.Sc. Material Science and Engineering, M.Sc. Material Science
JTM	Computer Science/Computer Science & Engineering, Electronics & Communication, Instrumentation Engineering, M.Sc. Physics with specialization in Electronics, Electrical Engg.
JVL	Computer Science/Computer Science & Engineering, Electrical Engineering, Engineering Physics, Informational Technology, Instrumentation Engineering, M.Sc. Physics, M.Sc. Physics with specialization in Electronics,
MCS	Computer Science/Computer Science & Engineering, Electrical Engineering, Electronics & Communication Engineering, Information Technology, M.Sc. Statistics, M.A./M.Sc. Maths, M.Sc. Mathematics/with an exposure to appropriate level course-in Computer Technology
MEM	Aeronautical Engineering, Agricultural Engineering, Automobile Engineering, Instrumentation Engineering, Mechanical Engineering, Metallurgy, Mining Engineering, Marine Engineering, Naval Architecture, Production Engineering, Textile Engg./Technology,
MEE	Aeronautical Engineering, Agricultural Engineering, Automobile Engineering, Biochemical Engineering/ Biotechnology, Chemical Engineering, Civil Engineering, Computer Science/Computer Science & Engineering, Electrical Engineering, Food Engineering Technology, Industrial Engineering, Informational Technology, Instrumentation Engineering, Mechanical Engineering, Metallurgy, Mining Engineering, M.Sc. Operations Research, Manufacturing Science & Engg., M.Sc. Statistics, M.A./M.Sc. Maths, M.Sc. Mathematics/with an exposure to appropriate level course-in Computer Technology, MCA (With Maths and Science at B.Sc. level), Production Engineering, Textile Engg./Technology, Electronics & Communication

MET	Architecture, Aeronautical Engineering, Automobile Engineering, Chemical Engineering, Environmental Engineering, Food Engineering Technology, Mechanical Engineering, Metallurgy, Marine Engineering, Production Engineering,
MEP	Aeronautical Engineering, Agricultural Engineering, Automobile Engineering, Industrial Engineering, Mechanical Engineering, Metallurgy, Manufacturing Science & Engg., Polymer and Rubber Technology, Production Engineering, Textile Engg./Technology, B.Tech in Tool Design
MEY	Industrial Engineering, Mechanical Engineering, Manufacturing Science & Engg., Production Engineering,
PHA	Electrical Engineering, Electronics & Communication, Engineering Physics, M.Sc. Physics, M.Sc. Physics with specialization in Electronics,
PHM	Electrical Engineering, Electronics & Communication, Engineering Physics, M.Sc. Physics, M.Sc. Physics with specialization in Electronics,
SIY	Civil Engineering, Computer Science/Computer Science & Engineering, Electrical Engineering, Electronics & Communication, Engineering Physics, Energy Engineering /Energy system / Associated Disciplines, Industrial Design, Industrial Engineering, Informational Technology, Instrumentation Engineering, Mechanical Engineering, M.Sc. Operations Research, Manufacturing Science & Engg., M.Sc. Statistics, M.A./M.Sc. Maths, MCA (With Maths and Science at B.Sc. level), M.Sc. Physics with specialization in Electronics, Production Engineering,
TTE	Electrical Engineering, Mechanical Engineering, Manufacturing Science & Engg., Production Engineering, Textile Engg./Technology, Apparel Tech.
TTF	Biochemical Engineering/ Biotechnology, Chemical Engineering, Engineering Physics, M.Sc. Physics, M.Sc. Chemistry, Polymer and Rubber Technology, Textile Chemistry, Textile Engg./Technology, Material Science.

