POST GRADUATE PLACEMENT INVITATION 2009

NATIONAL INSTITUTE OF TECHNOLOGY, TRICHY

Introduction

Tiruchirappalli, a historical, cultural and educational city, situated on the banks of the river Cauvery, is at the geographical center of Tamil Nadu. Regional Engineering College, Tiruchirappalli (RECT) was started in the academic year 1964-65 and has been imparting excellent technical education ever since. It has been granted the status of Deemed University and upgraded to National Institute of Technology (NIT) in the year 2003.

With the cream of the engineering talent, encompassing both students and faculty, coupled with state-of-the-art infrastructure facilities, it is of little wonder that NITT today stands as one of the stalwarts of engineering education in the country. Our illustrious alumni, working at the forefront of technology all over the world stand proof to the excellence of our institution.

An ever-evolving curriculum, nurtured through vital industry-institute interaction, keeps us up-to- date with the latest technology. Consequently the institute develops technologists of value, both practical and theoretical.

NITT teaches not just the science and technology of engineering, but much more than that, it instills in each one of its students the virtues and skills needed to make difference in tomorrow's world…..

The Campus Placement Committee
National Institute of Technology, Tiruchirappalli

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Selection Process

The Management, Engineering and Science departments at NIT Tiruchirappalli offer Post-Graduate programmes leading to MBA, MCA, M.Tech., M.S.(Research), M.Sc. or PhD degrees. With this diverse set of programmes offering different specializations, NITT has stayed at the forefront of emerging technologies. Further, the selection procedure for the various Post-Graduate programmes at NITT ensures that only the very best of students make it to its campus.

MBA: The MBA programme admits students with any under graduate degree. The two year programme follows a trimester pattern covering 32 courses spread over modules of 10 weeks each and a summer project of 10 weeks.

The selection is based on the score obtained in CAT, a National Level Entrance Test conducted by IIMs. Candidates are further screened through Group Discussion and Personal Interview before final admission.

MCA: The MCA programme admits students with any under graduate degree who have mathematics in 10+2. The three year course comprises of a 6-months project, where the students gain hands on experience in the emerging technologies and 30-months of course work to develop a sound theoretical knowledge.

The selection is based on the score obtained in NIMCET, a National Level Entrance Test conducted by NITs for admission to the MCA course offered by NITs.

M.Tech: The M.Tech programme admits graduate students in core as well as interdisciplinary courses. The two year course comprises of a 12-months research project, where the students gain hands on experience in cutting edge technology and 12-months of course work to develop a sound theoretical background.

The selection is based on the score obtained in Graduate Aptitude Test in Engineering (GATE), a highly competitive National Level Entrance Examination. The top percentile candidates short listed via this examination are then screened at the departmental level through an interview process before final admission.

M.Sc.: The M.Sc. programme admits science graduates with pertinent specialization. The two year course comprises of a 6-months research project, where the students gain a sound practial experience and 18-months of course work to develop a sound theoretical knowledge.

The selection is based on the score obtained in NITT written test. Candidates are further screened through department level interview before final admission.

M.S. (Research): The M.S.(Research) programme is offered to graduates in engineering. It includes a research project, where the students get enough opportunities to carryout research in the fields of specific interest and gain hands on experience in emerging technologies and a course work which establishes a sound theoretical background.
At present, M.S.(Research) is pursued by the students in the following fields

- Computer Science and Engineering
- Power Systems
- Process Control and Instrumentation
- Welding Engineering

The selection is based on the score obtained in GATE or NITT written test. Candidates are further screened through department level interview before final admission.

Master of Business Administration

Department Profile

The department of Management Studies (DoMS) was established in 1978. The MBA programme was started in the year1982. The programme imparts in-depth knowledge in all the cross-functional areas that go towards making a complete manager. The functional expertise of the faculty acts as a catalyst for this process.

Course Profile

The programme follows a trimester pattern and imparts in-depth knowledge in the crosscuts of all academic areas and pools together resources from every functional area, thus driving home the importance of seeing the "big picture" in business. The courses are designed so as to expose the students to various theoretical concepts and the best practices of the industry. The stress towards academic excellence at NIT Trichy, combined with real inputs from practising managers provide a congenial environment for nurturing managerial experience. Further, a concentrated effort is made throughout the course to incorporate computer orientation in every functional area in order to cope up with the dynamic changes. The programme covers 32 courses spread over modules of 10 weeks each and a summer project of 10 weeks.

Curriculum

MARKETING
Brand Management
Consumer Behavior
International Marketing
Marketing on the Internet
Marketing Research
Services Marketing
Strategic Management

HUMAN RESOURCES
Change Management
Organizational Theory
Strategic Human Resource Development
Training for Results
Entrepreneurship and Small Enterprise

FINANCE
Corporate Finance
Financial Institution and Services
Investment Banking
Security Analysis and Portfolio Management
Strategic Cost Accounting & Management Control

INFORMATION SYSTEMS
RDBMS
e-Business Technologies
Knowledge Management
Multimedia Technologies
Operating Systems & Networks
Software Project Management
System Analysis and Design

OPERATIONS
Advanced Materials Management
Advanced Operations Research
Production Planning & Control
Purchasing and Inventory
Logistics Management
Supply Chain Management
Value Engineering & Waste Control

Student Activities

The classroom routine has been remarkably supplemented with efforts of the students as well as the academia in the form of clubs. They organize various events like business quizzes, stock exchange games, product promotion games, and management debates and so on, in addition to guest lectures and weekend seminars. They serve as a forum for pooling in knowledge from all the departments and as a confluence of thoughts in the form of case discussions, management games and industry interaction.The clubs have been christened as Marketus by Marketing, Finnacle by Finance, Persona by HR and Infinit-e by Systems.

Master of Computer Applications (MCA)

Department Profile

The department of Computer Applications is one of the pioneering departments of the institution that offers Information Technology courses such as MCA and one among the top two offering MCA courses in the country. It provides a good theoretical foundation through high quality teaching complemented by extensive practical training. The main objective of the programme is to provide professional training in the area of computer applications and to develop computer professionals to meet the demand of the fast growing IT industry.

Course Profile

This programme is specifically aimed at fulfilling the industry's growing need for competent software professionals. MCA is a six semester full time Post-Graduate programme spread over three years. The curriculum is designed to provide a solid conceptual foundation and an extensive focus on application of these concepts to real life situation. The curriculum covers diverse streams such as systems, application and management. In the first five semesters, the course content is a perfect blend of computer science, computer oriented mathematics and management sciences. The sixth semester is dedicated exclusively to project work.

Ongoing Projects

- Graph based classification of geometric shaped objects
- Approximation algorithm for hard problems in engineering
- A composite color-texture-object-shape feature using saturation thresh holding from the HSV color fuzzy approach for content- based image and video retrieval

Curriculum

Core Subjects

C / C++ / JAVA programming
Data structures and Algorithms
Data Base Management System
Object Oriented Analysis and Design
Operating Systems
Visual Programming
Software Engineering
Computer Networks
Data Warehousing and Data Mining
Software Architecture and Software Testing
Computer Organization and Architecture

Mathematical Techniques

Discrete Mathematics
Operations Research
Numerical and Statistical Methods

Management Sciences

Accounting and Financial Management
Management Information System

Electives

Organizational Behavior
High Performance Computing
System Programming
Image Processing

Advanced Topics

Principles of Programming language
Principles of Compiler Design
Client/Server Technology

Lab courses

C / C++ / JAVA programming
Visual Programming (.net)
Data Structures
UNIX shell programming
RDBMS
Computer Graphics

Lab Facilities

The MCA lab distinguishes itself with 60 DELL PCs and a high-speed gateway to the Octagon's central computing facilities. In addition, it also has IBM RS/6000SP along with the digital library software.

M.Tech. - Communication Systems

Department Profile

The department of Electronics and Communication Engineering was established in 1968. Recognizing the need for the development of science to go hand in hand with the development of technology, the post graduate course in communication systems was started. The department is rated very high for its expertise and pioneering contributions to the field of DSP and communications. The department strives for raising the potential capability of students through experienced and dedicated faculty.

Course Profile

The course is designed from a signal processing perspective and lays strong emphasis on rigorous mathematical foundation. The course work aims at grasping the advanced concepts and recent trends in the fields of Communication and Signal Processing. An in-depth analysis on the principles of communication and their application is the central theme of the course work. The students also undergo laboratory programmes on the design and implementation of communication subsystems based on DSP modules, fibre optic devices and components besides devoting their final year entirely to the project work.

Ongoing Projects

- RF MEMS component (reconfigurable antenna), MHRD funded R&D project
- Equalizers for wireless communication HELLOSOFT Inc, Hyderabad
- Analysis and Design of Coplanar Waveguide (CPW) Filters, AICTE Govt. of India
- Implementation of ADSL T1.143 on Onyx processor, MOTOROLA INDIA ELECTRONICS LTD, Bangalore

Curriculum

Core Subjects

Advanced Digital Signal Processing
Broad Band Wireless Communications
Linear Operators and Integral Equations
Microwave Circuits
DSP structures for VLSI
Verilog HDL
High Speed Communication Networks
Advanced Digital Communications
Optical Communication systems
Detection and Estimation
FPGA Based System Design
RF MEMS

Lab Courses

Microwave and MIC Lab
Fiber Optics Laboratory
Communication systems and Networking lab.

