

NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI



UNDERGRADUATE PLACEMENT INVITATION 2012



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 ensure smooth and effective transition into the corporate world. Various surveys have consistently ranked NITT among the top engineering institutions in India and this is further proof that we are among the very best.

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Name of institute	P. Pvt G. Govt	City	Selection process (22)	Academic excellence (24)	Personality devt & int'l interface (19)	Infrastructure (20)	Placement (18)	Overall score (1,000)
1								
2								
3								
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12								
13								
14								
15								
16								
17								
18								
19								
20								

Top 10 Engineering Colleges In Placement

Rank	Name of institute	City	Score (180)	Total score (1,000)
1	IIT			
2	IIT			
3	Delhi Tech University	Kharagpur	174.50	887.20
4	IIT	Mumbai	168.10	874.40
5	IIT	Delhi	167.10	839.00
6	IT-BHU	Roorkee	164.70	878.90
7	NIT	Varanasi	161.10	858.50
8	IIT	Chennai	160.60	857.60
9	IIT	Kanpur	159.80	809.50
10	ISMU	Dhanbad	157.70	861.80
			141.50	720.50

Top 3 Zonewise

S.N.	NORTH	S.N.	SOUTH	S.N.	EAST	S.N.	WEST
1	IIT, Delhi	1	IIT, Madras	1	IIT, Kharagpur	1	IIT, Bombay
2	IIT, Kanpur	2	NIT, Tiruchirappalli	2	ISMU, Dhanbad	2	COEP, Pune
3	IIT, Roorkee	3	Anna Univ, Guindy	3	BIT, Mesra (Ranchi)	3	ICT, Mumbai

FROM OUR ESTEEMED RECRUITERS

Great campus, good students. Well organized campus event. - Credit Suisse

We are extremely pleased to come 2nd year in a row to NIT Trichy. Attitude of students very good. - Caparo

Extremely well organized. Good hiring process and hospitality. - Intel

Very good students with good educational background. - Ready Mix Qatar

Hospitality quite good as always. Student coordination support really appreciated. - Qualcomm

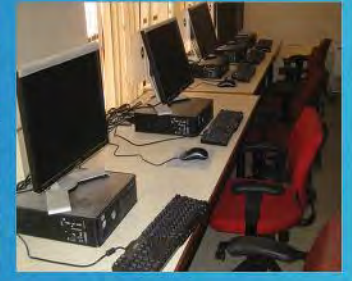
Excellent hospitality. Looking forward for future campus visits. - Tata Technologies

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ARCHITECTURE

INTRODUCTION

The Department of Architecture in National Institute of Technology Trichy had a humble origin 30 years back. The department was started with just three faculty members and a small batch of students. But the growth of the department in these thirty years has been phenomenal. Today we have faculty members who have specialised in all important branches of architecture and a group of able students drawn from all over the country. Together we evolved a work culture that has brought us success in academics, professional practice and extra-curricular activities.



CURRICULUM

Core Subjects

- Architectural Design
- Computer Applications in Architecture
- Building Construction & Materials
- Climatology
- Landscape Architecture
- AutoCAD
- Advanced Graphics
- Visual Arts

Advanced Subjects & Electives

- Building Services
- Mechanical & Electrical Services
- Air Conditioning (HVAC Systems)
- Professional Practice
- Town Planning
- Building Economics
- Project Management & Evaluation
- Energy Efficiency in Building

Computer Courses

- Programming in C
- Autodesk Design Software
- Adobe
- 3D Studio Max
- Flash
- BREEZE
- I.E.S.
- Software for Sunshade Design

LAB FACILITIES

• Building Science Lab :

Heliodom, Miniature Video Camera with video processor, measuring devices, globe thermometer, anemometer and a wide range of data loggers.

• Acoustics Lab : Acoustics Impedance Tube.

• Photography Lab : Colour and Monochrome

• Computer Lab :

Photoshop, Corel Draw, 3D Max Studio, MAYA, all versions of AutoCAD and other building design software like DAYLIGHT, BREEZE and VIRTUAL ENVIRONMENT.

• Survey Lab :

Chain, Compass Survey and Levelling.

PROJECTS

- Documentation and analysis of Palace of Ramanathapuram.
- Documentation and analysis of Sengi Kottai.
- Analysis of Goubert Avenue, Pondicherry.

- Analysis of Isha Yoga Centre, Coimbatore.
- Analysis of Saravana Stores, Chennai.

INTRODUCTION

Established in 1964, the Department of Civil Engineering is one of the oldest and finest departments of the institute. The vision is to shape infrastructure development with societal focus. Its mission is to achieve international recognition by developing professional civil engineers, offering continuing education and interacting with industry with emphasis on R&D. The department has labs which are equipped with cutting edge machinery and instruments. The highly experienced faculty of the department contribute immensely to academic research. Many research papers have been presented in reputed international conferences by the faculty and the students.



CURRICULUM

Structural Engineering

- Analysis of Structures
- Design of Steel Structures
- Design of RC Structures
- Matrix Analysis of Structures
- Concrete Technology
- Strength of Materials

Geo-Technical Engineering

- Geotechnical Engineering
- Advanced Foundation Engineering

Hydraulics Engineering

- Mechanics of Fluids
- Irrigation & Water Power Engineering
- Water Resource Engineering

Electives

- Structural Dynamics
- Earthquake Resistant Structures
- Transportation Planning
- Water Power Engineering
- Experimental Stress Analysis
- Models of Air and Water Quality
- GIS and Remote Sensing

Transportation Engineering

- Railway Engineering
- Highway Engineering
- Airway Engineering
- Waterway Engineering
- Traffic Engineering
- GIS, GPS & Remote Sensing
- Pavement Analysis and Design

Environmental Engineering

- Water Supply Engineering
- Solid Waste Management
- Air Pollution
- Waste Water Treatment



LAB FACILITIES

Structural Engineering Lab : 1000 kN UTM, 2000 kN CTM, PUNDIT, corrosion analysis instrument, Photo-elastic polariscope, covermeter Schmidt hammer.

Transportation Engineering Lab : Geo-gauge, Fatigue Testing Machine, Dynamic Cone Penetrometer & Benkleman Beam Deflectometer, GPS, Pavement Management System, Vehicle Emission Testers, Radar Speed Gun & Material Testing.

Software : Mix-roads, Arc GIS, ERDAS Imagine 9.1.

