राष्ट्रीय प्रौद्योगिकी संस्थान दिल्ली

NATIONAL INSTITUTE OF TECHNOLOGY DELHI

(शिक्षा मंत्रालय, भारत सरकार के अधीन एक स्वायत्त संस्थान)

(An autonomous Institute under the aegis of Ministry of Education (Shiksha Mantralaya), Govt. of India) Plot No. FA7, Zone P1, GT Karnal Road, Delhi-110036, INDIA

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Information Brochure

for

Admission to Self-Financed (SFS) Programs M.Tech (Full Time 2 Years Duration) Academic Year 2025-26

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1. About the Institute

National Institute of Technology Delhi (NITD) is one of the thirty one NIT(s) established in the National Institute of Technology Delhi (NITD) is one of the thirty one NIT (s) established in the year 2010 by an Act of Parliament. The Institute has been declared as an Institute of National importance.

NIT Delhi is an autonomous Institute which functions under the aegis of Ministry of Education, Government of India. It aims to provide instructions and research facilities in various disciplines of Engineering, Science and Technology, Management, Social Sciences and Humanities for advance learning and dissemination of knowledge.

NIT Delhi has started its academic session in 2010 with three undergraduate B.Tech degree programmes in Computer Science and Engineering, Electronics and Communication Engineering and Electrical and Electronics Engineering. The academic activities of NIT Delhi were initiated at NIT Warangal in year 2010 which later moved to a temporary campus at Dwarka, New Delhi in June 2012 and then shifted to IAMR Campus, Narela in February 2014. Currently, NIT Delhi is operating from its permanent campus at Plot No. FA7, Zone P1, GT Karnal Road, Delhi-110036, India (Google Maps Link: https://goo.gl/maps/6yVMs8nygsw3hCR36)



Figure 1: View of the under-Development NIT Delhi Campus

2. The Campus

Fifty one acre land has been allotted for permanent campus of NIT Delhi on NH-44, GT Karnal Road, Delhi-110036. The Phase 1A works consisting of Mini Campus, Startup Centre and Admin Block has been completed and the Phase 1B works consisting of Academic Building, Staff Quarters, Hostel-800 seater are under construction and Director's Residence has been completed.



Figure 2: Campus of NIT Delhi

The Institute has secured a remarkable **NIRF** 45th **rank** in 2024 among 4000 engineering colleges in India. The **highest package** awarded to the student of NIT Delhi is **Rs.62 LPA in 2024** and the **average package** awarded to the students of NIT Delhi is **Rs. 15.59 LPA**.

The Institute further provides well-furnished hostel facility to its outstation candidates studying full time courses only. The boy's hostels are located on the transit campus of the Institute in Narela as well as in the main campus in Bakoli, while the girl's hostel is located at the main campus in Bakoli. Currently, the boarding facility has been extended to almost 1000 students at hostels (both boys and girls) and an adequate bus facility has also been extended for the commutation of students staying at transit campus, Narela as well as for the day scholars.

3. Computing Facilities and Campus Network

The Computer Centre at the National Institute of Technology (NIT) Delhi was established in 2014. It serves as a central facility offering a range of services and resources that support advanced research and academic activities. Key infrastructure includes *Param Shawak* supercomputing machine and a High-Performance Computing Lab equipped with Intel i7 Core processors with latest generations.

The campus is fully Wi-Fi enabled, with extensive LAN coverage supported by single-mode fiber, ensuring seamless connectivity. Security is prioritized through 24/7 CCTV surveillance, while administrative functions are streamlined via the e-Office platform, which includes modules such as e-File, e-Leave, e-Tour, and PIMS.



NIT Delhi also supports national and international collaborations through Audio-Video Conferencing facilities. Printing and Xerox services are conveniently available for both academic and administrative purposes.



The institute's robust Software and Hardware Infrastructure includes tools such as MATLAB, Seqrite Endpoint Protection, QualNet, NetSim, Microsoft Office 365, WebEx, Google Suite, Google Workspace Education Plus, and Microsoft Teams. This software ecosystem is backed by high-end hardware, including Cisco servers, HP Blade servers, interactive screens, biometric machines, LED walls, and modern networking equipment.

For secure and efficient Networking and Connectivity, the campus is equipped with a Fortinet firewall, a PRI line for internet-based communications, and is connected to the National Knowledge Network (NKN), enabling collaborative academic and research opportunities across the country.

Student facilities include high-speed internet in hostels and a biometric attendance system to ensure accurate attendance tracking. The institute's website and communication platform keeps

the campus community informed with real-time updates on announcements, events, and recruitment.

This comprehensive digital infrastructure reflects NIT Delhi's commitment to innovation, research excellence, and digital advancement.

4. Library Facilities

The Central Library, located on the 3rd floor of the Administrative Block of the Institute, acts as the primary information resource centre and the repository of various printed as well as electronic resources that support teaching, research, and all the academic activities of the Institute. All the students, faculty members and staff of the Institute are entitled to access all the library facilities and services.

The Library has a rich collection of books on Engineering, Science and Technology, including Chemistry, Mathematics, Physics, Chemical Engineering, Civil Engineering, Computer Science, Electrical and Electronics Engineering, Humanities, Management and Social Sciences etc. Besides this, the library also has a good collection of Rajbhasha Hindi Books, Dictionaries, Handbooks, Encyclopedias and research-related books.