Lab Facilities

The course has been framed with the right blend of both hardware and software laboratories. The modern microwave laboratory is equipped with a microwave vector network analyzer, a digital spectrum analyzer and a software based MIC filter design tools. The fiber optics laboratory contains application specific soft ware packages like PHOTONICSCAD and RFsoft. In addition, a CAD center for MIC & RF MEMS has been established with application software such as IE3D and FIDELITY. Besides COVENTOR, INTELLISUIT, EMPIRE and ANSOFT HFSS have been procured.

M.Tech. - Computer Science and Engineering

Department Profile

The department of Computer Science and Engineering with its cohesive team of faculty members, offers a sound program at the UG as well as the PG levels. The curriculum is updated regularly to keep up with the growing demands and the changing trends of the software industry and research laboratories. Core courses include Programming Languages, Computer Architecture, System Software, Networking Technologies and Artificial Intelligence.

Course Profile

This programme is aimed at providing a comprehensive overview of the later-day advances in the various frontiers of Computer Science including Computer Architecture, Software Systems, Parallel and Distributed Computing and Networking and Web Technologies. The highly experienced faculty team coupled with modern computing facilities provide an environment in which students can improve their professional skills and knowledge base which are mandatory to conquer the challenges of the future. To enhance the awareness to the rapid changes in computer science, students participate in various guest lectures and workshops conducted by eminent personalities from the industry.

Ongoing Projects

- Smart and Secured Environment (Sponsored by N.T.R.O., Delhi)
- Issues related to Multicore (Sponsored by Intel)
- Implementation of Parallel Algorithms

Curriculum

Core Subjects

Advanced Concepts in Database Systems
Advanced Concepts in Operating Systems
Data Structures and Algorithms
Distributed Systems
Parallel Computer Architecture

Lab Courses

Software Systems Laboratory
Network Programming Laboratory

Electives

CAD for VLSI
Design and Analysis of Parallel Algorithms
Fault Tolerant Computing Systems
Network Security
Network Principles and Protocols
Mobile Communications
Real Time Systems

Lab Facilities

- State-of-the-art computing facility at the Octagon with Pentium IV and Sun SPARC systems.
- Servers which support the LAN also provide a Linux/Unix environment and include SUN SPARC and Silicon Graphics workstations
- Lab specially dedicated to M.Tech. students with latest configuration of i-macs.

M.Tech. - Energy Engineering

Department Profile

CEESAT- Center for Energy and Environmental Science and Technology emerged under the protocol signed by the Governments of India and the United Kingdom. The department has been established as an interdisciplinary nodal center to enhance the excellence in training, research and consultancy in Energy and Environmental science. CEESAT has been identified as center for testing small hydro power plants by Alternate Hydro Energy Center, IIT-Roorkee.

Course Profile

The two year M.Tech course on Energy Engineering aims at offering a competency based education to emphasize an Energy Engineer to perform tasks such as

- Choosing an energy source and evaluating its economic viability
- Setting up energy management as a regular feature
- Selecting appliances and designing suitable devices
- Energy auditing and devising conservation schemes

Ongoing Projects

- DST Sponsored project "Experimental and Simulation Studies on CO2 Sequestration"
- Autonomous and Non-Autonomous operation of hybrid wind driven Permanent Magnet Alternator and Photovoltaic Array Generator
- PV Panel-Power improvement by cooling technique
- Vapour Absorption Refrigeration–Flue gas heat recovery

Curriculum

Core Subjects

Energy Audit & Management
Optimum Utilization of Heat and Power
Solar Energy Engineering
Wind Energy Engineering
Batteries and Fuel Cells
Computational Fluid Dynamics
Fuels and Combustion Technology
Nuclear, Hydel & OTEC Power Plants

Lab Facilities

Equipment such as:

- Thermo Gravitimetric Analyzer
- Ultimate Analyzer
- Delta T Logger
- Fluidized Bed Gasifier
- Pyroheliometer
- Pyronometer
- CHNO analyzer
- Data Loggers and Noise Level Indicators
- Wind/Solar Energy Converters
- Spectro photometer
- Vapour Absorption Refrigeration System

Softwares

- CFX-11, Gambit, Hysys, Fluent 6.2, Phounex, Matlab, Aspen plus.

M.Tech. - Environmental Engineering

Department Profile

The department of Civil Engineering has been one of the oldest and finest departments of the institute. Established in 1964, it has been involved in making professional civil engineers. The highly qualified and experienced faculty along with its engineering consultancy centre has been instrumental in bringing the institute to the fore front of academic and consulting activities.

Course Profile

Post Graduate programme in Environmental Engineering was started as a interdisciplinary (Civil, Chemical & Mechanical Eng.) programme under TEQIP in 2006. The course is aimed to develop professional engineers with leadership qualities in engineering aspects of land & water management, environmental assessment, skills in water supply, waste water treatment, land reclamation and solute transport. In addition it will enable engineers to converse scientifically with biologists, ecologists and resource managers. With these skills, graduates will be able to play a leading role in developing engineering solutions to a wide range of problems and opportunities within an ecologically sustainable context.

Ongoing Projects

- Remote sensing application in Ambient Air Quality Monitoring, sponsored by MHRD
- Engineered solid waste management, sponsored by MHRD

Curriculum

Core Subjects

Air Quality Management
Biological Process Design for Wastewater Treatment
Environmental Chemistry & Microbiology
Physico-Chemical Process for Water & Wastewater Treatment
Solid & Hazardous Waste Management
Transport of Water & Wastewater

Electives

Bio-Energy & Engineering
Contaminant Transport Modeling
Environmental Impact Assessment
Industrial Wastewater Management
Water & Air Quality Models

Lab Facilities

- Well-equipped to carry out testing, analysis, research and development including consultancy.
- Key equipment include Atomic Absorption Spectrophotometer, UV Visible Spectrophotometer, Ion Analyser, COD Digester, Orbital Shaking Incubator, Flue Gas Analyser, Vehicle Exhaust Analyser and Diesel Smoke Meter.
- Key software include Auto CAD, Visual MODFLOW, Arc GIS, Arc View, Arc Info, ENVI, RIAM, QUAL2E.

M.Tech. - Industrial Engineering

Department Profile

The Production Engineering department was established in the year 1981. The department aims at imparting education and training that helps the students in ensuring a challenging and satisfying career. In the modern rapidly changing technologically competitive world, there is an immense need of technocrats specialized in manufacturing and operations. Realizing this trend in the global scenario, the department offers two post graduate programmes in Industrial Engineering and Manufacturing Technology.

Course Profile

Industrial Engineering is a unique discipline which amalgamates both the engineering skill with business sense and managerial abilities of technocrat. By focusing on present industrial scenario and their needs, the course equips the student with operational management skills to utilize the available resources in a cost effective and productive way. The course ensures holistic transformation of undergraduate scholars to a dynamic and innovative Industrial Engineers who can design & integrate systems, analyze problems and provide permanent solutions with business consciousness.

Ongoing Projects

- Development of models and algorithm for the functional integration in supply chain.
- Modeling and Simulation Lab-Server with Clients (TEQIP)
- Modernization of Engineering Practice Laboratory
- Hybrid Decision Making Tool for Intelligent Manufacturing (MHRD-R&D)

Curriculum

Core Subjects

Advanced Operations Research
Analysis and Control of Manufacturing Systems
Modeling and Simulation
Probability and Statistics
Quality Engineering
Work Design and Ergonomics

Electives

Enterprise Resource Planning
Facilities Planning
Financial Management
Project Management
Supply Chain Management
Value Engineering

Lab Facilities

- Simulation packages – Simquick, Arena, Witness
- Operation Management packages – OM Expert, TORA
- CAD/CAM packages – Pro/E Wildfire, Ideas, Unigraphics, Ansys 8.0
- Computer Programming Languages – C/C++, Java, Visual Basic, Oracle

M.Tech. - Industrial Safety Engineering

Department Profile

The Mechanical Engineering department has the reputation of being among the finest in the country since its inception. Keeping itself upto date with the latest developments in the field and with a dedicated, highly qualified and experienced faculty members in all streams of mechanical engineering, the department aims at providing world class facilities for education and research. An interactive relationship, maintained between the students and staff, ensures effective learning.

Course Profile

Post Graduate programme in Industrial Safety Engineering was started in 1985, with the support of BHEL Trichy, as a multidisciplinary programme. The course aimed at providing the core technical knowledge and managerial skills to administer Health, Safety & Environment programme. Continually updated curriculum addressing the current and future needs and the faculty team consisting of practicing HSE professionals facilitate in transforming the students to competent professionals.

