WE ARE UNIQUE

Founded in 1961, the department marked the establishment of IIT Delhi with a mission of conducting world-class research and providing quality education.

It is the only department in the whole of IIT system and is one of the few worldwide with dedicated focus on teaching and research in textile and fibre engineering. The only department that imparts education and conducts research in all major areas of textiles viz. polymers & fibres, yarn, fabric, nonwovens and chemical processing.

QUALIFIED FACULTY

With faculty having qualifications and research experience from the top international institutions, the department has strived to impart training and conduct research in the emerging areas of textile materials and engineering at par anywhere in the world.

GLOBALLY RECOGNIZED

Having contributed in creating new knowledge and developing new technologies, the department has positioned itself as one of the top institutions globally.

SOCIAL OUTREACH & CONTRIBUTION

The department has built a strong collaborative network within the country and abroad with a goal to acquire and disseminate knowledge to help the community at large. This ranges from providing help to the various craftsmen engaged in traditional methods of processing textiles to helping organizations find textile based solutions to problems in the areas of technology, health and environment.

MISSION & VISION

To explore and develop novel areas of textile applications by conducting world class research

To create competent manpower in emerging areas of textiles by imparting quality education through classroom teachings and extended training programs.
OUR COURSES

UNDERGRADUATE (4 YEARS PROGRAM)

Bachelor in Technology (B. Tech.) in Textile Technology
The students are admitted through highly competitive national level Joint Entrance Examination (JEE), where only top 1% students are selected. Program provides:
• A wide exposure to students in humanities, sciences and engineering (about 50% courses outside Textiles) besides training them on core competence in all major areas of textile manufacturing such as fibre, yarn, fabric and chemical processing.
• A choice of advanced elective courses in emerging areas of technology.
• Courses to impart essential knowledge of management tools such as production and operations, quality control, project appraisal and finance.

Apart from a major degree in Textile Technology, the students may also opt for a minor area degree in any other engineering of their choice.

POSTGRADUATE (2 YEARS PROGRAM)

Department runs three M. Tech. level programs. Students are admitted through a national level Graduate Aptitude Test in Engineering (GATE). These are two years long programs consisting of one year of course work and one year of project for building strong analytical skills and research competence.

Master of Technology (M. Tech.) in Fibre Science and Technology
One of its kind program in the country on advancements in polymers and fibre manufacturing processes with a year long research project on new technologies.

With a focus on developing expertise in synthesizing polymers, their derivatives and converting them into modified fibres/films for variety of technical applications such as medical textiles, e-textiles, smart textiles, super-absorbents, nanofibres, laminates, membranes, and super-porous structures.

In-depth knowledge of resins and high performance fibres such as carbon, aramids, gel and liquid crystalline fibres and their applications in composites.

Hands-on experience with emerging technologies for modification of fibres through melt blending, bicomponent spinning, nanotechnology, plasma processing, grafting, and other physio-chemical processes.

Master of Technology (M. Tech.) in Chemical Processing
A newly launched program for imparting specialization in textile chemical processing with a year long research project on advanced dyeing, printing and finishing technologies.

With a goal of providing in depth knowledge of colour science, novel finishes, processing machines, auxiliaries, & sustainable technologies.

Exposure to new emerging technologies, such as nano materials, plasma technology, digital printing, and green processing.

Master of Technology (M. Tech.) in Textile Engineering
Course on advancements in manufacturing technologies for yarns, fabrics and nonwovens with a year long research project on new directions.

With an emphasis on design and construction of complex textile structures such as hybrid yarns, 3D constructs, composites, and nonwoven assemblies. Hands on experience on developing superior comfort properties and advanced technical textiles in application areas such as structural composites, ropes, filtration, oil-water separation, protective materials, defence materials and healthcare textiles.

Modelling and simulation of yarns, woven and nonwoven structures for novel properties.

Doctor of Philosophy (Ph.D.)
The program admits students of exceptional calibre and research aptitude having academic backgrounds in varied fields such as textiles, nano technology, polymers, chemistry, chemical, mechanical and electrical/electronics engineering, etc.