Computer Lab : STAAD III, STAAD PRO, STRAAP, CADS & ANSYS, TRIPS, MIGRAN, AutoCAD, Auto Civil, Auto plotter, GIS packages including ArcInfo, Arc View, Map Info, Inter graph, ENVI.

Survey Laboratory : Micro-optic Theodolite, Laser Theodolite, Auto-level, Digital Planimeter & Electronic Total Station.

Soil Mechanics Lab : Motorised triaxial testing machine, Motorised direct shear equipment, Load cell, LVDT, Triaxial, Uniaxial testing machines and CBR apparatus, Fluid Mechanics and Hydraulic Machinery Turbines, pumps and pipe testing equipment.

PROJECTS

- Polymer - fibre reinforced concrete beam subjected to bending and torsion.
- Development of interactive software for reservoir simulation.
- Water management studies in Agniar river basin.

- Development of a remote sensing image integration cell for rural & urban planning.
- Interactive software for Vaigai reservoir operation with inflow prediction using simulation, artificial neural networks.

CHEMICAL ENGINEERING

INTRODUCTION

Established in 1968, the Department of Chemical Engineering, NIT Trichy is regarded as one amongst the few premier centers for chemical engineering in India by industries as well as academics. The National Board of Accreditation (NBA) has granted the department A(+3) certification for 3 years. It also has the distinction of being ranked as one of the top seven chemical engineering departments in India by chemical engineering faculties. The department is backed by highly qualified and experienced faculty who have been involved in various industrial projects and consultancy services. The students have presented many papers in India and abroad and have won several national level design competitions.



CURRICULUM

Core Subjects

- Material technology
- Mechanical operations
- Fluid mechanics
- Chemical engineering thermodynamics
- Process calculations
- Mass transfer
- Heat transfer
- Process dynamics and control
- Inorganic chemical technology

Computer Courses

- C, C++
- AutoCAD
- Numerical methods
- Design 2
- Matlab

Management Subjects

- Human psychology and organisational behaviour
- Industrial economics and management
- Corporate communication

Advanced Subjects

- Bio chemical engg.
- Process equipment and design
- Petroleum and petrochemical engg.
- Transport phenomenon
- Process economics
- Applied mathematics in chemical engg.
- Safety engg.
- Polymer science and technology

Energy engg.

- Process modelling

Science Subjects

- Physical chemistry
- Organic chemistry

LAB FACILITIES

Process control and Instrumentation lab :

- Plant condition simulator
- Energy Trainer and Simulator

Unit Operations Lab :

- Fluid Mechanics
- Mechanical Operations
- Heat and Mass transfer

Technical Analysis Lab :

- Gas-Liquid Chromatography
- Spectrophotometry

Center for Energy and Environmental Science and Technology (CEESAT) :

An energy center has been established by the Governments of India and the UK to carry out research in energy saving and optimisation.

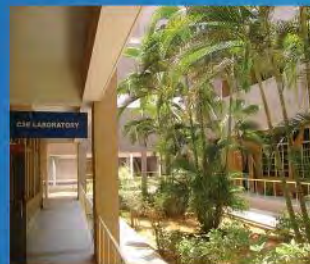
PROJECTS

- The department has been sanctioned Rs.20 lakhs from FIST towards networking.
- MHRD Thrust Area project titled, "CFD modelling of chemical process equipment."
- MHRD - MODROBS project on modernisation of chemical reaction engineering laboratory is in progress.

COMPUTER SCIENCE AND ENGINEERING

INTRODUCTION

The B.Tech. course in Computer Science & Engineering is one of the most coveted courses in NIT Trichy. The students of the department rank among the elite. The dedicated and highly experienced faculty impart top quality education. The course has been carefully designed and frequently updated to cover all the aspects of education in this field, including both hardware & software, and caters to the current global demands. It has at its disposal various labs equipped with highly capable workstations and the Octagon Computer Centre. It also has an enviable and vast collection of books and other publications related to the world of Computer Science.



CURRICULUM

Core Subjects

- Data Structures
- Introduction to Algorithms
- Principles of Programming Language
- Automata & Formal Language
- Digital Computer Fundamentals
- Digital System Design
- System Programming
- Operating System
- Computer Networks
- DBMS
- Microprocessor Systems

Laboratory Practicals

- OS Lab (DOS, Windows, GNU/LINUX)
- Programming Languages (C, C++, JAVA)
- DS & Algorithms
- DBMS (Oracle & SQL)
- System Programming
- Linear & Digital ICs
- Microprocessor & Interfacing
- Compiler Design
- Network Programming

Electives

- Computer Graphics & Display Systems
- Parallel Algorithms
- Compiler Design
- Distributed Computing
- AI & Expert Systems
- Cryptography
- Real Time System & Network Security
- Artificial Neural Network & Fuzzy Logic
- ARM System Architecture

Mathematics

- Numerical Computing
- Probability Theory
- Operations Research
- Combinatorics & Graph Theory

LAB FACILITIES

CSE Laboratory : The CSE laboratory has around 50 Pentium IV based PCs, an IBM Netfinity Server, an IBM Pentium MMX running LINUX and Windows NT, an IBM RS/6000 Machine and a Sun Cluster Platform.

RISE Laboratory : The Reconfigurable & Intelligent Systems Engg. laboratory is a high end computer laboratory with twelve workstations and two high end systems (of 32 GB RAM each).

Microprocessor Lab : The Lab is equipped with 8085 and 8086 Microprocessor training kits. It is used to conduct practical sessions for Digital IC lab and Microprocessor based interfacing Lab.

Octagon Computer Centre : The centre has over 250 nodes and half a dozen Pentium based servers. It also has various Solaris based Sun machines, HP, DEC Alpha Ultra Space and Silicon Graphic workstations.

PROJECTS

- Collaborative Directed Basic Research in Smart and Secure Environment sponsored by National Technical Research Organization.
- Automatic Test Case Generator for evolving Processor Architectures.
- Page Functions : Developing a Faster Approach to Address Translation.
- Bus architecture for multicore systems.

ELECTRICAL & ELECTRONICS ENGINEERING

INTRODUCTION

The Department of Electrical and Electronics Engineering has been, for long, a pillar of strength in NIT Trichy and also in the engineering community, since 1964. The department boasts of excellent lab facilities and courses for electrical, electronics and computer applications which provide ample opportunities for students to build their own circuits and systems for projects. The dedicated faculty impart training to students not only in the core courses but also in allied areas such as instrumentation, communication & computer subjects. The curriculum is framed by the faculty members with significant contributions from well known industrialists and experts to keep track of the current industrial trends.