Co-curricular Activities

- National Safety Week Celebrations
- Industrial Visits

Professional Training

- OHSAS 18001 Programme
- First-aid training by St Johns Ambulance
- Fire fighting training
- EMS Lead Auditor Course

Curriculum

Core Subjects

Probability and Statistics
Safety Management
Computer Aided Risk Analysis
Occupational Health and Hygiene
Regulations on Health, Safety and Environment
Safety in Chemical Industries
Safety in Material Handling
Fire Engineering and Explosion Control

Electives

Safety In Engineering Industries
Human Factors Engineering
Environmental pollution control
Electrical Safety

Lab Facilities

- **PPE (Personal Protective Equipment) Lab :** Safety Helmets, Safety Shields, Safety Shoes, Safety Belt, Safety Gloves, Leather Hand Sleeve, Leather Leg Guard, Ear Muff, Ear plug, Safety Aprons, Safety Goggles, Safety Respirators, Dust Mask, BAM FRICTION TESTER.
- National Model Center for Occupational Health Services (OHS), an ILO/UNDP project of BHEL, Trichy.
- Sound level meters, Noise dose meters, Air samplers (Drager tubes, Multi gas analyzer &Elutriators) WBGT index meter & KATA thermometer, LUX meter, Tread mill & ECG for measuring work capacity.

M.Tech. - Manufacturing Technology

Department Profile

The Production Engineering department was established in the year 1981. The department aims at imparting education and training that helps students in ensuring a challenging and satisfying career. In the modern rapidly changing technologically competitive world, there is an immense need of technocrats specialized in manufacturing and operations. Realizing this trend in the global scenario, the department offers two post graduate programmes in Manufacturing Technology and Industrial Engineering. It was declared as the best department of the institute for the academic year 2006-2007.

Course Profile

The industrial scenario today is poised for modernization and growth in manufacturing. Given the paucity of manufacturing professionals, the course intends to shape the students in tune with advanced methods of manufacturing technology by imparting essential inputs on practical and theoretical exposures vogue in present day industries. The course aims at producing world class manufacturing engineers armed with knowledge in diversified field of manufacturing.

Ongoing Projects

- Hybrid Laser-GMAW Welding of AISI 904L Super Austenitic Stainless Steel. (DST)
- Joining of Thermoplastics Composite Pipes. (DST)
- Comparison of hole expansion ratio, stretch flange ability, wrinkling behavior and crash worthiness of high strength IF steel tailor welded blanks, fabricated by various welding techniques. (DST)
- Improvement of wear resistance of Ti-alloy disc brake rotor through laser surface melting. (DST)
- Neural network based prediction of deformation, densification of workability of nano Ti C particles reinforced Al matrix nano composites. (DST)

Curriculum

Core Subjects

Tool Engineering and Design
Production Automation and CNC Technology
Mechanics of Metal Forming
Flexible Manufacturing System
Finite Element in Manufacturing
Casting and Welding Technology
Mathematical Methods
CAD/CAM

Electives

Manufacturing of Products from Non-metallic materials.
Robotics
Machine Tool Technology
Tero Technology
Tolerance Technology
Project Management
Intelligent Industrial Systems
Quality Engineering

Lab Facilities

- CAD/CAM software – Pro/E wildfire 3, Catia V5R12, Uni Graphics NX2, ANYSYS 11, IDEAS, Auto CAD 2006.
- Machining Centers- HARDFORD FANUC VMC, LEADWELL turning center, HMT-STC turning center, TRIAC milling machine, EMCO PC TURN 55, EMCO PC MILL 55.
- Robotics- RHINO X-3 Robot work cell, Machine Vision system, SCORBOT ER5 Plus.

M.Tech. - Materials Science

Department Profile

The department of Metallurgical and Materials Engineering was established in 1967. Since then the department has been one of the premier centers of excellence in the field of Metallurgy and Materials Science. Highly qualified faculty handle the lectures and in addition to that guest lectures are delivered by eminent professionals from premier organizations such as DRDO, IISc, WRI-BHEL, and IGCAR.

Course Profile

The programme in Materials Science has been designed to meet the requirement of experts in the fields of Manufacturing, Materials Development and Materials Research. The course work covers both metallic and non-metallic materials and includes subjects such as Metallic Materials and Experimental Techniques on Metallurgy and subjects such as Engineering Materials, Ceramic Materials, Polymers & Composites, and Electrical, Magnetic & Opto-electronic Materials on Materials Science. The students are particularly encouraged to get a feel of the latest developments in Engineering Materials.

Ongoing Projects

- Development of High Strength Aluminium Alloys for High Temperature Applications by Mechanical Alloying, MHRD
- Development of High Performance Ti-Al Inter-metallic Composites prepared by Mechanical Alloying, DRDO
- Development of High Strength High Conductivity Cu-Cr in-situ Composites prepared by Mechanical Alloying, DST Young Scientist Research
- Corrosion Behaviour of Super Duplex and Super Austenitic Stainless Steel Weldments in Marine Environments, NRD

Curriculum

Core Subjects

Physical Metallurgy
Manufacturing Process
Materials Characterization
Ceramic Materials
Polymers and Composites
High Temperature Materials
Engineering Mathematicsl

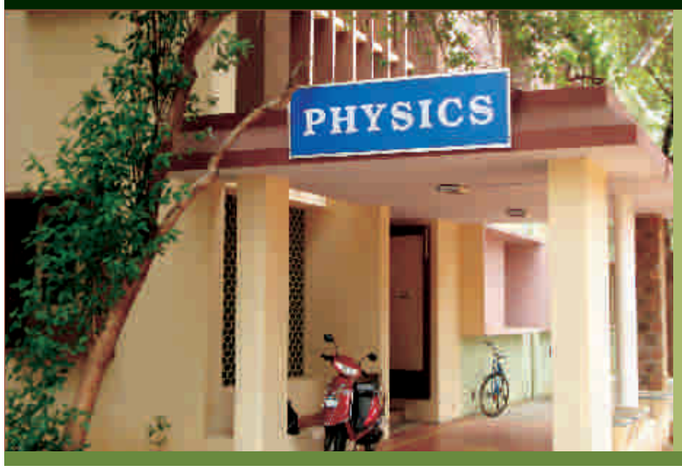
Electives

Nano Materials and Applications
Mechanical Behaviour of Metals
Non-Destructive Testing and Analysis
Corrosion Science and Engineering
Metallic Materials
Statistical Quality Control and Engineering
Particulate Processing

Lab Facilities

- Powder Metallurgy - Screw Press, High Temperature Furnaces & Ball Mills.
- Surface Engineering - Slurry Erosion Unit, Pulse Rectifier, Wear Testing Units.
- Characterization - Scanning Electron Microscope, High Resolution Microscopes and Image Analyzer.
- Mechanical Testing - UTM 100T & 60T, Tensometers 2T, Servo Hydraulic Testing Unit for Fatigue and Fracture Toughness Evaluation, Low Load and Microhardness testers, Creep and Fatigue Testing Units, Impact Testing Machines for Ambient and Cryotemperatures.
- Corrosion Centre - Computer Controlled ACGi11 Scanning Galvanostat / Potentiostat, Vacuum impregnation Unit and Salt Spray unit.
- Process Metallurgy - Thermocole Modeling Software, Thermo-Chemical Calculation, High Temperature Pyrometer.

M.Tech. - Non - Destructive Testing



Department Profile

The department of Physics is one of the oldest and active organs of NITT. It has always played a vital role in building a team of fresh technocrats and brilliant researchers. The distinguished faculty members contribute to science and technology in various key areas like Laser Instrumentation, Laser and its Applications, Crystallography, Ultrasonics, Thin Film Technology, Nanoscience and Technology, Fiber Optic Sensors and many of the emerging fields. This programme is indeed a testimony for the interaction between Industry and Educational Institution. NITT enjoys the pride of offering this unique postgraduate programme in whole of the country for nearly two decades.

Course Profile

Non-Destructive Testing (NDT) plays vital role in ensuring reliability and quality of the products of various engineering industries. The first two semesters are devoted to theory, practical and field work and the final two semesters are exclusively meant for carrying out project work at industries and research institutions such as IISc, IGCAR, BHEL WRI and HAL. Core faculty of the institute and senior experienced engineers of NDTL / BHEL handle the subjects. Students are exposed to the trade through visits to various laboratories and workshops in BHEL. Students concurrently get qualified for ASNT level II, while they undergo field work during the first two semesters at NDTL / WRI.

Curriculum

Core Subjects

Conventional NDT Techniques

Basic Metallurgy and Fracture Mechanics
Eddy Current Testing
Fabrication Technology
ISO-9000, ISO-14000 Series and Quality Concepts
MPI and LPI Methods of Testing
Radiation Safety
Radiography Methods of Testing
Ultrasonic Method of Testing

Advanced NDT Techniques

Acoustic Emission Inspection
Advanced Optical Inspection
Leak Testing
Magnetic Resonance Imaging
Optical and Acoustical Holographic Techniques
Photo Elasticity
Strain Gauges
TOFD, Laser Ultrasonics

Electives

Boiler Auxiliaries and Performance Evaluation
Digital Image Processing & Digital Signal Processing
Fiber Optic Sensors
Nanoscience and Technology
Thin Film Technology

Lab Facilities

- NDTL – BHEL
  - Radiography Testing - X-Ray and Gamma Ray Sources
  - Magnetic Particle Testing
- WRI – BHEL
  - Ultrasonic and Liquid Penetration Inspection
- SSTP - BHEL
  - Eddy Current Testing
  - Advanced NDT such as Thermograph, Leak Testing, Optical Holography and Acoustic Emission are also dealt.