The library has total 19,000 (approx) printed books till date including 3,000 Rajbhasha Hindi Books, along with 10 leading newspapers and 23 renowned magazines. Also, the library provides access to diverse collection for General Reading, including Sports, Yoga, Fiction, Motivational Books and Magazines on Current Affairs and Specialized Subject areas. There are 4500+ ebooks subscribed from the renowned publishers like IEEE, McGraw Hill, Pearson, CBS publishers and New Age Publishers. The library is part of ONOS programme of Govt. of India which provides access to full-text of E-journals from 30 major publishers.

Additionally, the Library provides access to around 1,198 multimedia items (CDs/DVDs/NPTEL videos) and 257 dissertations submitted by M.Tech, and B.Tech students and 76 Theses submitted by PhD Scholars.

INFORMATION TECHNOLOGY: AUTOMATED LIBRARY SYSTEM:

- The library is connected to the campus LAN and Wi-Fi facility.
- The library has an RFID (Radio Frequency Identification) based Automation system and a Circulation system (self-check-in/Check-out).
- The database of the entire Library acquisitions is being updated on a regular basis, along with details of recently acquired books.
- The library has a WebOPAC facility under which all the bibliographic details of the library collection can be accessed from Internet 24x7 on all weekdays by the users.
- The EAS/RFID Security Gates are installed at the library entrance to prevent Library resources from theft activities.
- The RFID smart cards (i.e. Institute ID cum Library Card) along with a cardholder and lanyard are provided to all the students & faculty/staff members of the Institute.
- The library has an RFID Portable Handheld reader for easy and quick physical verification of Library Books, for locating missing books and security checks of checked-out items, etc.
- The library has initiated a QR code facility for Overdue payments/fines in the Library to provide convenience to patrons, and it streamlines the payment process.

• The Knimbus Mobile App: Currently in beta trial mode, once set up, the app will be accessible to all library users from the Google Play Store for remote access to all subscribed library resources.



Central Library located on Third floor of Admin Block

5. **Programs of Study**

The Institute offers 8 B.Tech and 9 M.Tech programs in various disciplines under the different departments. The Institute also offers facilities for research leading to PhD degree in various branches of Engineering, Science and Humanities & Social Sciences. The academic responsibilities are shared by the following Teaching Departments:

- 1. Applied Sciences, Humanities & Management (AS Hum.& Mgmt.)
- 2. Civil Engineering (CE)
- 3. Computer Science and Engineering (CSE)
- 4. Electrical Engineering (EE)
- 5. Electronics & Communication Engineering (ECE)
- 6. Mechanical & Aerospace Engineering (M&AE)

Following SFS M.Tech programs (Full Time) are being offered by the Institute under the Departments as mentioned below:

a) Department of Applied Sciences, Humanities & Management

1. Mathematics & Computing

b) Department of Computer Science and Engineering

- 1. Computer Science and Engineering
- 2. Computer Science and Engineering (Analytics)

c) Department of Electrical Engineering

- 1. Power Electronics and Drives
- 2. Power & Energy Systems

d) Department of Electronics & Communication Engineering

- 1. Electronics & Communication Engineering
- 2. Electronics & Communication Engineering (VLSI)

e) Department of Mechanical & Aerospace Engineering

1. Computer Aided Design/ Manufacturing (CAD/CAM)

f) Department of Civil Engineering

1. Civil and Infrastructure Engineering (CIE)

6. Admission to SFS M.Tech (Full Time) programs

NIT Delhi will admit students for the M.Tech programs as shown in Table 1 with sanctioned intake as shown in Table 2 in the Academic year 2025-26. The candidates who fulfil the prescribed minimum eligibility criteria as given in the 'Section 6.1A may apply for the same.

6.1. Minimum Qualification/Eligibility:

SFS M.Tech Program (Common to all Full Time Programs):

Admission shall be open to Indian nationals who have passed the prescribed qualifying examination with a Cumulative Grade Point Average (CGPA) of at least 6.5 in the 10 scale grading system, OR not less than 60% marks in the aggregate (taking into account the marks scored in all the subjects of all the public/university examinations conducted during the entire prescribed period for the degree Program). **However, this prescribed minimum shall be a CGPA of 6.0 OR 55 % marks in the aggregate for SC/ST/PwD candidates.** For information on the prescribed qualifying examinations for various M.Tech Programs offered by the various departments at NITD, please refer the Institute website, **https://nitdelhi.ac.in/**. The indicative information is given in table 1.

The CGPA shall be converted to the percentage on the basis of conversion formula given by the University, from where the candidate completed qualifying examination. In case, there

is no formula given by the University, the prevailing guidelines of the Institute/AICTE/UGC shall be taken into consideration.

6.2. Selection Procedure:

SFS M.Tech (Full Time) Program

Selection of the candidate to the SFS M.Tech (Full Time) Programs shall strictly on the basis of the merit of the Entrance Test conducted by the Institute.

Table 1: Indicative Information regarding Tentative Qualifying Degree for respective SFSM.Tech programs