• Students carry out research projects of international standards supported with world-class research facilities.
• The projects are of academic as well as industrial value with a focus of developing new age technologies and products.
• Exposes students to global research trends through participation in international conferences and collaboration with international institutes.
• Emphasis is given to both academic publishing of international standards and patenting of new technologies for industrial use.
ACADEMIC SKILLS

The students are taught the most advanced curriculum by trained faculty and experienced staff. They are given hands-on experience in handling advanced analytical equipment & unique sample preparation facilities.

LITERATURE AND PATENT SEARCH SKILLS

Students are trained to search, collate and analyse information from published literature and patents using advanced search engines and international databases.

PROBLEM SOLVING & ANALYTICAL SKILLS

The courses and year-long projects are aimed at building analytical skills of the students, emphasis is given on analysis of acquired data, reasoning to establish cause-effect relationships and self learning to explore answers to a given problem. This makes our students eligible for jobs in Finance, Management, Consulting, Software and other sectors.

WRITING AND PRESENTATION SKILLS

All courses and project work involve frequent presentations in the class and in front of expert committees. Many research groups have weekly meetings and presentations. The students are required to write project reports, research papers and thesis under guidance of a faculty supervisor with an aim to develop their communication skills.

PLANNING AND EXECUTION SKILLS

Students are involved in a project starting from procurement of materials (locally or from abroad), design of experiments to operating specialized equipment and even getting these repaired. All these require proper planning, time management, learning of rules and regulations and execution to achieve desired results.

INTERPERSONAL SKILLS & ADAPTABILITY

Though the students come from varied backgrounds, our on campus residential set-up provides them with enormous opportunities to learn to live and work together, help each other, organize events, participate in variety of extracurricular activities and adapt a new lifestyle unmatched with any other campus in the world.

AREAS OF EXPERTISE

SMART & INTELLIGENT TEXTILE MATERIALS

Textile materials with functional properties such as super-hydrophobicity, self-cleaning activity, antimicrobial or antifungal properties, shape changing and heat or chemical storage capability.

PROTECTIVE TEXTILES

Textile materials which are engineered and chemically finished to impart protection to the wearer from a variety of external agencies making the material bullet-proof, flame and heat resistant, extreme temperature-resistant, UV protected, cut and stab resistant.

MEDICAL AND HEALTHCARE TEXTILES

Textile materials optimized and specially engineered to be applied for special-use applications such as tissue engineering, sutures, bio-material based wound dressings, compression bandages and therapeutic textiles.

STRUCTURAL COMPOSITES

Development of high-performance composites using textile as building blocks competing with the conventional materials for industries such as automotive, aerospace, medical and construction opening new scopes for development.

CLOTHING COMFORT

Heat and moisture management in active wears for superior comfort properties such as wicking, wicking and drying, thus a critical controllable characteristic for specialty textiles such as sports and protective textiles.

- Machine and Process Designing
- Flexible and Wearable Electronics
- Medical Textiles
- Filtration and Industrial Textiles
- Sustainable Technologies
RECRUITMENT PROCESS-FLOW:

1. Invitation to recruiters
2. Filling the Job Notification Form (JNF) by recruiters
3. Registration of the recruiters with the institute
4. Finalization of JNF form and short-listing of students.
5. On campus interviews and enlisting the selected students.

For further information proceed to the following link: https://tnp.iitd.ac.in/ocs/procedure.php

JOB PROFILE

B. Tech, and M. Tech. graduates in their final year may be recruited anytime starting December onwards and are available for joining in May the following year.

Doctorate candidates nearing completion of their doctoral thesis may be hired anytime of the year and may join after submission of thesis. Alternately, they may convert to part-time status and join with the permission of the faculty supervisor.

Our students are most suited for a challenging assignment and can contribute in:

- Exploring & developing new products and processes.
- Improving existing products and processes.
- Technical marketing and new market development.
- Trouble shooting, optimization and process controls.

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