CURRICULUM

Electrical Technology

- Theory and operation of AC and DC Machines
- Design of Electrical Apparatus
- Transmission and Distribution of Electrical Energy
- HVDC Transmission
- Power System Analysis
- Switchgears and Protection
- Digital and Analog Control Systems
- Network Analysis and Synthesis
- Electromagnetics

Computer Science

- C, C++ Programming Languages
- Operating Systems
- Data Structures
- Computer Architecture
- Computer Networking & Graphics
- Assembly Language Programming
- Microcontrollers and Interfacing
- Neural Networks and Fuzzy Logic

Electronics

- Design of Digital & Analog Electronic Circuits
- Linear Integrated Circuits
- Electronic Measurements
- Power Electronics
- Principles of Communication
- Systems and Biomedical Instrumentation
- Digital Signal Processing

LAB FACILITIES

Microprocessor & Micro-Controller Laboratory :

8085 and 8086 Microprocessor Training kits, 8031 and 196 (16-bits) Micro-Controller Training kits, 32-Channel Logic Analyser.

Electrical Machines Laboratory :

All types of DC Machines, single phase and three phase squirrel cage and slip ring induction motors, single-phase and three-phase transformers.

Computer Lab :

PSPICE, SABER, MATLAB, SIMULINK and PSCAD.

Power Electronics and Drives Lab :

General purpose and storage oscilloscope, power semiconductor devices like Power MOSFETs, Driver ICs, LCR-Q meter, Thyristor converters, IGBTs of various voltages and current ratings, Opto-Isolators, Pulse transformers and other related commutating components. Power electronics modules such as DC/AC choppers and Inverters.

PROJECTS

The department faculty have done extensive research work in the areas of power systems, power electronics and applications of neural networks and fuzzy logic. A number of controllers for energy efficient drives and renewable energy systems have been designed and developed.

- FIST

- Application of Genetic Algorithm for High Performance power converters.
- Unified power flow controller.
- Control of a hybrid wind-driven induction generator and PV array distributed generator for the isolated and grid-connected operations.

INTRODUCTION

The Department, since establishment in 1968, has strived to maintain its high standards by revising academic syllabi to suit the industrial requirements. The courses are in sync with the growing demands of the research community. The focus of the curriculum is mainly on 'Wireless Communication' & 'VLSI System Design'. The curriculum is reinforced by sets of elective courses offering specialisation in either Software or Hardware aspect of Communication Systems. The alumni consistently feed inputs for improvement of the curriculum and research facilities. The consistent quality of the department has earned it the prestigious 'A' grade from the National Board of Accreditation.



CURRICULUM

Wireless Communication

- Mobile Communication
- Digital Communication

Digital Signal Processing

- Signals and Systems
- DSP Architecture (TMS320C5x, 3x, 54x)

VLSI System Design

- VHDL, Verilog
- Digital IC Design

Computer Architecture

- Microprocessors (8086, Pentium)
- Microcontroller (8051)
- Embedded Systems (Motorola 68HC11, 12, ARM)
- Networks and Protocols

Solid State Devices & Circuits

- Analog IC Design
- Amplifiers and Oscillators

Communication Switching Systems

- Electromagnetics
- Transmission Lines and Waveguides
- Microwave components and devices

Communication Techniques

- Communication Electronic Circuits
- Communication Systems

Information Theory

- Probability and Random Process
- Statistical Theory of Communication

LAB FACILITIES

VLSI Design Lab : Altera QUARTUS, NIOS IDE, ORCAD, FOUNDATION Series, Synopsis, Leonardo synthesizer, SPICE Variants (ELDO Spice), Model Tech Corporation's MODELSIM & SABER, Ultra 10. CADENCE & Mentor graphics mixed signal kits, Synopsis & Magma Digital Kit, Coware Designer. **Hardware -** XILINX FPGAs and CPLDs DSP Development Kits Stratix II & Xtreme (Virtex IV), Spartan III starter kit with I/O interface, Virtex II pro board.

Microwave Lab : Vector Network Analyzer, Spectrum Analyzer, MIC Kit, Microwave test benches and MIC Design Software (IE3D, Agilent ADS & HFSS).

DSP and Microcontroller Lab : Motorola Onyx (56300, 303, 309), HAWK Processors (56000, 003, 009) & 68HC11 Power PCs with complete tools. **Software Tools -** MATLAB, MEPEE light, DADISP, VIRTUOSOT MRTOS v4.0, Floating Point Processors from Texas Instruments (TMS320C67x, C3x) with Code Composer Studio.

Microprocessor Lab : Micro processing and Interfacing Laboratory with 8085 and 8086. Microprocessor 8086 and Microcontroller 8051 & 32-channel Logic Analyzer.

Fiber Optics Lab & Solid State Circuits and Devices Lab

PROJECTS

- Design and implementation of multiband OFDM UWB transceiver using asynchronous pipelining funded by Department of Information Technology (DIT), New Delhi.
- Special Manpower Development Project (SMDP) on VLSI design and related software, funded by Ministry of Information and Telecommunication, Govt. of India.
- Optimisation techniques for System on Chip (SoC) implementation of target recognition system, Department of Science & Technology (DST), New Delhi.
- Development of signal processing systems for core temperature measurement, funded by IGCAR, Kalpakkam.

INSTRUMENTATION & CONTROL ENGINEERING

INTRODUCTION

The Department of Instrumentation and Control Engineering was established in 1993. The department has modern labs in the areas of Instrumentation, Sensors and Transducers, Control Systems, Process Control, Embedded Systems, Modelling and Simulation, MEMS and smart structures. Guided by learned and experienced faculty, the department envisages being a world-class school of instrumentation & control. It is involved in providing quality education to the students with a dynamic curriculum that caters to the ever-improving industrial & research needs. Students are encouraged to design & develop products to suit the needs of society.