S. No.	Department	Discipline	Tentative Qualifying Disciplines in
1	Applied Sciences,	Mathematics &	BE/BTech/BSc (Engineering)/MCA/MSc in
	Humanities &	Computing	Mathematics, Statistics, Computing, Computer
	Management (AS Hum. &		Science & Engineering, Information
	Mgmt.)		Technology, Electronics & Communication,
			Engineering, Electrical Engineering,
			Electronics & Instrumentation Engineering,
			Electrical Engineering and other relevant
			disciplines.
2	Computer Science and	Computer Science	BE/BTech/BSc (Engineering)/MCA/ MSc in
	Engineering (CSE)	and Engineering	Computer Science & Engineering, Computer
			Engineering, Information Technology,
			Electronics & Communication Engineering,
			Computer & Communication Engineering and
			other relevant disciplines.
3	Computer Science and	Computer Science	BE/BTech/BSc (Engineering)/MCA/ MSc in
	Engineering (CSE)	and Engineering	Computer Science & Engineering, Computer
		(Analytics)	Engineering, Information Technology,
			Software Engineering, Electronics &
			Communication Engineering, Computer &
			Communication Engineering, Mathematics
			and other relevant disciplines.
4	Electrical Engineering	Power Electronics	BE/BTech/BSc (Engineering) in Electrical &
	(EE)	and Drives	Electronics Engineering, Electrical
			Engineering, Instrumentation & Control
			Engineering and other relevant disciplines.
5	Electrical Engineering	Power & Energy	BE/BTech/BSc (Engineering) in Electrical &
	(EE)	Systems	Electronics Engineering, Electrical
			Engineering, Power Systems, and other
-			relevant disciplines.
6	Electronics &	Electronics &	BE/BTech/BSc (Engineering) in Electronics
	Communication	Communication	& Communication Engineering, Electronics
	Engineering (ECE)	Engineering	Engineering, Electronics & Instrumentation
			Engineering, Electrical & Electronics
			Engineering and other relevant
			disciplines/ MSc (Electronics/ Physics)

7	Electronics &	Electronics &	BE/BTech/BSc (Engineering) in Electronics,
	Communication	Communication	Electronics & Communication Engineering,
	Engineering (ECE)	Engineering (VLSI)	Electrical & Electronics Engineering,
			Electronics & Instrumentation Engineering
			and other relevant disciplines
8	Mechanical & Aerospace	Computer Aided	BE/BTech/BSc (Engineering) in Mechanical
	Engineering (M&AE)	Design/	Engineering, Automation Engineering,
		Manufacturing	Production Engineering, Industrial
		(CAD/CAM)	Engineering Manufacturing Engineering,
			Manufacturing Processes & Automation
			Engineering, Automobile Engineering,
			Aerospace Engineering, Mining Machinery
			Engineering and other relevant disciplines.
9	Civil Engineering (CE)	Civil and	BE/BTech/BSc (Engineering) in Civil
		Infrastructure	Engineering, MSc in Environmental Sciences,
		Engineering (CIE)	Environmental Engineering, B.Arch, B.Tech in
			Construction Management and any other
			relevant disciplines.

Note: For consideration of other relevant disciplines qualifications, the decision of the screening committee will be considered as final.

6.3. Seat Matrix

The intake for SFS M.Tech (Full Time) programs is given below in the table 2. **Institute reserves** right to increase/ decrease the intake in any of the programs without any notice.

Table 2: Program-wise Intake for SFS M.Tech programs

S. No.	M.Tech Program	Department	Mode	Intake
1	Mathematics & Computing	AS Hum. & Mgmt.	Full Time	10
2	Computer Science and Engineering	CSE	Full Time	15
3	Computer Science and Engineering (Analytics)	CSE	Full Time	15
4	Power Electronics and Drives	EE	Full Time	10
5	Power & Energy Systems	EE	Full Time	10
6	Electronics & Communication Engineering	ECE	Full Time	15
7	Electronics & Communication Engineering	ECE	Full Time	15
	(VLSI)			
8	Computer Aided Design/ Manufacturing	M&AE	Full Time	10
	(CAD/CAM)			
9	Civil and Infrastructure Engineering (CIE)	CE	Full Time	10

*For category-wise seats bifurcation for SFS M.Tech programs, kindly refer Annexure II.

7. How to Apply

The Information Bulletin, Seat Matrix and Online Application portal for admission to M.Tech (Full Time) programs has been made available over the Institute website, https://nitdelhi.ac.in/. The eligible and desirous applicants are required to fill the **Application Form** (**page 34-36**) of this brochure and along with all the relevant documents, submit through online mode to the link, https://forms.gle/oRZsQXQTaAzYkquZ8.

The candidates are required to pay a Non-refundable Registration Fee of Rs. 1,000/- for UR/ EWS/ OBC category, while Rs. 500/- for SC/ ST/ PwD category through Online Link, <u>https://rzp.io/l/s25QiCay1R</u>.

Please note that in case you wish to apply for more than One Discipline, you need to pay fee for each discipline applied. (For example, if you have applied for 3 disciplines, then you have to pay 3 times of Rs.1000 = Rs.3000/- for UR/EWS/OBC and 3 times of Rs.500 = Rs.1500 for SC/ST/PwD Category).

Start Date of Online Application is 25.04.2025, 04:00 P.M. Last Date to Apply is 25.05.2025, 04:00 P.M.

8. Documents to be submitted along with application in pdf form:

- Document for Proof of date of birth: Class X marksheet/ certificate issued by the school last attended/recognized educational board containing the date of birth of the applicant. In case, class X marksheet/certificate does not contain date of birth, the candidate is required to upload class X marksheet/ certificate and any other Government issued document containing date of birth of the applicant, name and Parent's name such as Passport/ Aadhaar Card/ Driving License/ Voter ID Card/ PAN Card/ Birth Certificate issued by Municipal Corporation/authority empowered to register the birth.
- Certificate of Class XII/ Diploma in Engineering
- Original mark-sheet of all Semesters/years of the Qualifying Degree (BE/BTech/MSc/MCA or Equivalent)
- Degree Certificate or Course Completion certificate from college (if qualifying degree exam results are awaiting, submit **Annexure-I** on Institute Letter-Head)
- Candidate's category certificate (SC/ST/OBC-NCL/EWS) must be issued by the competent authority. In case of OBC-NCL/ EWS category candidate, the category certificate must be issued on or after April 01, 2025.
- Certificate for Persons with Disabilities (PwD), if applicable, must be issued by the competent authority.
- Photo ID proof as per Govt. of India norms.
- Registration Fee Payment Proof

Original documents shall be verified at the time of physical reporting/ admission. Admission shall stand cancelled in case; original documents are not produced/ misleading information is furnished by the candidate at the time of physical reporting/ admission without any prior notice.