M.Tech. - Chemical Engg. (Plant Design)

Department Profile

Since its inception in 1968, the department has been the premier center for excellence in the field of Chemical Engineering. The department is backed by highly qualified and experienced faculty, most of whom have been involved in various industrial projects and consultancies. The students have been actively participating and presenting many technical papers in India and have won several National and International Level Design competitions.

Course Profile

The department offers a post graduate course in Plant Design to meet the growing demand for design engineers in process industries and consultancy. With the rapid development of chemical industries based on petroleum, coal and alcohol, process design of chemical process equipment has assumed importance. The design and fabrication of heat, mass and momentum transfer equipments is taught along with chemical reaction engineering and process development.

Ongoing Projects

- Cellulose nano fibers from aquatic seeds.
- Studies on augmentation of heat transfer in heat exchanger fitted with different inserts and different fluids.
- Carbon dioxide separation from power plant emissions.
- Manufacturing of hydrogen from bio mass for fuel cell applications.

Curriculum

Core Subjects

Advanced Process Control
Process Modeling and Simulation
Computer Aided Design
Fluid Particle Technology
Chemical Reactor Design and Analysis
Advanced Fluid Dynamics and Heat Transfer
Computational Techniques in Chemical Engineering

Electives

Computational Fluid Dynamics
Pinch Technology
Bio Process Engineering
Environmental Impact Assessment
Principles and Practices of Energy Conservation

Lab Facilities

- Unit Operations.
- Chemical reaction , technical analysis , momentum transfer and mechanical operations laboratory.
- Process control and instrumentation with plant condition simulator, energy trainer and analog simulator and DDC systems.
- Bio chemical laboratory with biostat E, fluidized Bed reactor and UV spectrometer.
- Software packages – CFD , Aspen Plus, Hysis , Chem CAD, Matlab.

M.Tech. - Power Electronics

Department Profile

The department of Electrical and Electronics Engineering in National Institute of Technology Tiruchirappalli has grown from a modest beginning in 1964 into a large, fully equipped teaching and research department. The Department has a highly qualified faculty and equipped with state-of-the-art computer systems and library facilities. Department shares its research experience through technical symposia.

Course Profile

This course emphasizes on the foundation and technologies of modern power electronics and automation of power system. It deals with state-of-the-art techniques in design and development of power modules and power conversion. It also covers subjects on flexible AC transmission, High voltage DC transmission, Power electronics drives, embedded systems, and advanced topics in micro processors and microcontrollers which are very much needed to meet the growing challenges in the field of electrical engineering.

Ongoing Projects

- Neural controller for integrated Wind/Solar system for Battery Charging
- Development of Neuro Fuzzy Controller for High Performance Voltage Controlled Induction Motor Drive
- Application of Genetic Algorithm for High Performance Power Converters
- Unified Power Flow Controller
- Control of Hybrid Wind Driven Induction Generator and PV Array Distributed Generator for Isolated and Grid-connected Operations

Curriculum

Core subjects

Programmable Digital Controllers in Power Electronic Applications
Design and Development of Power Modules
Switched Mode Power Conversion
Power Conversion Techniques
Power Electronics Drives
System Theory

Electives

Computer Networks Power
Embedded Systems
Flexible AC Transmissions System
Analysis and Design of Artificial Neural Networks
Power System Planning and Reliability
High Voltage DC Transmission

Lab Facilities

- Power Electronics Laboratory
- Microprocessors and Microcontrollers Laboratory
- Electrical Drives Laboratory
- Simulation Laboratory Software like MATLAB / SIMULINK, MP LAB IDE, PROTEUS VSM (LAB CENTRE).

M.Tech. - Power Systems

Department Profile

The department of Electrical and Electronics Engineering in National Institute of Technology Tiruchirappalli has grown from a modest beginning in 1964 into a large, fully equipped teaching and research department. The department has a highly qualified faculty and equipped with state-of-the-art computer systems and library facilities. Department shares its research experience through technical symposia.

Course Profile

This course is designed to provide sound knowledge on the various aspects of modern Power systems with more thrust on the key concepts of power electronics and automation of power systems. It deals with sophisticated techniques in power system analysis, stability evaluation, planning, reliability and forecasting.

Ongoing Projects

- Controller for PV system with Maximum peak power tracker.
- Fault detection in Power system network using Fuzzy-Logic Approach.
- Performance Investigation UPFC in a SMIB System for Power Flow Control and Power Oscillation Damping.
- Space vector PWM Controlled shunt Active Power filter for Power Conditioning

Curriculum

Core Subjects

Flexible AC transmission systems
High voltage DC transmission
Power system operation and control
Computer methods for power system analysis
Power converters
Industrial control electronics

Electives

System Theory
Computer Networks
Real time & Embedded Systems
Analysis and design of artificial neural networks
Power system planning and reliability
Renewable power generation sources

Lab Facilities

- Electrical Machines Laboratory
- Power System Simulation Laboratory
- Power Electronics Laboratory
- Software Packages like MATLAB / SIMULINK, PSCAD, ETAP, Mi Power, POWER WORLD SIMULATOR.

M.Tech. - Process Control & Instrumentation

Department Profile

The M.Tech. program in Process Control & Instrumentation is an interdisciplinary course jointly offered by department of Instrumentation & Control Engineering and department of Chemical Engineering.

Course Profile

It was started in the year 1996 with an aim to train man power in the area of Control and Instrumentation and to satisfy the demands arising from various industries and R&D establishments. It is backed up by young and highly motivated faculty members. The right blend of theory and state-of -the-art-lab facilities makes the course more effective. The curriculum is regularly updated to keep pace with changes in technology and to cope up with the varying demand from industries.

Ongoing Projects

- Micro-resonating beam Differential Pressure Sensor: Simulation and electronic interface design, ISRO, GOI.
- Online control of Multivariable process using Soft Computing, DST, GOI.
- Towards reliable and smart Air-vehicles, UKIERI.
- Uncertainty analysis of chain error in Instrumentation system for Space application, ISRO, GOI.

Curriculum

Core Subjects

- Advanced Process Control.
- Computer Control.
- Industrial Automation.
- Instrumentation.
- Modern Control Systems.
- System Modeling & Simulation
- Piping, Flow sheeting & Instrumentation.

Electives

- Chemical Reactor Design.
- Computational Fluid Dynamics.
- Computer Networks.
- Embedded Systems.
- Micro Electro Mechanical Systems.

Lab Facilities

- Embedded Systems Lab
- Virtual Instrumentation Lab
- Transducer Design Lab
- Microcontrollers Lab
- MEMS Design center
- Control and Instrumentation Lab
- CFD lab
- Process Control Lab

M.Tech. - Structural Engineering

Department Profile

The department of Civil Engineering has been one of the oldest and finest departments of the Institute. Established in 1964, it has been involved in making professional Civil Engineers. The highly qualified and experienced faculty along with its engineering consultancy centre has been instrumental in bringing the Institute to the fore front of academic and consulting activities.

Course Profile

The aim of this course is to fulfill the growing demand for specialists in Structural Engineering. Practicing engineers will find this course very useful as it will enable them to update their knowledge in the field of structural behavior and design and will equip them to solve complicated structural engineering problems. The curriculum is designed so as to give exposure on areas of structural analysis, design, detailing and construction. The course also familiarizes the use of general purpose and application oriented softwares in the field of structural engineering, finite element analysis and optimization.

Ongoing Projects

- Geotechnical Investigation for New Plant Area – BHEL
- Geotechnical Investigation for new power transmission line project across the Cauvery river – TNEB
- Non Linear soil structure investigation on piles on sloping ground – Department of Science and Technology
- Structural Assessment of bridges and Railway over bridges at Thanjavur and Thiruverambur.

Curriculum

Core Subjects

Matrix Methods of Structural Analysis
Advanced Concrete Technology
Theory of Elasticity and Plasticity
Structural Dynamics
Advanced Steel Structures
Maintenance and Rehabilitation of Structures
Failure Analysis of Structures
Theory of Plates
Bridge Engineering
Finite Element Analysis
Advanced Concrete Structures
Seismic Design of Structures

Audit Subjects

Smart Structures
Non - Linear Analysis

Lab Facilities

- Structural Engineering laboratory is equipped with 100ton capacity UTM, Heavy Testing Floor with loading frame, Load Cells, Strain Data Logger, Photo Elastic Polariscope.
- Advanced instruments include 16 channel Data log system, ACLVDT, Electro-chemical corrosion measuring instrument
- NDT Equipments include Schmidt Hammer, Ultrasonic Testing Equipment, Electronic Cover Meter
- Software includes ANSYS 11, AutoCAD, STAAD Pro, STRAP, SAP, NASTRAN, NISA 3, GTStrudl 6.0, C & C++

M.Tech. - Thermal Power Engineering

Department Profile

The Mechanical Engineering department has had the reputation of being among the finest in the country since its inception. Keeping itself up to date with the latest developments in the field and with a dedicated, highly qualified and experienced faculty members in all streams of mechanical engineering. The department aims at providing world class facilities for education and research. An interactive relationship, maintained between the students and staff, ensures effective learning.