CURRICULUM

Instrumentation

- Sensors & Transducers
- Industrial Instrumentation
- Biomedical Instrumentation
- Electrical & Electronic Measurements
- Analytical Instrumentation
- Opto-electronic & Laser based Instrumentation
- MEMS

Electrical & Electronics

- Analog Electronic Circuits
- Digital Techniques

- Electron Devices
- Network Theory
- Digital Techniques
- Linear Integrated Circuits
- Microprocessors & Microcontrollers
- Signals & Systems
- Data Communication Systems

Control

- Classical Control Systems
- Modern Control Theory
- Logic & Distributed Control

- Chemical Process Control
- Analysis of Feedback Controllers

Software

- C & C++ Programming
- Data Structures & Algorithms
- Programming tools
- Operating Systems
- Personal Computer & Interfacing
- Computer Networks

Electives

- Neural Networks & Fuzzy Logic
- Virtual Instrumentation
- Automotive Control Systems
- Power Electronics
- Power Plant Instrumentation
- Industrial Instrumentation Practices
- Digital Control Systems

LAB FACILITIES

Electronics & Instrumentation Lab : Design, testing & simulation of analog & digital circuits, instrumentation systems for process variables.

Sensors & Transducers Lab : LVDT, load cells, strain gauges & accelerometers & design of signal conditioning circuits.

Microcontroller & Embedded Systems Lab :

Programming of interfacing cards for stepper motor, USART, PLC. Design of microcontroller & embedded systems. Data acquisition cards compatible to embedded systems.

Virtual Instrumentation & MEMS Lab : Creation of virtual instruments, analysis & design of MEMS devices using CAD tools.

Control Systems lab : Controller design & analysis. Modeling & simulation of electrical & electro-mechanical systems.

Process control Lab : Pilot processes for temperature, pressure, flow & level control, heat exchanger set-up, PLC, DCS simulator.

Biomedical Instrumentation lab : Physiological parameter analysis using Respiratory analyzer, ECG monitoring equipment, blood pressure monitoring system & Blood Glucometer.

PROJECTS

- DST, Government of India, has sanctioned Rs. 90 lacs to provide center of excellence in the area of MEMS & Mechatronics in the year 2007 for 3 years.
- Design of Electrorheological (ER) Damper based suspension control system, funded by Aeronautics R&D.

- Towards Reliable & Smart Air-Vehicles (UKIERI).
- Control of Multivariable process using soft computing, funded by DST.
- Design & development of Micro Devices, funded by NPSM - National Programme on Smart Materials.

INTRODUCTION

One among the first four departments to be established in 1964 in the institute, the Mechanical Engineering Department of NITT has the reputation of being among the finest in the country. Keeping itself up to date with the latest developments and trends and with a team of highly qualified and experienced faculty, the department consistently strives to provide world class facilities for education and research. The department has an excellent industrial interaction and contributes to the industry by offering consultancy services. Students are encouraged to take up projects and training that are essential for their career growth and give them exposure to the requirements of the industry.



CURRICULUM

Design Engineering

- Engineering Metallurgy
- Strength of Materials
- Mechanics of Machines
- Design of Machine & Transmission Elements
- Optimisation Techniques

General Engineering

- Applied Electrical & Electronics Engineering
- Mechatronics

Manufacturing Engineering

- Production Technology
- Machine Drawing
- Production Drawing & Cost Estimation
- Metrology & Quality Control

Software Engineering

- Programming in C
- Computer Aided Design & Drafting

Advanced Engg. Subjects

- Advanced IC Engines
- Finite Element Method
- Nuclear Power Engineering
- Welding Technology
- Tool Engineering & Design
- Combustion & Gasification Engineering
- Computational Fluid Dynamics
- Robot Technology

Management

- Industrial Engineering

- Behavioral Sciences & Industrial Management
- Operations Research

Thermal Engineering

- Engg. Thermodynamics
- Thermal Engineering
- Heat and Mass Transfer
- Turbomachines
- Refrigeration & Air Conditioning
- Automobile Engineering
- Power Plant Engineering



LAB FACILITIES

Thermal Engineering Lab : IC Engine test rigs, air compressor test rigs, bio-diesel optimisation plant, fuel testing equipment.

Refrigeration and Air-Conditioning Lab : Vapour compression, vapour absorption & air conditioning tutor.

Heat Transfer Lab : Pin-Fin apparatus, guarded hot plate apparatus, heat exchanger, emissivity measurement apparatus, film and dropwise condensation unit.

Automobile Lab : Auto system assemblies, steering gear box (manual), power steering (hydraulic), full car cut section, car AC & LPG kits, vehicle chassis (heavy & light), motor bikes & scooters, electric two wheelers.

Dynamics Lab : Free and forced vibration apparatus, gyroscope, jump speed of cam setup, Dynamic Balancing Machine.

Industrial Safety Lab : Friction tester, high volume sampler, fire extinguisher with accessories, impact tester.

CAD Lab : ProEngineer (Wildfire), Unigraphics, CATIA, MATLAB, Fluent, Gambit, ANSYS, MAYA, Abacus.

Metrology Lab : Calibration facilities for pressure, temperature and length as per internationally accepted standards, co-ordinate measuring machine, vibrometer, toolmaker's microscope.

PROJECTS

- Theoretical and experimental investigations on performance influencing parameters of industrial air compressors.
- Process modelling and online monitoring of laser beam welding.
- Experimental Investigation and finite element simulation of workability of Al-TiC powder metallurgy composites during cold upsetting.

PRODUCTION ENGINEERING

INTRODUCTION

Established in 1983, the Department of Production Engineering strives towards excellence in the field of Production and Industrial Engineering. It was declared as the best department of the institute for the year 2006-2007. State-of-the-art laboratories are available in the areas of CAD, CNC, mechatronics, simulation & operations management. The department has a central workshop equipped with power tools in carpentry, lathes, milling machines, shaping machines & special machines like Hobbing, EDM, tool & cutter grinder. The faculty of the department play a vital role in academic research. Many research papers have been published in reputed national & international journals.



CURRICULUM

Manufacturing Technology

- Traditional and Non-Traditional Machining Process
- Foundry and Welding Process
- Metal Forming Process
- Metallurgy and Material Testing
- Mechanical Measurements and Metrology
- Manufacturing Planning and Control

Engineering Design

- Theory of Machines

- Design of Machine Elements
- Design of Production Tooling
- Finite Element Analysis
- Machine and Product Design

Allied Engineering

- Thermal Engineering
- Fluid & Solid Engineering
- Automobile Engineering
- Plant Engineering
- Mechatronics

Automation and CAD/CAM

- Computer Graphics, AI and Expert systems
- CNC Machines

- Automation, CIM & Industrial Robotics
- Machine Tool Control & Automats

Management

- Operations Research, Production & Materials management
- Quality Reliability & Maintenance
- Industrial Economics & Management
- System based Industrial Engineering

Software

- C, C++
- Database Management Systems
- Mechatronics Software
- Hydraulic and Pneumatics Control Software

LAB FACILITIES

Production Workshop

Centreless Grinding Machine, Universal, Tool and Cutter Grinder, Electric Discharge Machine(EDM), Gear Hobbing, Carpentry Power tools Machine, SCORBOT ER IV & V plus HMT STC-15 Turning Center, HARTFORD Vertical Machining Center, AS/RS, Machine Vision System, Lead Well CNC Turning Centre. Co-ordinate Measuring Machine.