9. Timelines

Schedule of SFS M.Tech (Full Time) (AY 2025-26): Table 3

S.No.	Event		Date	Time
1	Start Date of Online Application		25.04.2025	04:00 PM
2	Last Date to Apply		25.05.2025	04:00 PM
3	Display the list of candidates to appear in the written examination		30.05.2025	04:00 PM
4	Written exa	amination for CSE, CSE-A	12.06.2025	
5	Written exa	amination for ECE, ECE(VLSI)	13.06.2025	Communicated
6	Written exa	amination for PES, PED & CIE	16.06.2025	later
7	Written exa	amination for M&C and CAD/CAM	17.06.2025	
8		Display the final list of provisionally eligible candidates (for round 1) for all branches	19.06.2025	04:00 PM
9	Round-1	Admission Fee payment of the M.Tech SFS for all branches - Starts	19.06.2025	04:00 PM
10		Admission Fee payment of the M.Tech SFS for all branches - Ends	29.06.2025	04:00 PM
11		Display the final list of the candidates whose seats have been provisionally confirmed (in	02.07.2025	04:00 PM
12		Display the final list of provisionally eligible candidates (for round 2) as per the vacant seats available in the disciplines	04.07.2025	04:00 PM
13	Round -2	Admission Fee payment of the M.Tech SFS - Starts	04.07.2025	04:00 PM
14		Admission Fee payment of the M.Tech SFS - Ends	13.07.2025	04:00 PM
15		Display the final list of the candidates whose seats have been provisionally confirmed	16.07.2025	04:00 PM
16		Display the final list of provisionally eligible candidates (for round 3) as per the vacant seats available in the disciplines	18.07.2025	04:00 PM
17	Round - 3	Admission Fee payment of the M.Tech SFS - Starts	18.07.2025	04:00 PM
18		Admission Fee payment of the M.Tech SFS - Ends	27.07.2025	04:00 PM
19		Display the final list of the candidates whose seats have been provisionally confirmed	30.07.2025	04:00 PM
20	Physical Re	porting for the Documents verification	Date will b	e communicated later

Note:

"If a candidate is provisionally allotted a seat in any round and if he/she fails to pay the admission fee, their provisional allotment will be stand cancelled, and they will not be considered for any further rounds of admission."

10. Minimum/ Maximum Duration of the M.Tech Programs and Mode

SFS M.Tech (Full Time, Offline): 02 Years comprising of 04 Semesters (02 Semesters for Course work and 02 Semesters from Dissertation work). **However, the M.Tech (Full Time) must be completed within 04 years from enrolment.**

The classes for SFS M.Tech (Full Time) shall be held on the working days during 8.30 AM – 05.30 PM in the Institute.

11. Regulations to the SFS M.Tech Programs

The Institute PG regulations prevailing from time to time shall be enforced to the students and shall be binding to govern the M.Tech programs.

12. Financial Assistance

Students admitted to the SFS M.Tech (Full Time) programs shall not be given any financial support/ scholarships by the Institute.

S. No.	Head of Fees	Amount (Rs.)
1.	Admission Fee	2000
2.	Tuition Fee	100000
3.	Development Fee	5000
4.	Library & Book Bank	1800
5.	Computer/ Internet Fee	2000
6.	Sports & Creative Arts Society	3000
7.	Students Welfare	1000
8.	Industrial Training and Placement Fee	1500
9.	Examination Fee	2000
10.	General Insurance Fee	1000
11.	Entrepreneurship and Startup Fees	1000
12.	Contingency Fee (Annual)	10000
13.	Identity Card Charges	200
14.	Alumni Association Membership Fee	1000
	(One time only)	
15.	Convocation Fees	2500
16.	Institute Caution Money	20000
	(Refundable, One time only)	
	Total Fee	154000

* After the first Semester, the Refundable/ One Time Only components of the Fee Structure will not be payable. The Fee compenents charged annually are charged only in Autumn Semester. Refundable components of the fee shall be paid either after completion of course or withdrawl from the course, as the case may be.

* Fee once paid is non refundable, only caution money shall be refunded in case of withdrawal.

14. Hostel Facilities

The Institute provides hostel accommodation to support the residential needs of its students, fostering a conducive environment for academic and personal growth.

Eligibility Criteria:

- **Full-Time Students:** Hostel facilities are primarily offered to full-time students enrolled in regular programs at the Institute. Allocation is subject to availability and is managed on a first-come, first-served basis or as per the Institute's allocation policy.
- **Self-Financed (SFS) Program Students:** If hostel seats remain vacant after accommodating full-time regular students, those enrolled in Self-Financed (SFS) programs may also be considered eligible for hostel accommodation. Such consideration will be based on the availability of rooms and the discretion of the hostel administration.
- Fee Structure: The hostel and mess charges for all students, including those from SFS programs (if allotted), will be the same as those applicable to students from other academic programs of the Institute. No differential fee structure is applied for different categories of students.