Annexure-IV

**GATE Sore cut off for admission to non-sponsored full-time
M.Tech. Programmes in Academic Year 2015-2016**

(This is only for reference as the cut off this year may change substantially)

S.NO.	M.Tech. Programme	Code	GATE Paper/ B.Tech. Discipline	GEN	OBC	SC	ST	PH
1.	Engineering Mechanics	AME		650	630	425	425	425
2.	Design Engineering	AMD		650	630	425	425	425
3.	Radio Frequency Design & Technology	CRF		723	650	478	455	478
4.	Atmospheric-Oceanic Science Technology	AST		350	350	250	250	250
5.	Molecular Engg; Chemical Synthesis and Analysis	CYM	CY	330	300	200	200	200
6.	Chemical Engineering	CHE	Direct Admission	650	615	525	525	440
			Interview Shortlisting	530	480	375	375	300
7.	Construction Engg. & Mgmt.	CET	CE	770	740	620	525	252
			AR	850	650	581	346	200
8.	Environmental Engg. & Mgmt.	CEV	CE/EN	716	650	580	580	300
			BT	550	500	400	400	300
			CH	550	500	400	400	300
9.	Rock Engg. & Underground Structure	CEU	CE	630	590	475	400	300
			MN	700	600	400	360	300
10.	Geotechnical and Geoenvironmental Engg.	CEG	CE	750	650	550	500	400
11.	Structural Engineering	CES	CE	800	781	613	530	329
12.	Water Resources Engg.	CEW	CE	650	650	475	450	400
			AG	650	650	475	450	400
13.	Transportation Engg.	CEP	CE	725	700	600	550	400
			AR	700	700	530	500	300
			ME	725	700	530	500	300
14.	Computer Sc. & Engg.	MCS	Direct Admission	900	900	900	900	900

			Interview Shortlisting	790	720		550		550		550
15.	Communications Engg.	EEE	EE/EC/IN	860	810		630		520		500
16.	Computer Technology	EET	IT/CS/EC/Other	735	690		555		530		415
17.	Control & Automation	EEA		810	760		590		500		450
18.	Integrated Electronics & Circuits	EEN		910	855		650		550		500
19.	Power Electronics, Electrical Machines & Drives	EEP	EE	790	760		600		500		540
			Others	850	850		800		800		800
20.	Power Systems	EES	EE	770	720		580		500		500
			Others	900	900		850		850		850
21.	Mechanical Design	MEM	ME	830	800		650		550		550
22.	Industrial Engineering	MEE	ME	800	775		600		525		525
23.	Production Engineering	MEP	ME	800	775		600		525		525
24.	Thermal Engineering	MET	ME	830	800		650		550		550
25.	Applied Optics	PHA	PH	400	360		260		260		260
			EE/EC	750	675		500		500		500
26.	Solid State Materials	PHM	PH	400	360		260		260		260
			EE/EC	750	675		500		500		500
27.	Textile Engineering	TTE	BE/B.Tech.	400	360		266		266		266
			M.Sc.	550	495		366		366		366
28.	Fibre Science & Tech.	TTF	BE/B.Tech.	400	360		266		266		266
			M.Sc.	550	495		366		366		366
29.	Energy Studies	JES	PH/Cy	650	585		390		390		390
			ME	750	675		390		390		390
			EE/EC	700	630		390		390		390
			Others	650	585		390		390		390
30.	Industrial Tribology & Maintenance Engg.	JIT		695	625		500		340		340
31.	Instrument Technology	JID		675	600		500		400		400
32.	Optoelectronics & Optical communication	JOP	EE/EC	750	680		500		350		350
			ME	675	605		450		450		450
33.	Polymer Science & Tech.	JPT	CY,TF, Polymer	350	315		235		235		235
			CH,Petro	400	360		266		266		266
34.	Telecom. Tech &	JTM	(All)	750	700		500		450		450

	Mgmt.									
35.	VLSI Tool Design & Technology	JVL	EC	850	850		850		850	850
			EE/IN	760	760		760		760	760
			CS/IT/Others	700	700		700		700	700
36.	Industrial Design (M.Des.)	JDS*	B.Arch./ B.E./B.Tech. or equivalent	34	30		28		15	15

*CEED Percentile

Additional Important Information for Candidates

- Ragging in any form is banned in IIT Delhi.
- The Institute treats ragging as a cognizable offence and stern action will be taken against the offenders.
- IIT Delhi will not be responsible for any postal delays.
- All matters of disputes will be subject to legal jurisdictions of the courts at Delhi only.
- The Institute reserves the right to amend, without any notice, any provisions stated in this brochure.