Course Profile

This programme is designed to provide a sound and in-depth training in various aspects of design, manufacture, test, control and evaluation of Thermal Power Equipment. Thermal Power Plants have an increasingly dominant role to play in the vital power generation sector. The course content aims at developing the necessary analytical and technical competence among engineers in this area.

Ongoing Projects

- Process Modeling and Online Monitoring of Laser Beam Welding sponsored by DST.
- Experimental Investigation and Finite Element Simulation of Workability of Al-TiC Powder Metallurgy Composites during Cold Upsetting sponsored by DST.

Curriculum

Core subjects

Mathematical Methods
Fuels, Combustion and Emission Control
Advanced Fluid Mechanics
Advanced Heat Transfer
Analysis of Thermal Power Cycles
Fluid Mechanics of Turbomachines
Instrumentation
Computational Fluid Dynamics

Electives

Analysis and Design of Pressure Vessels
Energy Conservation, Management, and Audit
Advanced IC Engines
Advanced Refrigeration and Air Conditioning
Boiler Auxiliaries and Performance Evaluation
Heat Transfer Equipment Design
Installation, Testing and Operation of Boilers
Environmental Pollution Control
Non-Destructive Testing and Failure Analysis
Frontier Materials

Lab Facilities

- Thermal Lab - Advanced instruments like integrated thermal analyzer, temperature calibration bath and infrared thermometer.
- Other Labs include Metrology Lab, Turbo Machines Lab, Dynamics Lab, Heat and Mass Transfer Lab, Refrigeration and Air conditioning Lab and Automobile Lab.
- CAD Centre - Advanced Modeling and Analysis packages, AutoCAD 2006, Ansys 11, Unigraphics, Pro/E, IDEAS and Catia. CFD packages like Fluent/Gambit, Phoenix, Online flue gas analyzer, Ultimate analyzer and Hightech calorimeter.

M.Tech. - Transportation Engineering & Management

Department Profile

The department of Civil Engineering is one of the oldest and finest department of the institute with a vision of shaping infrastructure with societal focus. Established in 1964, it has been involved in developing professional Civil Engineers, offering continuing education and interacting with industry with emphasis on research and development. The highly qualified and experienced faculty along with its engineering consultancy center has been instrumental in bringing the institute to the fore front of academic and consulting activities.

Course Profile

The Master of Engineering Course in Transportation Engineering and Management, started in 1971 with MHRD approval under the University of Madras, is a pioneering one. The unique feature of our course is that it emphasizes the importance of Management in Transportation projects. One month In Plant training program is arranged for students at the end of second semesters in companies such as CRRI Delhi, RITES Ltd, Gurgoan, L&T Ramboll, Consulting Engineering Services (I) Pvt. Ltd, Wilbursmith(P)Ltd etc.

Ongoing Projects

- Rural Road Pavement Performance studies sponsored by PMGSY
- Coir Geotextile Reinforced Low Volume Rural Road Pavement Performance Study.
- Research oriented projects on pavements.
- Rural Road Traffic Volume Study
- GIS based road network analysis

Curriculum

Advanced Courses

Traffic Engineering and Highway Geometrics

Pavement Analysis and Design

Computer Simulation Applications

Transportation and Land use Planning

Road Transport Management and Economics

CAD in Transportation Engineering

Electives

Transportation Systems

Geographical Information systems

Intelligent Transportation systems

Bridge Engineering

Highway Materials

Environmental Impact Assessment

Project Management

Lab Facilities

- Major Lab Equipments
- Dynamic Cone Penetrometer
- Geoguage
- CO/HC Exhaust Gas Analyser
- Pavement Core Drilling Machine
- Automatic Compactor for Bituminous Mixes
- Benkelman Beam
- Modified Marshall Stability Apparatus
- Electronic California Bearing Ratio Test Apparatus
- Portable Axle/Wheel Weigh Pad
- Global Positioning System
- Fatigue Testing Machine
- Global Positioning System
- Buoyancy Balance
- Merlin Roughness Indicator

M.Tech. - VLSI Systems

Department Profile

The department of Electronics and Communication Engineering was established in 1968. Recognizing the need for the development of science to go hand in hand with the development of technology, the post graduate course in VLSI Systems was started. The department has made pioneering contribution to the field of Microelectronics and VLSI and strives for raising the potential capability of students through experienced and dedicated faculty.

Course Profile

The programme in VLSI Systems is a judicious blend of ASICs, FPGA/PLD based systems and Digital Signal Processing. This course is designed to provide the students in depth understanding of principles of Digital System Design and Testing, Design of Analog Systems, Design with ASICs and other advanced courses like design issues in SOC. The course is well supported by highly sophisticated ECAD laboratories, where the students unleash their ideas. Equipped with powerful Sun ULTRA workstations and with complete array of ECAD tools, students are given every opportunity to learn. Cadence front-end and back-end tool flow gives the students an industry-like learning environment.

Ongoing Projects

- Optimization Techniques for FPGA Implementation of SDR funded by DST
- FPGA Based Waveform Generator for Pulse Compression Radar funded by LRDE, Bangalore
- Special Man power Development Programme (SMDP) in VLSI Design funded by MIT (Ministry of Information and Technology)

Curriculum

Core subjects

Analog VLSI
Basics of VLSI
Digital System Design
Low Power VLSI Circuits
Design and Synthesis Using Verilog HDL
Electronic Design and Automation Tools
Design with ASICs
VLSI System Testing

Electives

FPGA Based System Design
DSP Structures for VLSI
VLSI Digital Signal Processing Systems
Advanced Computer Architecture

Lab Facilities

- Cadence tools (Virtuoso, Encounter, Spectre, Assura)
- Synopsys tools (VCS, Design Compiler, Formality, Prime time, Prime Power, Astro, Jupiter XT, Hercules, Star RCXT)
- Mentor Graphics tools (IC-Station, Leonardo Spectrum, Calibre, Physical verification tools, Parasitic Extraction tools)
- Software-Hardware Co-design using SystemC, Mixed signal design using VHDL-AMS, Analog Tools (Hspice, Nano Sim, pathmill)
- FPGA tools from XILINX (FPGA foundation series, project manager) and ALTERA(Maxplus II & Quartus II), HDL Designer tool kit, ModelSim & ASIC design tools from Mentor Graphics consisting of Analog & Mixed signal ADMS
- FPGA kits from Xilinx (XC4000, Spartan, Spartan II , Spartan III ,Virtex XC100, Virtex II Pro XC2VP30) and ALTERA(Apex2011E, Cyclone C6X, C30X)
- Apart from this, the department also possesses mixed simulation tools like PSpice, SABER & OrCad PCB Design tool and mixed signal design tools like CoWare(Platform Architect , Signal Processor, Designer Processor Designer)

M.Tech. - Welding Engineering

Department Profile

The department of Metallurgical and Materials Engineering was established in 1967. Since then the department has been one of the premier centers of excellence in the field of Metallurgy and Materials Science. Highly qualified faculty handle the lectures and in addition to that guest lectures are delivered by eminent professionals from premier organizations such as DRDO, IISc, WRI-BHEL, and IGCAR.

Course Profile

The Post-graduate programme in Welding Engineering was started in 1978 in collaboration with Welding Research Institute (WRI) – BHEL, Tiruchirappalli to meet the growing demands of technological expertise in metal fabrication Industries. Both the regular faculty of the Metallurgical and Materials Engineering department and the experts from WRI handle theory and practical classes. The practising professionals from WRI share their expertise with the students which makes learning effective.

Ongoing Projects

- Development of High Strength Aluminium Alloys for High Temperature Applications by Mechanical Alloying, MHRD
- Development of High Performance Ti-Al Inter-metallic Composites Prepared by Mechanical Alloying, DRDO

Curriculum

Core Subjects

Physical Metallurgy
Welding Processes
Advanced Welding and Allied Processes
Welding Metallurgy
Welding Application Technology
Welding Codes and Standards

Electives

Electrical Aspects of Welding
Material Characterization
Mechanical Behavior of Materials
Design of Weldments
Statistical Quality Control

Lab Facilities

- Tensile test: Servo Hydraulic UTM 50 ton for fatigue and UTM 100 & 60 ton for KK & JK evaluation, 2 ton Hounsfield tensometer, Impact test, Bend test.
- Hardness measurements: Brinell, Vickers, Rockwell, Portable and Micro hardness testers.
- Characterization: Scanning Electron Microscope, Image Analyzer, In-situ Metallographic kit, S tereo zoom microscope, Fisher Ferritscope, Laser particle Size Analyzer, AAS- Atomic Absrption Spectroscopy.
- Welding Facilities: Submerged Arc, Plasma Arc , Resistance, Gas Tungsten Arc with AC & DC pulsing and Gas Metal Arc Welding.
- Thermo Calc Modeling package.
- In addition, the students have access to the laboratory facilities at WRI-BHEL.
- Development of High Strength Aluminium Alloys for High Temperature Applications by Mechanical Alloying, MHRD.
- Development of High Performance Ti-Al Inter-metallic Composites Prepared by Mechanical Alloying, DRDO.
- Development of High Strength High Conductivity Cu-Cr in-situ Composites Prepared by Mechanical Alloying, DST Young Scientist Research.
- Corrosion Behaviour of Super Duplex and Super Austenitic Stainless Steel Weldments in Marine Environments, NRD.