15. Training and Placement

The T&P Cell aims at enhancing the employability of the students while also providing the students with the necessary skillets to grow in their respective fields of interest. The Institute has excellent track record of placement of BTech and MTech students of all the disciplines. Training and Placement Cell of the Institute shall strive for placement opportunities to the students through regularly conducted placement drives. Several students of BTech and MTech are placed for long-term internships (2 months to 12 months duration) through placement drives in their Pre-final year of the course. The students should visit the website, https://nitdelhi.ac.in/training-placement/

The Cell performs the following activities throughout the year:

- (i) Industry Networking: The T&P Cell establishes and maintains connections with various industries and companies for collaboration.
- (ii) Internship Opportunities: Facilitates internships of 3rd year B.Tech students and 1st year M.Tech students to give the students real-world experience in their chosen field.
- (iii) Job Placement: Organizes campus recruitment drives to connect the 4th year B.Tech students, 2nd year M.Tech students and Ph.D. students with potential employers.
- (iv) Seminars and Talks: The T&P Cell organises expert lectures and seminars to offer guidance and skill enhancement services to help students make informed career choices and learn the recent industrial trends.
- (v) Industry Insights: Keeps students informed about emerging career opportunities.
- (vi) Feedback Mechanism: Collects feedback from employers to improve placement processes.
- (vii) Placement Records: Maintains various databases of placements, students and the visiting companies as a testament to the institution's quality education.

16. Available Research facilities in Various Departments

A. Department of Applied Sciences, Humanities & Management (AS Hum. & Mgmt.)

- Computational Mathematics Research Laboratory:
 - 1. Equipped with 7 high-performance, CPU-optimized computers for advanced computing tasks.
 - 2. Dell High-Performance Computing (HPC) server available on-demand for enhanced computational requirements.
 - 3. Seating capacity available for up to 28 individuals, ideal for collaborative work and instruction.
 - 4. High-resolution projector for clear and detailed visual presentations.
 - 5. On-site printing machine for convenient and efficient document handling.





Computational Mathematics Research Laboratory

- M.Tech Computational Laboratory:
 - 1. Seating capacity for up to 10 individuals, suitable for focused group work or research activities.
 - 2. Equipped with 9 high-performance, GPU-accelerated computers for intensive graphics and parallel processing tasks



M.Tech Computational Laboratory

Physics Laboratory

Equipped with the basic/advanced experiments related to Optics, Physics, Electroptics and Electronic Science. The lab is also having the research facilities in the field of Optics and electropics.



UG Physics Laboratory



Chemistry Laboratory

Equipped with experiments related to inorganic, organic and physical chemistry. The faculties/researchers are working on designing and synthesis of new porous materials with metal skeleton and their applications in catalysis and sensing.

Following are the major instruments available in the Chemistry laboratory for research purpose:-

Gas chromatography-mass spectrometry, Thermo gravimetric Analyzer, Differential scanning calorimeter, FT-IR, UV-VIS Spectrophotometer, Fluorescence, Muffle furnace, Programmable oven, Ice matic machine and Fume hoods.



FT-IR, TGA, GC-MS / Instrumentation Lab



The Laboratories are having well equipped spacious laboratories with pleasant working environment. All the laboratories have ultra new apparatus and equipments to expose the students to new trends in the field of Science and Technology. The department has an established and Highly qualified faculty and supporting staff with long working experience. The students to teacher ratio are also maintained as per Institute norms.

B. Department of Computer Science and Engineering

The laboratories of the Department of CSE are well equipped and are being upgraded from time to time in order to provide state of art facilities to the BTech, MTech students as well as PhD research scholars. Following laboratories are located in the Department itself.

1. Computer Programming – I

- To foundation Lab of CSE , AI & DS Curriculum. The focus is to make the student develop coding skills, learn a programming language. They are here introduced to data structures, algorithms and software development practices
- The students will be able to enhance their analyzing and problem-solving skills.
- Know the steps involved in compiling, linking and debugging C code and testing.
- Students enhance their logical and critical thinking abilities. Also learn to break down complex problems into manageable steps and devise soln.

Hardware Details:

- Lab Capacity : 40
- HP Desktop with i7 3rd Gen, 4GB RAM & 512 GB HDD



Computer Programming – I

2. Ubiquitous Computing Lab

- To skill the undergraduate and postgraduate students in the IoT and Embedded system design utilizing state of the art hardware boards and software as per industry standards.
- Unique and Practical experience in working with connected devices, sensors, actuators, micro controllers and data. Exposure to real world applications connecting physical objects to the Internet
- To enhance research activities in different application areas of IoT like smart home, smart village, smart healthcare, smart grid, smart agriculture, industry 4.0 and wearable IoT devices etc.

Hardware Details:

- IoT Smart Nucleo
- IoT Smart Health Lab
- Intelligent system Lab



Ubiquitous Computing Lab

3. Artificial Intelligence & Data Science Lab

- Explore the fundamental concepts of data science and shaping them into skilled data scientists and analysts.
- Understand data analysis techniques for applications handling large data. Understand various machine learning algorithms used in data science process Visualize and present the inference using various tools.
- Learn to think through the ethics surrounding privacy, data sharing and algorithmic decision-making

Hardware Details:

- Lab Capacity : 31
- HP Desktop with i7 12th Gen, 512GB NVMe SSD, 16GB RAM & 1 TB HDD



Artificial Intelligence & Data Science Lab

4. Computer Networks and Architecture Lab

- To understand the working principle of various communication protocols, hands on experience in configuring network devices, setting up LAN and troubleshooting network issues.
- To analyze the various routing algorithms.
- To know the concept of data transfer between nodes
- Processor Architecture, Memory systems, hardware and software interaction



Computer Networks and Architecture Lab

5. Information Security And Software Engineering Lab

- Labs can simulate various cyber threats, attacks, and vulnerabilities in controlled environments. This allows students to experiment, analyze, and learn how to mitigate these security risks effectively.
- Information Security Labs can emphasize secure coding practices, teaching students to write software that is resistant to common vulnerabilities like SQL injection, cross-site scripting, and buffer overflows.