CAD/CAM

- Packages like NICA
- Pro Engineer (Wildfire)
- Unigraphics
- 3D Studio V3
- AutoCAD Designer
- Animator Pro
- Master CAM
- AutoCAD r-14

PROJECTS

- Neural network based prediction of deformation, densification and workability behaviour of nano TiC particles reinforced Al matrix nanocomposites.
- Development of models and algorithms for functional integration in supply chain.
- Improvement of wear resistance of Ti- alloy disc brake rotor through laser surface melting.
- Hybrid laser-GMAW welding, laser beam welding and gas metal arc welding of AISI 904L super austenitic stainless steel.
- Comparison of hole expansion ratio, stretch flangeability, wrinkling behaviour and crash worthiness of high strength IF steel tailor welded blanks, fabricated by various welding techniques.
- Joining of thermoplastic composite pipes.

INTRODUCTION

The Metallurgical and Materials Engineering department, established in the year 1967 is ranked among the best in the country. Its highly qualified faculty and advanced laboratories earned it the best Department award for the year 2008-09. It maintains a symbiotic relationship with premier research institutes like IISc, Bangalore, IIT-Madras, CECRI-Karaikudi, WRI-BHEL Trichy etc. Regular upgradation of the syllabus along with frequent visits to well established industries enable the department to mould the students to meet the ever-changing industrial demands. Many of the faculty members have got prestigious fellowships like BOYSCAST and awards like Govindaraj Memorial Award .



CURRICULUM

Extractive metallurgy

- Mineral Dressing
- Iron and Steel Making
- Extraction of Non-Ferrous Metals
- Process Modelling & Computer Applications in Metallurgy
- Transport phenomena

General Engineering

- Industrial Economics

- Corporate Communication
- Instrumentation Engineering
- Mechanical Technology
- Strength of Materials

Industrial Metallurgy

- Welding and foundry
- Non-Destructive Testing & quality control
- Metal Forming Technology
- Corrosion Engineering
- Fractography and Failure Analysis
- Special Steels & Cast Irons

- Special Casting Techniques

Software

- Unix Operating Systems
- Shell Programming
- Programming in C and C++
- Operating Systems
- DBMS, SQL
- Thermocalc

Materials science

- Nanomaterials
- Ceramics
- Composites and polymers
- Surface Engineering
- Electrical, Electronic and magnetic materials



LAB FACILITIES

Powder Metallurgy : Induction Sintering Furnace, Friction Press, Centrifugal Ball Mill, Planetary Ball Mill, Glove Box, Sintering Furnaces.

Corrosion Testing Laboratory : Manual/Computer controlled Potentiostat / Galvanostat, Facilities for Salt Spray Test, Stress Corrosion, Electro and Electroless Plating & other surface treatments.

Welding Laboratory : SMAW/GTAW/GMAW/PAW/FRW power sources and facility for automatic welding.

Mechanical Testing : UTM, Tensometer, Creep, Fatigue & Hardness testing machines.

Surface Engineering Laboratory : Facilities for room temperature and high temperature Pin-on-Disc wear test, Apparatus for erosive wear test, dry sand abrasive wear test, pulse rectifier for composite/nanocoating/alloycoating.

Metallography : Scanning Electron Microscope, High resolution microscopes with photographic facilities, Image analyser.

Process Modelling Laboratory : Thermocalc and Dictra packages & databases.

PROJECTS

- Development of ultra high strength aluminium based in-situ composites by cryorolling.
- Friction stir welding of high strength materials using double shouldered tool.

- Development of nano and metastable magnesium based multi-component alloys.
- Nanostructure and Bimodal Nanostructured Aluminium Alloys by Severe Plastic Deformation (SPD).

OCTAGON COMPUTER CENTRE

INTRODUCTION

The sterling hallmark of the campus is the OCTAGON computer centre. This centre serves the campus wide LAN which caters to 4000 users across the campus at the same time and has a 10 Gbps fiber optic backbone. The Octagon has a server room with 25 high end servers, 400 high end computers in seven user labs. A printer room equipped with two high speed printers which can print upto 50 ppm, it also has centralized air conditioning and 2x60 kVA redundant uninterruptured power supply with 200 kVA standby Power Generators. The OCTAGON is connected to the internet via 45 Mbps leased line from Software Technology Park of India and via 100 Mbps leased line from BSNL. Arrangements can be made on prior intimation to use the computers in the Internet Lab for conducting online tests. The Computer Support Group offers courses under its continuing education programme for the students as well as the local community.



RESOURCES

UNIX Servers/Workstation

- Sun Fire- Solaris Server
- Sangam-Linux File Server
- Platinum-Internet Proxy Server
- Windows Server/Workstation
- Aditya-Network 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 EEE
- Control Systems

Operating Systems

- Windows XP Pro /Vista SP2 / Windows 7
- Red Hat Enterprise Linux AS release 5.x
- Fedora 12, 11
- SUN Solaris 10
- Mac OS

Software

- Microsoft C V5.1
- Lisp
- Lotus Notes 2.6
- Microsoft Office 2007
- Matlab R2010a with Simulink
- SQL Server
- Star Office
- Oracle 11i
- Visual Studio .NET 2008/2010
- Lotus Notes
- Power Builder

CAD/CAM Packages

- Pro/Engineer Wildfire 5
- CATIAV 5R20
- UniGraphics
- Solid Works
- AutoCAD 2010
- Maya 8
- Fluent
- Gambit
- Adobe, Corel & Macromedia Products
- Ansys 12.0.1

LAB FACILITIES

Electronic CAD (ECAD) Lab :

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

DSP Design Lab :

Texas Instruments TMS32C6X Evaluation Module (EVM), 6X simulator, TMS320C54X5X and 3X Kits and Simulator. This lab is used predominantly for project work. Development of EVM TMS320C6X is under progress.