M.Sc. Applied Chemistry

Department Profile

The department of Chemistry was established in 1971. It possesses excellent facilities and sophisticated equipment for the students during their course of study. The department has five laboratories which are well equipped to meet the demand of the students. Recent achievements include a collaborative investigation study with E.Merck, USA, Virginia Tech., USA and National Cancer Institute, USA towards the development of the new drug discovery.

Course Profile

The post graduate programme in applied chemistry apart from the Research Programme in the fields of Natural products, Biochemistry, Bioinorganic Chemistry and Water Treatment. The competently designed and regularly reviewed curriculum, synergized with periodical industrial visits, enable the students to cater the growing needs of industry and the challenging trend of the research laboratories.

Ongoing Projects

- Silica immobilized Ruthenium- and enzyme-catalyzed dynamic kinetic resolution of secondary alcohols: A novel approach for chiral synthesis.
- Synthetic, structural, DNA-binding and photocleavage studies of Ru(II) and Ru(III) complexes with modified benzimidazole ligands.
- Green conversion of alcohols to carbonyl compounds in ionic liquids using nickel catalysts containing PPh3 and N-(2-pyridyl)-N'-(salicylidene) hydrazine ligands.
- Direct Conversion of Solar Radiation into electricity through dye-sensitized solar cells.

Curriculum

Core subjects

Organic Chemistry
Inorganic Chemistry
Physical Chemistry
Medicinal Chemistry
Analytical Chemistry
Polymer Chemistry
Petroleum and Petrochemicals
Computational Methods in Chemistry
Unit Operations and Process
Spectroscopic Techniques

Lab Courses

Organic Qualitative and Quantitative Analysis
Inorganic Qualitative and Quantitative Analysis
Physical Chemistry
Industrial Chemistry

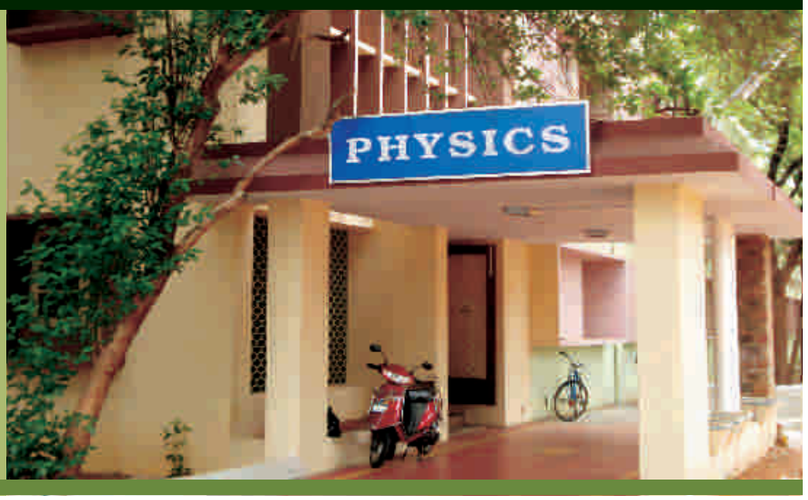
Lab Facilities

- Wet analysis lab
- Research lab
- Sophisticated instruments lab
- High performance liquid chromatography
- Fourier transform IR spectrophotometer
- UV visible spectrophotometer
- Auto magnetic susceptibility balance
- Electro-chemical analyzer
- Pulse polorograph, Fluorimeter
- Potentiostat
- BOD incubator cum analyzer
- Thermo gravity / Differential thermal analyzer
- Electronic orbital shaker with incubation hood
- Physical Chemistry lab

M.Sc. - Applied Physics

Department Profile

The department of Physics is one of the oldest and active organs of the institute. It has always played a vital role in building a team of fresh technocrats and brilliant researchers. The distinguished faculty members contribute to Science and Technology in various key areas like Laser Instrumentation, Laser and its Applications, Crystallography, Ultrasonics, Thin Film Technology, Nanoscience and Technology, Fiber Optic Sensors and many emerging Fields.



Course Profile

The post graduate programme in applied physics is designed to offer in-depth knowledge in various aspects of science and technology to match the needs of applied areas such as digital signal and image processing, fiber optics communication, programming skills, thin film technology and latest trends of nanotechnology. The programme curriculum is not restricted to pure physics alone but involves interdisciplinary topics which showcase the possibilities of physics in other fields also.

Ongoing Projects

- Design of fiber optic sensors for measuring thickness of thin transparent materials and on-line monitoring of refractive index of liquids, MHRD.
- Bifurcations and Chaos in periodically pulsed Nonlinear Electronic Circuits, DRDO.
- Development of Micro plasma spraying Technique for the preparations of Nanomaterials, DST.

Curriculum

- Digital Signal and Image Processing
- Programming in C and Numerical Methods
- Microprocessors
- Electronics
- Mathematical Physics
- Electromagnetic Theory
- Instrumentation
- Fiber Optic Sensors
- Nanoscience and Technology and Applications
- Physics and Technology of Thin Films
- Sensors and Transducers
- Laser and its Applications
- Solid State Physics
- Atomic and Molecular Physics
- Thermodynamics and Statistical Physics
- Quantum Mechanics
- Classical Mechanics

Lab Facilities

- X-ray Diffractometer
- Thin Film Preparation
- Fiber Optic Sensors Lab
- Holography Lab
- Materials Processing Lab
- Nanomaterials Lab
- Robotics Lab
- UV-Visible spectrometer
- Advanced Materials Lab
- Advanced Functional Materials Lab

M.Sc. - Operations Research and Computer Applications

Department Profile

The department of Computer Applications is one of the pioneering departments of the Institution. It is committed to the cause of quality education in mathematics that forms the basis for all the other fields and IT, a field growing in leaps and bounds. It is dedicated to the mission of developing highly skilled professionals who can adapt to the dynamic changes of the IT industry.

Course Profile

This programme in Operations Research and Computer Applications (OR & CA) was started in 1993-94 and it is a multifaceted course following a three semester theory and one semester project pattern covering topics from Operations Research and Computer Applications. Course provides requisite standards to withstand the emerging challenges of the corporate world. In addition it generates quality optimizers and potential software professionals with unified foundation in the functional areas.

Ongoing Projects

- Graph based classification of geometric shaped objects
- Approximation algorithm for hard problems in engineering
- A composite color-texture-object-shape feature using saturation thresh holding from the HSV color fuzzy approach for content- based image and video retrieval

Curriculum

Core subjects

Operations Research / Management Science
Linear Programming & Simulation
Non - Linear Programming
Data Analysis
Replacement, Reliability and Network Models
Computer Applications
Computer Organization and Architecture
Programming in C and C++
Operating Systems
Data Base Management Systems
Data Structures and Algorithm
Visual Programming
Mathematics
Discrete Mathematics
Probability, Statistics and Estimation

Electives

Multiple Criteria and Decision Making
Supply Chain Management
Quality Control and Assurance
Decision Support System
Software Engineering
Object Oriented Programming, Analysis and Design
Logistics Management
4GL And 5GL System
Graphics And Multimedia
Computer Networks

Lab Course

Programming in C and C++
Data Structures
Unix
Visual Programming
DBMS

Lab Facilities

NIT Local Area Network (OCTAGON Computer Center), Pentium based servers, Platforms such as Linux, Solaris based SUN Machines, HP DEC Alpha Ultra Sparc, Silicon Graphics workstations and Pentium based DELL n-series PCs connected to the NIT LAN

The Octagon

The sterling halmark of the campus is the OCTAGON computer centre. This center serves the campus-wide LAN in close association with the user departments. This LAN caters to 1300 users across the campus at the same time and has a 100 Mbps fiber optic backbone. The Octagon has a server room with 20 servers, 800 high-end computers and four user labs. A printer room equipped with two high speed printers which can print upto 50 ppm is also connected to the LAN. It also has centralized 2x60 kVA redundant uninterrupted power supply with 200 kVA standby power generators and central air conditioning. With a view to enhancing facilities and in order to meet additional requirements, a new annexe building with a capactiy of 200 computers has come up next to the Octagon. It houses two labs, one of which is connected to the Internet via a 8Mbps leased line from the STPI while the other is a general lab acting as an extension to the ones already present in Octagon. Arrangements can be made on prior intimation to use the computers in the Internet Lab for conducting online tests. The centre is maintained by the Computer Support Group(CSG). The CSG also offers courses under its Continuing Education Programme for the students as well as the local Community.