Hardware Details:

- Lab Capacity : 31
- Intel Xeon E5-2620, 16GB, 1TB HDD, GPU Nvidia Quardo K2000



Information Security And Software Engineering Lab

6. Big Data & Intelligent Systems Lab

- To solve real-world challenges in areas such as image recognition, natural language processing, recommendation systems, autonomous vehicles, healthcare, and more. Preparing the students to participate various technical competitions.
- Lab can focus on NLP tasks such as sentiment analysis, text generation, and language translation, allowing students to explore the fascinating intersection of AI and human language.

Hardware Details:

- Lab Capacity : 19
- HP Desktop with i7 12th Gen, 512GB NVMe SSD, 16GB RAM & 1 TB HDD



Big Data & Intelligent Systems Lab

7. Data Analytics and Vision for Smart Environments Lab (DAViSE)

- Lab offers opportunity to work on computer vision projects, including image classification, object detection, and facial recognition, giving students hands-on experience with visual data processing.
- Learn about the problems and issues associated with automated image analysis algorithms and techniques from the perspective of quantitative image analysis.
- Implement computer vision techniques with emphasis on practical aspect.

Hardware Details:

- Lab Capacity : 5
- Tyrone Camarero Desktop with Intel Xeon Gold 6226R, 64GB RAM, 512GB SSD, 2TB HDD



Data Analytics and Vision for Smart Environments Lab (DAViSE)

8. Visual Computing And Robotics Labor (VCRL)

- We are pioneering breakthroughs in a full spectrum of topics related to AI, including machine learning, computer vision and image processing, human-robot interaction, speech and language analysis, information extraction and privacy-protection.
- Our researchers are working in areas where artificial intelligence has been under study like language—and where the tools are just starting to make inroads—such as efforts to combat human trafficking, diagnose fetal alcohol syndrome, and prevent terrorist attacks using limited resources.



Visual Computing And Robotics Labor (VCRL)

9. Programming Lab –II

- To make the student learn a programming language.
- The students will be able to enhance their analyzing and problem solving skills.
- Gain experience of procedural language programming.
- Know the steps involved in compiling, linking and debugging C code.

Hardware Details:

- Lab Capacity : 40
- HP Desktop with i7 3rd Gen, 4GB RAM & 512 GB HDD



Programming Lab -II

10.AI Research & Innovation Lab (AIRIL)

- Design and Implement a database schema
- Devise queries using DDL, DML, DCL and TCL commands.
- Develop application programs using PL/SQL
- Design and implement a project using embedded SQL and GUI.
- Apply modified components for performance tuning in open source software.

Hardware Details:

- Lab Capacity : 35
- HP Desktop with i7 12th Gen, 512GB NVMe SSD, 16GB RAM & 1 TB HDD



AI Research & Innovation Lab (AIRIL)

11.Complex System Lab

- To educate the fundamental knowledge and usability of industrial robots.
- To trained the student to develop the robot work cell for selective industrial robotic application.
- To provide hands-on experience of industrial robot with basic to advance level programming.

Hardware Details:

- Lab Capacity : 35
- HP Desktop with i7 12th Gen, 512GB NVMe SSD, 16GB RAM & 1 TB HDD



Complex System Lab

C. Department of Electrical Engineering

The laboratories of the Department of Electrical Engineering are well equipped and are being upgraded from time to time in order to provide state of art facilities to the B.Tech., M.Tech students as well as Ph.D. research scholars and Post-Doctoral Fellows. Following laboratories and software are available in the department itself.

Laboratory	Software
Electrical Measurement	• MATLAB
• Power Electronics & Drives	• Real-Tine Simulation (OPAL-RT)
Control System	• PSIM
• Electrical Simulation	• ANSYS
Power Electronics Advanced Research	• Typhoon HIL
SERB Sponsored - Electric Vehicle	• ALTAIR
• Power Systems	• LabVIEW
Electrical Machines	• Homerpro
 Microprocessor & Microcontroller 	• Digsilent





Power Electronics & Drives Laboratory



Control & Measurement Laboratory





Power Electronics Advanced Research Lab



SERB Sponsored-Electric Vehicle Laboratory



Power Systems Laboratory



Electrical Machines Laboratory



Electrical Simulation Laboratory

D. Department of Electronics & Communication Engineering (ECE):

The laboratories of the Department of ECE are well equipped and are being upgraded from time to time in order to provide state of art facilities to the B.Tech, M.Tech students as well as PhD research scholars and Post Doctoral Fellows. Following laboratories are located in the Department itself.

System Simulation Laboratory	CT Stellio Steller Setware	MATLAB ADS Software
Circuit Simulation Laboratory	EMPro EMPro Software EM Pro Software EM Pro Software	OFCAD DE DE ISINE OFCAD PER DE SUITE OFCAD PER DE SUITE QualNET
Signal Processing Laboratory		





Communication Systems Laboratory		Spectrum Analyser
Microprocessor & Microcontroller Laboratory	Advanced Analog cum Digital Trainer Kit	Function Generator

Electronic Devices and Circuits Laboratory	Function Generator	
Instrumentation and Measurement Laboratory	Temperature Sensor Trainer	Digital Storage Oscilloscope Infiniivision DSOX2024A/ 200Mhz,
		2GSa/s Make-Keysight Technologies

	SYNOPSYS [®] Silicon to Software [®] SILVACO
WIGL Design and	
Simulation Laboratory	