INTRODUCTION

The institute 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 224 periodicals (print) plus 5000+ (e-journals) besides a holding of 17000 bound volumes of journals (back numbers). The library also contains 17,432 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 many professional bodies, industries, British Council Library - Chennai, DELNET - New Delhi for interlibrary loan. The "LIBSYS" package is being used for various functions.



STATISTICAL DATA

- Library Books – 111571
- e-books (Springer) – 670.
- Print journals subscribed – 225
- e-journals – 9 Databases
- Back volumes – 17454
- Reports – 7786
- B.I.S. -12449
- Video cassettes – 1504
- Audio cassettes – 31
- CD-ROM databases - 1524

INDEST CONSORTIA

Library is a member of Indest - AICTE Consortium (MHRD initiative). NITT library subscribes to access more than 7000 full-text e-journals covering various databases besides online books and standards.

- IEL (113 journals): Access to the full archives of IEEE and IEE publications from 1998 to the present.
- Scencedirect (5 subjects collection journals)
- ABI / INFORM and Academic Research Library
- American Chemical Society's journals

- JCCC @ Indest
- Cambridge Structural Database
- ASTM Standards and Digital Library
- Springerlinks (498 journals)
- ASTP (160 journals)
- ACM (30 journals)

SPECIAL SERVICES

- CD-ROM search service.
- Audio-visual service (educational cassettes).
- Membership with institutions.
- Wireless fidelity service.
- Bulletin board service.
- News headlines with weekly update.
- Current awareness service.

THE OTHER SIDE

PRAGYAN

PRAGYAN is the annual international technical extravaganza organized by the students of NIT, Trichy. This mega event aims not only to promote the celebration of the spirit of technology but, also to hone the latent talent and provide a podium to recognize and showcase technology, innovation and creativity on an international scale .

nit trichy

pragyan
2011
let's celebrate technology

FESTEMBER

The students involve themselves actively in organizing cultural events. The inter-college cultural festival at our institute, FESTEMBER, is spread over four days. FESTEMBER brings to the surface the cultural talents among the youth from over 200 institutes all over the country. The fest incorporates various english, hindi and tamil literary events, informals, rock shows, movie-making in addition to music and dance competitions. Our institute also hosts performances by eminent celebrities from the music industry adding glamour and grandiosity to this cultural carnival.



NITTFEST

During NITTFEST, departments square off against each other over two days, on an even keel, to battle over quizzes, debates, music, terpsichorean delights and more. Its a time when heroes emerge in all, heartbreak for some, ecstasy for others, but glory for the institute and a treat for all. It is thus evident that NITTFEST is more than just a fest - it is in effect, a tribute to the creative genius inherent in every Nittian.



CLUBS AND SPORTS

There are about 30 student clubs in the institute. They range from cultural clubs such as ROTARACT, LEO, WISDOM and LEO ROCKTOWN to social awareness clubs such as SPIRIT-Ed (Student Participatory Initiative for Rural IT Education), NITT for CRY and a chapter of the SPICMACAY movement. There are also special interest clubs for photography, karate and trekking. These clubs organize cultural gatherings and interaction programmes throughout the year.

There are various academic and computing societies, which are dedicated to the goal of sharing technical information and spreading computer awareness among students. Notable among these are the GNU-Linux users groups of Trichy (GLUG-T), IEEE, RMI, ACM and the ISA Student Chapters of NITT.

The institute has well developed sports facilities for the students. There are courts for cricket, hockey, basketball, football, volleyball and tennis, besides indoor courts for badminton and table tennis attached to each hostel, and at the sports centre. There is also a fully equipped gymnasium. A newly constructed 'Semi Olympic' swimming pool adjacent to the sports centre adds more pride to the institute campus.



TRAINING AND PLACEMENT



INTRODUCTION

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. The department hosts companies on campus and ensures that every aspirant is assured of a bright career of his/her choice.

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 facilities for online tests will be arranged upon prior intimation. Conveyance from/to airport or railway station is arranged by the department. Accommodation 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. In case 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.

Organises & coordinates campus placement program, to fulfill its commitment of a career to every aspirant.

Helps every student define his/her career interest through individual expert counselling.

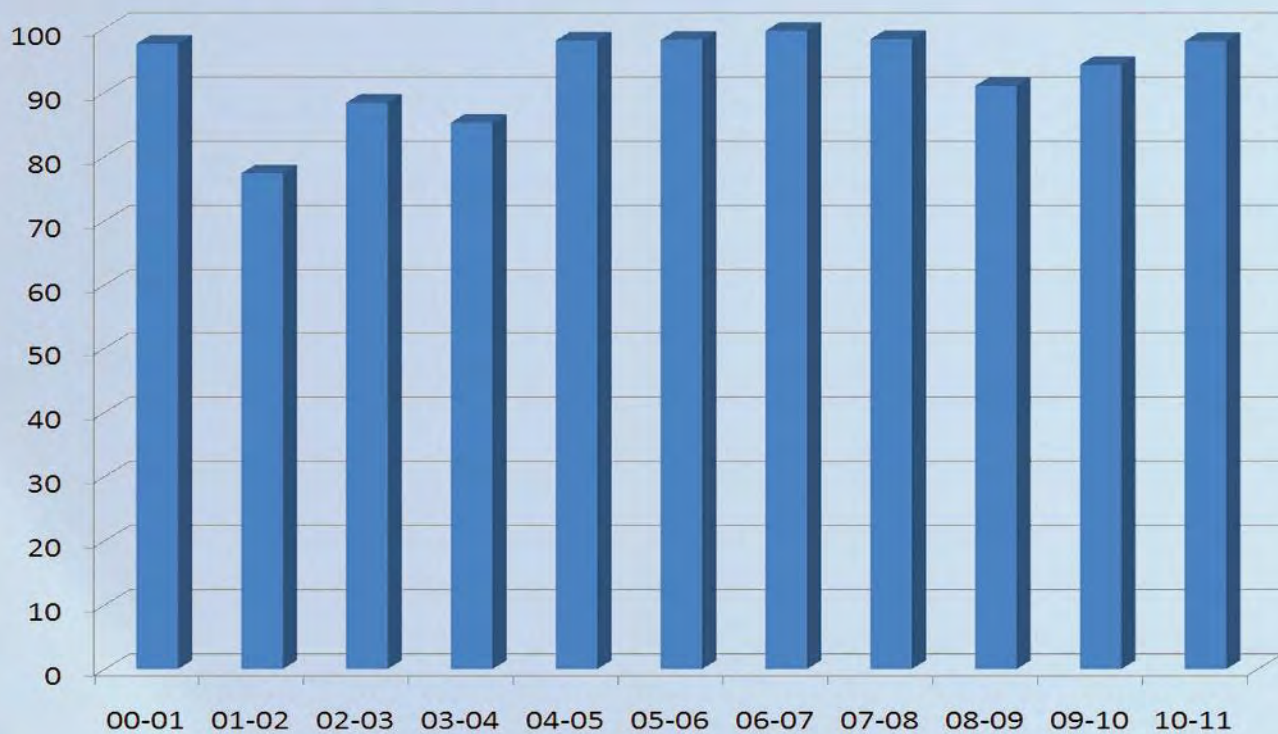
Makes available updated database and job profile of the companies and thus helps each student analyse and choose a company of his interest. The department has in its active file a database of nearly 500 companies.