UNIX Servers/Workstation
SunFire - Solaris Server
Sangam - Linux File Server
Platinum - Internet Proxy Server

Windows Server/Workstation
Aditya - Network Attached Storage Server
Agni - Windows 2003 File cum Domain Server
Recnet - Internet Accounting Server

Novell Netware Servers
Vayu - Secondary Netware File Server
Sakthi - Office Automation Server

DTP Packages
Applied Electrical & Electronics Engg.
Control Systems
Mechatronics
Operating Systems

Windows Server 2003
Enterprise Edition

Windows XP Professional
Red Hat Enterprise Linux
Fedora Core 7
Red Hat Linux 9
Novell Netware 6
Sun Solaris 10
Mac OS X 10.2

CAD/CAM Packages
Pro/Engineer Wildfire 3
CATIAV5
UniGraphics
Solid Works
AutoCAD 2007
Maya 8

Fluent
Gambit
Adobe, Corel &
Macromedia Products
Ansys 11

Software
Microsoft C V 5.1
Lisp
Lotus Notes 2.6
Microsoft Office 2007
Matlab 7
SQL Server
Star Office
Oracle 9i/10g
Visual Studio .NET 2003
Lotus Notes
Power Builder

Lab Facilities

Electronic CAD (ECAD) Lab

ORCAD, PSPICE MAXPLUS II, XILINK's FOUNDATION Series, Synopsis Leonardo Synthesizer Model Tech Corporation's MODEL SIM & SABER. It also has the required hardware for programming the Xilink's FPGA and CPLD.

DSP Design Lab

Texas Instruments TMS32C6X Evaluation Module (EVM), 6X Simulator, TMS32OC54X, 5X and 3X kits and simulator. This lab is used predominantly for project work. Development of EVM TMS32OC6X is under progress.

DBMS Lab

This lab houses 56 Pentium Systems and has the clients for software such as Oracle, DB2, Java and VC++.

Multimedia Lab

The Multimedia Lab has 16 Multimedia Pentium IV systems, to be used extensively by the syudents to learn Multimedia Applications. Series of interactive sessions & workshops with faculty from University of Leeds and University of Sheffield, UK have been conducted.

Motorola Sponsored Lab

The IT centre also possesses a DSP and Microcontroller Laboratory sponsored by Motorola. It is eqipped with Pentium systems, ONYX Processors with full set of tools, HAWK Processors, 68HC11 power PCs with complete tools and software such as Matlab, MEPEE light DADISP.

The Library

The college has a modern central library with more than one lakh documents consisting of technical books, reports, standards and back volumes of journals. The library subscribes to 179 periodicals (print) plus 1000+ (e-Journals) besides a holding of 15943 bound volumes of journals (back numbers). The library also contains 15,000 books in the book bank. Besides the central library, each department has its own library. The open access system is observed in the library.Our Institute is holding membership with British Council Library, Chennai. We are also holding membership with DELNET, New Delhi for Interlibrary loan.The Library functions such as Acquisition, Circulation control, Cataloguing and Serials control have been automated using an integrated software called "LIBSYS".

Special Services

- Wireless Fidelity service.
- Bulletin Board service.
- News headlines with weekly update.
- Current awareness service.
- CD-ROM search service.
- Audio-visual service (educational cassettes).
- Membership to external agencies and individuals.

Stastical Data

- Library Books - 107571
- E-books titles accessible through Springer (India) Pvt.Ltd. - 670
- Journals subscribed - 205
- E-journals subscribed under TEQIP - 9
- Back Volumes - 17454
- Reports - 7786
- B.I.S. - 12449
- Video cassettes - 1504
- Audio cassettes - 31
- CD-ROM databases - 1367

Stastical Data

As a member of Indest Consortia (MHRD initiative) NITT library is allowed to access the following e-journal databases for accessing more than 5000 full text e-journals.

- IEL(113 journals): Access to the full archives of IEEE and IEE publications are available from 1998 to the present.
- Science direct (334 journals)
- Springerlink(498 journals)
- ASTP(160 journals)
- ACM(30 journals)

Department of Training and Placement

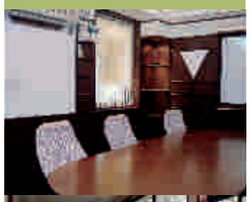
Department Profile

The department of Training and Placement is the marketing division of the institute. Over the years, the department, acting as an interface between college and companies, has maintained symbiotic, vibrant and purposeful relationship with industries across the country. As a result, it has built up an impressive placement record both in terms of percentage of students placed as well as number of companies visiting the campus.

Hosting Companies on Campus

The department provides facilities for the visiting companies to conduct pre-placement talks, written tests, group discussions and interviews. Audio visual aids like laptops, LCD projectors for pre-placement talks and internet facilites for online tests will be arranged upon prior intimation.

Conveyance from/to airport or railway station is arranged by the department. Accomodation and food is provided at the institute guest house for the company on prior intimation and the cost of these are borne by the institute. Incase the company executives wish to stay outside the campus, all arrangements for their accommodation will be made but the costs are to be borne by the company.



Functions and responsibilities

- Nurtures Industry Institute interaction, by organizing and coordinating frequent industrial visits, inplant training and projects of industrial relevance for the students, with the sole aim of zeroing down the hiatus between the industry and the academia.
- Receives and forwards the feedback pertinent to curriculum improvement from the visiting companies to the faculty, to ensure that the curriculum follows the latest industrial trends.
- Helps every student define his/her career interest through individual expert counseling.
- Makes available updated database and job profile of the companies and thus helps each student analyze and choose company of his interest. The department has in its active file a database of nearly 1500 companies.
- Organizes and coordinates Campus Placement Program, to fulfill its commitment of a job to every aspirant.
- Works towards continuing education for the employees.

Getting Here

NIT Trichy, is situated 20 kms from the city of Trichy on the Trichy-Thanjavur highway. Trichy, being located at the geomentric centre of the state of Tamil Nadu is well connected by rail, road and air. Major highways seamlessly link Trichy with other parts of the state and the country.Flight and Train timings given below are as of June 2008.

Flight Timings

Flight No.	From	To	Operated by	Days of Operation	Departure	Arrival
DN 173	Bangalore	Trichy	Simplifly Deccan	Daily	0555	0710
DN 175	Bangalore	Trichy	Simplifly Deccan	Daily	2035	2145
DN 174	Trichy	Bangalore	Simplifly Deccan	Daily	0750	0900
DN 176	Trichy	Bangalore	Simplifly Deccan	Daily	2210	2325
DN 153	Chennai	Trichy	Simplifly Deccan	Daily	1000	1110
DN 163	Chennai	Trichy	Simplifly Deccan	Daily	2120	2230
IT 2911	Chennai	Trichy	Kingfisher Airlines	Daily	1245	1355
IC 967	Chennai	Trichy	Indian	Daily	1310	1400
DN 154	Trichy	Chennai	Simplifly Deccan	Daily	1135	1245
DN 164	Trichy	Chennai	Simplifly Deccan	Daily	2245	2355
IT 2912	Trichy	Chennai	Kingfisher Airlines	Daily	1420	1530
IC 968	Trichy	Chennai	Indian	Mon,Thur,Sat	0500	0550

Train Timings

Train Number	Train Name	From	To	Departure	Arrival	Days of operation
6178	Rockfort Express	Trichy	Chennai-Egmore	22:00	5:15	Daily
6177	Rockfort Express	Chennai-Egmore	Trichy	22:30	5:15	Daily
6232	Mayiladuthurai Express	Bangalore	Trichy	19:05	4:05	Daily
6231	Mysore Express	Trichy	Bangalore	20:25	6:05	Daily
2605	Pallavan Express	Chennai-Egmore	Trichy	15:30	20:50	Daily
2606	Pallavan Express	Trichy	Chennai-Egmore	6:30	12:00	Daily
2635	Vaigai Express	Chennai-Egmore	Trichy	12:25	17:25	Daily
2636	Vaigai Express	Trichy	Chennai-Egmore	9:10	14:40	Daily
6607	Mangalore Express	Chennai-Egmore	Trichy	22:00	4:45	Daily
6608	Chennai Express	Trichy	Chennai-Egmore	22:20	4:30	Daily
6127	Guruvayur Express	Chennai-Egmore	Trichy	7:50	1:15	Daily
6128	Chennai Express	Trichy	Chennai Egmore	13:50	20:30	Daily