Further Information Links for ECE Department on the Institute Website

Faculty Profile	https://nitdelhi.ac.in/electronics-communication-engineering/
Research Profiles of the Faculty	https://nitdelhi.irins.org/
Details of Laboratories	https://nitdelhi.ac.in/electronics-communication-engineering /
Course Curriculums	https://nitdelhi.ac.in/electronics-communication-engineering/
Activities conducted by the	https://nitdelhi.ac.in/electronics-communication-engineering/
Department	

E. Department of Mechanical & Aerospace Engineering

The department has Laboratories for Computer Aided Design & Advanced Manufacturing. The department has various software for designing and analysis of research problems with ample collaborations with Industries/ Reputed Institutions throughout country. Department has state of art 3-D printing facilities for polymers and metals for researchers. Department also have the various advanced research facilities such as advanced machining Lab, Advanced Composites Lab and Smart Manufacturing Lab. Following the list of Laboratory established in the department of Mechanical & Aerospace Engineering:

- Advanced Manufacturing Lab
- Academy for Advanced & Reverse Manufacturing (ARM) Lab
- Advanced Composites Lab
- CAD Lab (Software for Research: CATIA, ANSYS, ABAQUS etc.)
- Smart Manufacturing Lab
- Material Testing Lab
- Central Workshop



Smart Manufacturing Lab



Advanced Machining Lab



CAD Lab



Academy for Advanced & Reverse Manufacturing (ARM) Lab



Materials Testing Lab



Central Workshop

CENTRE OF EXCELLENCE

Additive Manufacturing Technology Centre: The Department has recently established Additive Manufacturing Technology Centre very recently, which is a Centre of Excellence facility among in north India. The Centre is aimed to provide cutting edge technologies in the additive manufacturing and reverse engineering through 3D scanning. The Centre houses state of art additive manufacturing facilities along with metrology grade 3D scanner.



Additive Manufacturing Technology Centre (3D Metal Printer)

F. Department of Civil Engineering

The laboratories of the Department of CE are well equipped and are being upgraded from time to time in order to provide state of art facilities to the B.Tech, M.Tech students as well as PhD research scholars and Post Doctoral Fellows. Following laboratories are in place in the Department.

- Environmental Engineering Laboratory (LESER and JEEVAN Laboratory)
- Structural Engineering Laboratory
- Water Resources Engineering Laboratory
- Transportation Engineering Laboratory
- Surveying and Remote Sensing Laboratory
- Geotechnical Engineering Laboratory
- Computational Laboratory



Concrete and NDT Laboratory



Transportation, Surveying and Water Resources Laboratory



Geotechnical Engineering and Material Testing Laboratory



LESER Laboratory

PROGRAMME EDUCATIONAL OBJECTIVES (M.Tech.)

- 1. To impart education in Structural /Environmental /Geotechnical /Construction Management & related fields to have all-round development of students in order to serve the global society.
- 2. To develop the critical thinking and problem-solving ability amongst the students through application of various aspects/fundamentals of Structural /Environmental /Geotechnical /Construction Management to understand/ analyze/ solve the critical situations in the area amicably.
- 3. To develop independent research attitude through projects/dissertations and its administrative & financial management as well as its dissemination to the PG students.
- 4. To create awareness amongst the students for collaborative and multidisciplinary activities through usage of modern/emerging tools, technologies and research publications.
- 5. To encourage students to be ethically and socially responsible and articulate themselves to be a lifelong learner.

Program Outcomes (M.Tech.)

- 1. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using advanced understanding of mathematics and engineering.
- 2. Design/development/execution of solutions: Design sustainable solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public safety, and the cultural, societal, legal and environmental considerations.
- 3. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 4. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 5. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work effectively, as a member and leader in a multidisciplinary and/or diverse team, to manage projects and in multidisciplinary environments.
- 6. Life-long learning: Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Objectives (M.Tech.)

- 1. Design, develop, construct and manage new civil engineering infrastructure.
- 2. Analyze Evaluate and Execute sustainable solutions to the structural problems faced by the society.
- 3. Cognizance of social awareness, environmental necessity, modern management and construction techniques to have a successful career in their respective specializations.

17. Contact

Dean (Academic), Room 306, Admin Block, 3rd Floor, National Institute of Technology Delhi Flot FA 7, Zone P1, G T Karnal Road, Delhi 110 036, India. **E-mail:** pgadmissions@nitdelhi.ac.in **Contact Number:** 9267998783/ 011-33861106/19

<u>Disclaimer:</u> Though utmost care has been made while preparing the information brochure, the Institute reserves the right to partially/ fully amend the information brochure anytime without any notice. Grammatical error(s) if any, may be ignored.



राष्ट्रीय प्रौद्योगिकी संस्थान दिल्ली

NATIONAL INSTITUTE OF TECHNOLOGY DELHI (शिक्षा मंत्रालय, भारत सरकार के अधीन एक स्वायत्त संस्थान)

(An autonomous Institute under the aegis of Ministry of Education (Shiksha Mantralaya), Govt. of India) Plot No. FA7, Zone P1, GT Karnal Road, Delhi-110036, INDIA

दूरभाष/Tele: +9111-33861000, 1001, 1005 फैक्स/ Fax: +9111-27787503,

वेबसाइट/Website: <u>www.nitdelhi.ac.in</u>

Application Form for Admission to SFS M.Tech (Full Time) Programs for the Academic Year 2025-26

1. Select program (Please ensure your eligibility before selecting the program).

S. No.	Name of SFS M.Tech Program	Department	Tick (√) in the program you wish to apply
1	Mathematics & Computing	AS Hum. & Mgmt.	
2	Computer Science and Engineering	CSE	
3	Computer Science and Engineering (Analytics)	CSE	
4	Power Electronics and Drives	EE	
5	Power & Energy Systems	EE	
6	Electronics & Communication Engineering	ECE	
7	Electronics & Communication Engineering (VLSI)	ECE	
8	Computer Aided Design/ Manufacturing (CAD/CAM)	M&AE	
9	Civil and Infrastructure Engineering (CIE)	СЕ	

I hereby declare that in case, I qualify in more than one program as declared above, the following order of preference of allocation of seat will be accepted by me:-

I agree that, only one seat as per above preference will be allocated to me and I will not have any claim on change of preference or any other program at any stage.