Works towards continuing education for the employees

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.

PLACEMENT STATISTICS

OVERALL PLACEMENT



COMPANIES VISITING



NIT Trichy is situated 20 Kms from the city of Trichy on the Trichy - Thanjavur highway. Trichy, being located at the geographic 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 July 2011.

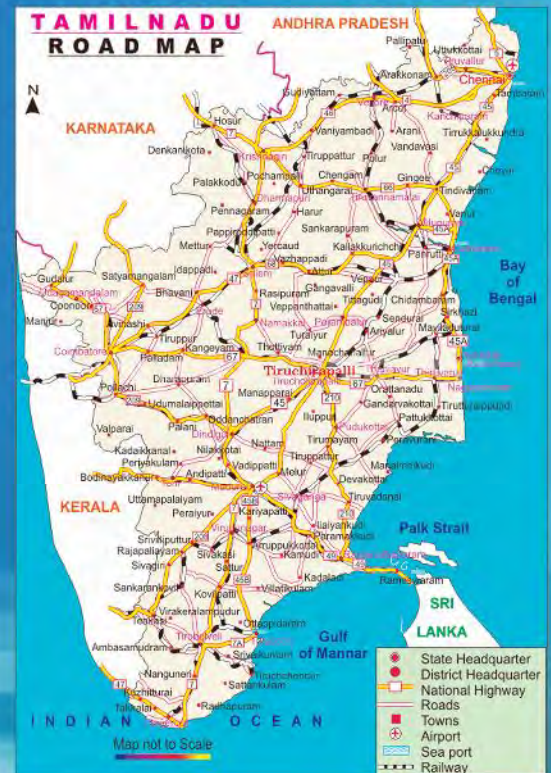
FLIGHT NUMBER	AIRLINE	DAYS OF OPERATION	FROM	TO	DEPARTURE	ARRIVAL
IX-622	AIR INDIA EXPRESS	DAILY	CHENNAI	TRICHY	22:50	23:55
IX-613	AIR INDIA EXPRESS	THURSDAYS AND SUNDAYS	CHENNAI	TRICHY	13:15	14:20
IT-2911	KINGFISHER-RED	DAILY	CHENNAI	TRICHY	11:45	13:00
IT-4343	KINGFISHER-RED	DAILY	CHENNAI	TRICHY	21:10	22:05
9W-2727	JET AIRWAYS	DAILY	CHENNAI	TRICHY	12:30	13:35
9W-2737	JET AIRWAYS	DAILY	CHENNAI	TRICHY	19:15	20:15
IX-621	AIR INDIA EXPRESS	DAILY	TRICHY	CHENNAI	11:25	12:30
IX-614	AIR INDIA EXPRESS	FRIDAYS AND SUNDAYS	TRICHY	CHENNAI	01:35	02:40
IT-2912	KINGFISHER-RED	DAILY	TRICHY	CHENNAI	13:30	14:35
IT-4344	KINGFISHER-RED	DAILY	TRICHY	CHENNAI	22:30	23:30
9W-2728	JET AIRWAYS	DAILY	TRICHY	CHENNAI	14:05	15:10
9W-2738	JET AIRWAYS	DAILY	TRICHY	CHENNAI	20:45	21:45

N.B.: Flights from Bangalore, New Delhi, and Hyderabad via Chennai are also flown by the Kingfisher Red Airline on specific days.