Our Esteemed Recruiters

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ACC
ACCENTURE
ADOBE
ADOR WELDING
ADVENTNET
AFL
AGERE SYSTEMS
AIRTEL
AIRVANA
ALLIANCE SEMICONDUCTORS
ALSTOM
AMADA SOFT
AMAZON
AMDOCS
ANALOG DEVICES
ANAND GROUP
ANZ
APC
APEX
APPLIED MATERIALS (AMAT)
ARICENT
ARIS GLOBAL
ASHOK LEYLAND
ASIAN PAINTS
ATHEROS LLC INDIA
AUDCO
AURIGO
AURO INFOTECH
AXES TECH
AZTEC
A2Z INFOTECH PVT LTD.
BAJAJ AUTO LTD
BALMER LAWRIE & CO
BANGALORE LABS
BANYAN NETWORKS
BASF
BEL-CRL
BEML
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CERACHEM
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CSC
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CYPRESS SEMICONDUCTORS
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DAIMLER CHRYSLER
DALMIA CEMENT
DCM
DELL
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DELPHI
DEUTSCHE SOFTWARE LTD.
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E.I.D PARRY
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EICHER GOODEARTH LTD.
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HLL
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I2
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IL & FS
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INDIA METERS
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INDO-US MIM TEC
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INTEL
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ISKRAEMECO-INDIA
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JISCO
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KAMDAR CONSTRUCTIONS
KARVY CONSULTANTS
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KIRLOSKAR
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L & T
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MM FORGINGS
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PARADIGM GLOBAL
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PEOPLEONE CONSULTING
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PHILIPS
POLARIS
PRAXAIR
PRICOL
QUEST
RAMCO
REDPINE SIGNALS
RELIANCE COMMUNICATION
ROBERT BOSCH
SAINT GOBAIN
SANDISK
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SASKEN
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SCHNEIDER ELECTRIC
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SDG
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SHARP
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SPCL
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SQL STAR
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STMICROELECTRONICS
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SUNDARAM CLAYTON
SUNDARAM FASTENERS
SUZUKI METAL INDIA
SYMANTEC
SYMPHONY SERVICES
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SYNOPSYS
SYNTEL
TAFE
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TATA MOTORS
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TATA STEEL
TATA TINPLATE
TAVANT TECHNOLOGY
TCE
TCS
TECH MAHINDRA
TECHNIP ABU DHABI
TECHNIP INDIA
TEJAS NETWORKS
TELCON
TELESOFT
TESPL
THERMAX INDIA
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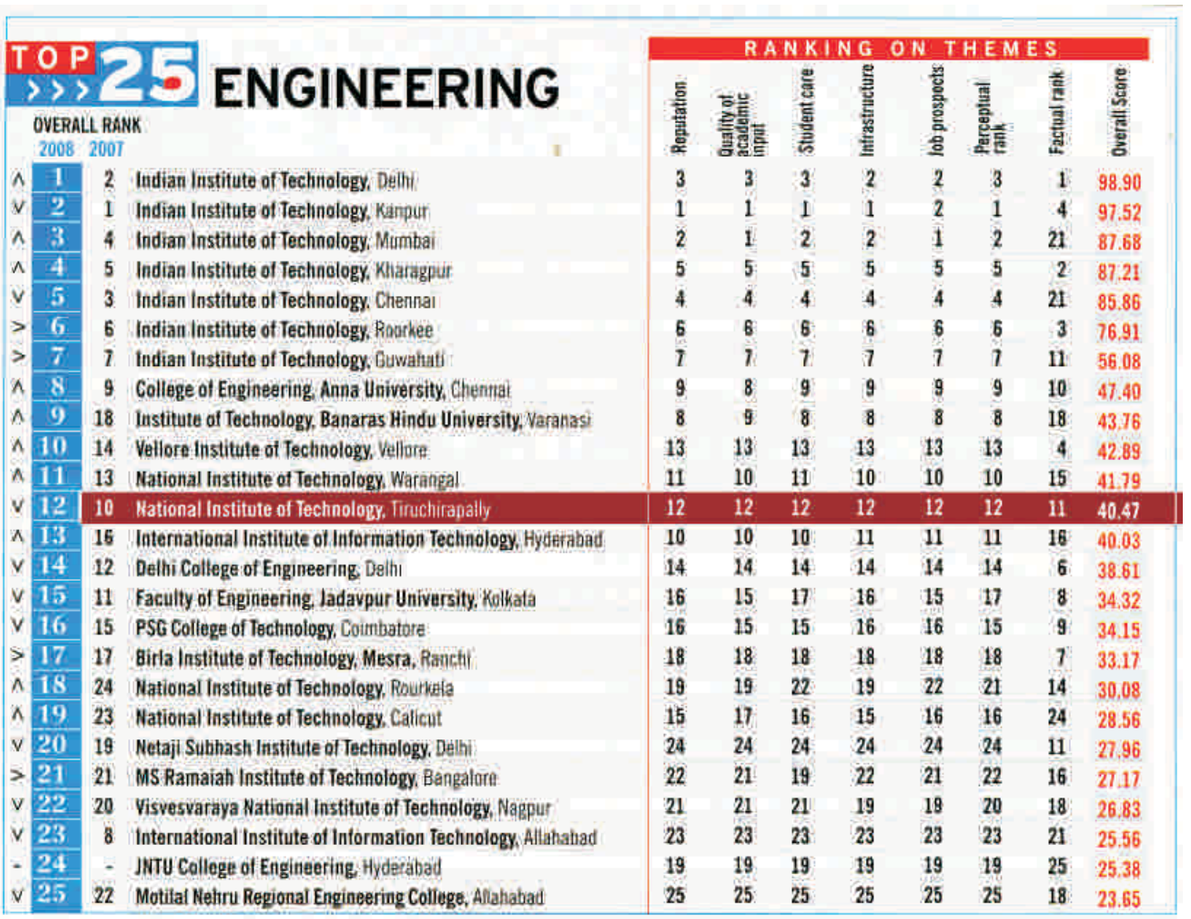
TEXAS INSTRUMENTS
TIMKEN
TINPLATE
TOSHIBA
TOTAL ENVIRONMENT
TPL
TRIAD
TRILOGY
TTK
TVS GROUP
UB GROUP
UCAL MACHINE TOOLS
UPL
US SOFTWARE
VEDANTA GROUP
VENTURE LIGHTNING
VERITAS
VERIZON DATA SERVICES
VIDEOCON
VIRTUSA CORP
VMWARE
VOLTAS
VSNL
WALCHAND INDIA
WAPCOS
WELSPUN
WHIRLPOOL
WIPRO
XILINX
YAHOO!
YOKOGAWA
ZENSAR TECH
ZS ASSOCIATES

Why Recruit at NITT

National Institute of Technology, Tiruchirappalli is one of the premier institutes in the country in the field of technical education where both the cream of students and faculty co-exist. Over the years, it has produced students with impeccable engineering acumen and also provides a conducive environment for the development of extracurricular talent. The students also acquire strong leadership, communication and team skills which ensures smooth and effective transition into the corporate world. Various surveys have consistently ranked NITT among the top engineering colleges in India and this is further proof that we are among the very best.



TOP >>> 25 ENGINEERING

	OVERALL RANK 2008	2007		RANKING ON THEMES: Reputation	Quality of academic input	Student care	Infrastructure	Job prospects	Perceptual rank	Factual rank	Overall Score
^	1	2	Indian Institute of Technology, Delhi	3	3	3	2	2	3	1	98.90
v	2	1	Indian Institute of Technology, Kanpur	1	1	1	1	2	1	4	97.52
^	3	4	Indian Institute of Technology, Mumbai	2	1	2	2	1	2	21	87.68
^	4	5	Indian Institute of Technology, Kharagpur	5	5	5	5	5	5	2	87.21
v	5	3	Indian Institute of Technology, Chennai	4	4	4	4	4	4	21	85.86
>	6	6	Indian Institute of Technology, Roorkee	6	6	6	6	6	6	3	76.91
>	7	7	Indian Institute of Technology, Guwahati	7	7	7	7	7	7	11	56.08
^	8	9	College of Engineering, Anna University, Chennai	9	8	9	9	9	9	10	47.40
^	9	18	Institute of Technology, Banaras Hindu University, Varanasi	8	9	8	8	8	8	18	43.76
^	10	14	Vellore Institute of Technology, Vellore	13	13	13	13	13	13	4	42.89
^	11	13	National Institute of Technology, Warangal	11	10	11	10	10	10	15	41.79
v	12	10	National Institute of Technology, Tiruchirapally	12	12	12	12	12	12	11	40.47
^	13	16	International Institute of Information Technology, Hyderabad	10	10	10	11	11	11	16	40.03
v	14	12	Delhi College of Engineering, Delhi	14	14	14	14	14	14	6	38.61
v	15	11	Faculty of Engineering, Jadavpur University, Kolkata	16	15	17	16	15	17	8	34.32
v	16	15	PSG College of Technology, Coimbatore	16	15	15	16	16	15	9	34.15
>	17	17	Birla Institute of Technology, Mesra, Ranchi	18	18	18	18	18	18	7	33.17
^	18	24	National Institute of Technology, Rourkela	19	19	22	19	22	21	14	30.08
^	19	23	National Institute of Technology, Calicut	15	17	16	15	16	16	24	28.56
v	20	19	Netaji Subhash Institute of Technology, Delhi	24	24	24	24	24	24	11	27.96
>	21	21	MS Ramaiah Institute of Technology, Bangalore	22	21	19	22	21	22	16	27.17
v	22	20	Visvesvaraya National Institute of Technology, Nagpur	21	21	21	19	19	20	18	26.83
v	23	8	International Institute of Information Technology, Allahabad	23	23	23	23	23	23	21	25.56
-	24	-	JNTU College of Engineering, Hyderabad	19	19	19	19	19	19	25	25.38
v	25	22	Motilal Nehru Regional Engineering College, Allahabad	25	25	25	25	25	25	18	23.65

From our Esteemed Recruiters

Keep up your good work. – Tata Projects

Very good hospitality. – HSBC

Great visit. Our idea to keep visiting Trichy was reaffirmed by our 1st visit – 3M

Campus interviews were well organized – NTPC

Had a very good experience – Adobe

Thanks for all the help. The coordinators were very helpful – Analog Devices

Address for communication

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