2.	Candidate's Name in Full (in BLOCK Letters)	Paste a recent passport size
3	Father's Name (in BLOCK Letters)	photograph
4.	Mother's Name (in BLOCK Letters)	

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5.	Date of Birth (DD/MM/YYYY format)							
6.	Gender: Male/ Female/ Transgender							
7.	Correspondence Address (in BLOCK Letters)							
Moh								
MOD	Mobile No E-mail							
Aadhar No								
8.	Nationality Religion							

- 9. Applying Category (UR/EWS/OBC-NCL/SC/ST/UR-PwD/EWS-PwD/ OBC (NCL)-PwD/ SC-PWD/ST-PwD)
- 10. Details of Examination Passed (from Class X onwards):

S. No.	Examination Passed	Subject/ Discipline/ Specialization	Year of Passing	CGPA/ Percentage of Marks Obtained	Division (I/ II/III)	Name of the Institute & University
1	Secondary School Certificate (Class X)					
2	Higher Secondary School Certificate (Class XII)					
3	Diploma in Engineering/ BSc					
4	BE/ BTech/ MSc/ MCA or equivalent					

11Have you ever been disqualified or debarred from appearing in anyYes/ Noexamination conducted by a University/ Board?Yes/ No

If yes, give details:

12. Registration Fee Payment Details:

Amount:Transaction ID.....

Date of Transaction.....

* The candidates are required to pay a Non-refundable Registration Fee of Rs. 1,000/- for UR/ EWS/ OBC category, while Rs. 500/- for SC/ ST/ PwD category through Online Link, https://rzp.io/l/s25QiCay1R.

Please note that in case you wish to apply for more than One Discipline, you need to pay fee for each discipline applied. (For example, if you have applied for 3 disciplines, then you have to pay 3 times of Rs.1000 = Rs.3000/- for UR/EWS/OBC and 3 times of Rs.500 = Rs.1500 for SC/ST/PwD Category).

S.	Designation	Name of the	From	То	Pay Scale/
No.		Organization	(DD/MM/YY)	(DD/MM/YY)	СТС
1					
2					
3					
4					

13. Work Experience Details (if any)

DECLARATION BY THE CANDIDATE

I clearly understand that my application/ admission to M.Tech program in the Discipline applied is subject to the Rules and Regulations of National Institute of Technology Delhi. I also understand that the admission is being allowed to me on the basis of the certificates and documents produced by me. I also undertake that the certificates and documents produced by me in original are correct, genuine and true to the best of my knowledge. If any information/documents/particulars are found to be forged or false at any stage in future, then the NIT Delhi can cancel my admission and all the fees deposited by me shall be forfeited. If any degree will be awarded based on my admission on the basis on my forged documents, then that certificate/degree awarded by NIT Delhi shall be automatically cancelled. In such case, I shall have no claim, whatsoever, in respect of my admission.

Date.....

Signature of the Applicant

<u>Annexure – I</u>

FORMAT OF COURSE COMPLETION CERTIFICATE

[TO BE ISSUED ON THE OFFICIAL LETTER HEAD OF THE INSTITUTE/UNIVERSITY]

This is to certify that,

1.	Mr./Ms(full	name) bearing	Roll No	i s	a bonafide
student	ofcourse/ prog	gram) in our inst	itute/university.		

2. He/She is likely to complete all requirements of the course / program and all of his/her examination is likely to be completed by August 31, 2025.

His/Her final result is awaited and is likely to be published on or before September 15, 2025.

Date:

Signature (with Seal) of the Authorized Signatory of the Institute/ University

<u>Annexure - II</u>

Seat Matrix for M.Tech (SFS) Programs, AY 2025-26																			
S. No.	M.Tech (SFS)	Dept.	Seats	UR	UR- PwD	UR Total	EWS	EWS- PwD	EWS Total	SC	SC- PwD	SC Total	ST	ST- PwD	ST Total	OBC	OBC- PwD	OBC Total	Total
1	CSE	CSE	15	5	1	6	2	0	2	2	0	2	1	0	1	4	0	4	15
2	CSE-A	CSE	15	6	0	6	1	0	1	3	0	3	1	0	1	3	1	4	15
3	CIE	CE	10	4	0	4	1	0	1	1	0	1	1	0	1	3	0	3	10
4	ECE	ECE	15	6	0	6	1	0	1	1	1	2	2	0	2	4	0	4	15
5	ECE (VLSI)	ECE	15	6	0	6	1	1	2	2	0	2	1	0	1	4	0	4	15
6	EE (PES)	EE	10	4	0	4	1	0	1	2	0	2	1	0	1	2	0	2	10
7	EE (PED)	EE	10	4	0	4	1	0	1	1	0	1	1	0	1	3	0	3	10
8	M&C	AS Hum. & Mgmt	10	4	0	4	1	0	1	2	0	2	0	0	0	2	1	3	10
9	CAD/CAM	M&AE	10	3	1	4	1	0	1	2	0	2	0	0	0	3	0	3	10
			110	42	2	44	10	1	11	16	1	17	8	0	8	28	2	30	110