FLIGHT TIMINGS

TRAIN TIMINGS

Train	Train Name	From	Dep	To	Arr	Travel time	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Chennai(Egmore) to Trichy													
12605	PALLAVAN EXP	MS	15.45	TPJ	21.15	5.03	Y	Y	Y	Y	Y	Y	Y
12631	NELLAI EXPRESS	MS	20.05	TPJ	2.25	5.35	Y	Y	Y	Y	Y	Y	Y
12633	KANYAKUMARI EXP	MS	17.03	TPJ	22.35	5.05	Y	Y	Y	Y	Y	Y	Y
12635	VAIGAI EXP	MS	12.04	TPJ	17.05	5.01	Y	Y	Y	Y	Y	Y	Y
12637	PANDIAN EXP	MS	21.15	TPJ	2.55	5.04	Y	Y	Y	Y	Y	Y	Y
12661	POTHIGAI EXP	MS	20.05	TPJ	1.03	5.25	Y	Y	Y	Y	Y	Y	Y
12693	PEARL CITY EXP	MS	19.35	TPJ	1.25	5.05	Y	Y	Y	Y	Y	Y	Y
16107	MS MANGALORE EX	MS	22.00	TPJ	4.45	6.45	Y	Y	Y	Y	Y	Y	Y
16127	MS GURUVAYUR EX	MS	7.05	TPJ	13.05	5.15	Y	Y	Y	Y	Y	Y	Y
16177	ROCK FORT EXP	MS	22.03	TPJ	5.03	7.00	Y	Y	Y	Y	Y	Y	Y
16701	RAMESWARAM EXP	MS	21.04	TPJ	5.25	7.45	Y	Y	Y	Y	Y	Y	Y
16713	RAMESWARAM EXP	MS	17.00	TPJ	22.25	5.25	Y	Y	Y	Y	Y	Y	Y
16723	ANANTAPURI EXP	MS	19.15	TPJ	1.01	5.55	Y	Y	Y	Y	Y	Y	Y
16853	TRICHY EXPRESS	MS	8.02	TPJ	16.35	8.15	Y	Y	Y	Y	Y	Y	Y
Trichy to Chennai(Egmore)													
12606	PALLAVAN EXP	TPJ	6.03	MS	12.00	5.03	Y	Y	Y	Y	Y	Y	Y
12632	NELLAI EXPRESS	TPJ	0.25	MS	6.35	6.01	Y	Y	Y	Y	Y	Y	Y
12634	KANYAKUMARI EXP	TPJ	0.04	MS	6.05	6.01	Y	Y	Y	Y	Y	Y	Y
12636	VAIGAI EXP	TPJ	8.05	MS	14.03	5.04	Y	Y	Y	Y	Y	Y	Y
12638	PANDIAN EXP	TPJ	23.35	MS	5.45	6.01	Y	Y	Y	Y	Y	Y	Y
12662	POTHIGAI EXP	TPJ	1.15	MS	7.01	5.55	Y	Y	Y	Y	Y	Y	Y
16108	MAQ CHENNAI EXP	TPJ	22.00	MS	5.01	7.01	Y	Y	Y	Y	Y	Y	Y
16128	GUV CHENNAI EXP	TPJ	14.01	MS	21.15	7.05	Y	Y	Y	Y	Y	Y	Y
16178	ROCKFORT EXPRES	TPJ	22.02	MS	5.03	7.01	Y	Y	Y	Y	Y	Y	Y
16702	CHENNAI EXPRESS	TPJ	22.35	MS	6.25	7.05	Y	Y	Y	Y	Y	Y	Y
16714	RMM CHENNAI EXP	TPJ	1.05	MS	8.02	6.03	Y	Y	Y	Y	Y	Y	Y
16724	ANANTAPURI EXP	TPJ	2.15	MS	8.04	6.25	Y	Y	Y	Y	Y	Y	Y
16854	CHENNAI EXPRESS	TPJ	9.15	MS	17.45	8.03	Y	Y	Y	Y	Y	Y	Y
Delhi to Trichy													
12642	THIRUKKURAL EXP	NZM	6.00	TPJ	0.35	42.35	x	x	x	x	x	Y	x
12652	T N SMPRK KRNTI	NZM	7.25	TPJ	0.35	41.10	x	Y	x	Y	x	x	x
Trichy to Delhi													
12641	TIRUKKURAL EXP	TPJ	3.00	NZM	18.00	39	x	x	x	Y	x	x	x
12651	SAMPARK KRANTI	TPJ	3.00	NZM	18.00	39	x	Y	x	x	x	x	Y
16787	TEN JAMMU EXP	TPJ	22.35	NDLS	21.40	47.05	Y	x	x	x	Y	x	x
Mumbai to Trichy													
11043	MADURAI EXPRESS	LTT	0.15	TPJ	8.50	32.35	x	x	x	x	Y	x	x
16351	NAGARCOIL EXP	CSTM	12.05	TPJ	20.40	32.35	x	Y	x	x	x	Y	x
Trichy to Mumbai													
11044	LOKAMANYA TT EX	TPJ	21.00	LTT	5.45	32.45	x	x	x	x	x	Y	x
16352	NCJ MUMBAI EXP	TPJ	12.35	CSTM	20.50	32.15	x	x	x	Y	x	x	Y
Howrah to Trichy													
12663	HWH TPJ EXPRESS	HWH	16.10	TPJ	4.25	36.15	x	x	x	Y	x	x	Y
12665	KANNYAKUMARI EX	HWH	16.10	TPJ	3.25	35.15	Y	x	x	x	x	x	x
Trichy to Howrah													
12664	HOWRAH EXPRESS	TPJ	16.00	HWH	3.20	35.20	x	Y	x	x	Y	x	x
12666	CAPE HOWRAH EXP	TPJ	16.00	HWH	3.20	35.20	x	x	x	x	x	Y	x



OUR ESTEEMED RECRUITERS



PLACES TO VISIT

ROCKFORT TEMPLE

This temple crowns a massive outcrop of rock, that soars 83 metres upwards, from the surrounding plains. Halfway up is the Sri Thayumanaswamy Temple, dedicated to Lord Shiva, having a 100-pillared hall, and a Vimana, covered with gold. On the southern face of the rock, are several beautifully carved, rock-cut cave temples of the Pallava period. Built by the Nayaks, who were the founders of the city, it was one of the main centers around which the wars of the Carnatic were fought in the 18th century during the British - French struggle for supremacy in India.



SRI RANGAM TEMPLE

This temple, 6 kms north of the city, is among the most revered shrines to Lord Vishnu in South India, and probably, the largest temple complex in the country. Enclosed by seven rectangular walled courtyards, this 13th century temple has 21 gopurams. The town, and the temple, are set on a 250-hectare island in the Cauvery, connected to the mainland by a bridge. The temple is very well preserved, with excellent carvings, and numerous shrines to various gods, though the main temple is dedicated to Lord Vishnu.



NATHARVALI

Constructed with four doors according to Vedic sastras and seppulingam, this shrine is a witness to ghee lamp burning near the grave of Baba Natharvali. The saint breathed his last on the 15th of the month of Ramzan in Hijiri 417 and with a view to remembering this day, the first 17 days in the month of Ramzan every year, Kanduri Urs is celebrated in a highly grand scale. It is a unique feature to see Muslims, Hindus and Christians assemble to pay their homage and warm respects to Baba Natharvali on the eve of the Kanduri festival and seek his graceful blessings.



THANJAVUR

Thanjavur is home to the famous Brihadeeswara Temple, one of UNESCO World Heritage Sites. The Brihadeeswara Temple was built by Rajaraja Chola during the 11th century. Among the other historic buildings are the Vijayanagara fort and the Manora Fort - a monumental tower, built by Serfoji II and situated about 65 km away from Thanjavur.



KALLANAI (GRAND ANAICUT)

Kallanai is one of the greatest engineering marvels of India. The Grand Anaicut built by Karikalan Chola in the 2nd century A.D. to harness the waters of the kauveri. Made of stone, the dam is 329m long and 20m wide and still very much in use. Additions have been made in the form of a road bridge on top of the dam.



ST. LOURDE'S CHURCH

Built in 1812, this Church has louvered doors, which when opened, turns the church into an airy pavilion. Its excellent setting and marvelous architecture, makes it a site worth visiting.



CAMPUS SNAPSHOTS





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