

Information Brochure  
**BRIEF HISTORY OF THE INSTITUTE**  
Guru Nanak Dev Engineering College was established by the Nankana Sahib Education Trust (NSET) Ludhiana. The Nankana Sahib Education was founded in memory of the most sacred temple of Sri Nankana Sahib, birth palace of Sri Gurur Nanak Dev Ji. Shiromani Gururdwara Parbandhak Committee, Amritsar, a premier organisation of Univarsal Brotherhood, was the main force behind the mission of "Removal of Economic Backwardness through Technology". With this mission, a Poly-technic was started in 1953 and Guru Nanak Dev Engineering College was established in 1956. Nankana Sahib Education Trust resolved to uplift the vast weaker section of Indian polity comprising of Rural India by admitting 70% students every year from rural areas. This commitment was made to nation on 8th April, 1956, the day foundation stone of the College building was laid by Dr. Rajendra Prasad Ji, the first president of India. Nearly 10,000 Graduate and 2000 Post-Graduate Engineers have passed out from this college during the last 49 years and are successfully employed in India and abroad. This college is now ISO 9001:2000 certified. Five branches of Engineering as listed below are Accredited by National Board of Accreditation, (NBA) AICTE, New Delhi. College is also supported under FIST and TEQIP scheme of Govt. of India and is a QIP centre of PhD research.

**UNDER GRADUATE COURSES**

1. Civil Engineering
2. Mechanical Engineering
3. Electrical Engineering
4. Electronics & Communication Engineering
5. Computer Science Engineering
6. Information Technology
7. Production Engineering

Following Posgraduate Courses are running in different departments:

**TESTING & CONSULTANCY CELL**  
Testing & Consultancy Cell was established in the year 1979 with a basic aim to provide quality service for technical problems at reasonable and affordable rates as a service to society in general and Engineering fraternity in particular. Ours is a pioneer institute providing Consultancy Services in the States of Punjab, Haryana, Himachal, J&K and Rajasthan. Various Major Clients of the Consultancy Cell are as under:

1. Larson & Tubro
2. Multi National Companies like AFCON & PAULINGS,
3. Power Grid Corporation of India

4. National Thermal Power Corporation
5. National Building Construction Co.
6. Northern Railway, Govt. of India
7. Municipal Corporations of Punjab & Chandigarh
8. Military Engineering Services
9. Punjab State Electricity Board
10. Punjab Mandi Board
11. Punjab Police Housing Corporation
12. Punjab Health System Corporation
13. Punjab State PWD (B & R, Public Health and Irrigation)
14. Punjab Water Supply & Sewerage Board
15. Punjab State Education Board, Mohali
16. Hindustan Petroleum Corporation Limited
17. National Fertilizers Ltd.
18. PUNSUP
19. Postal & Telecom Department, Govt. of India
20. Sonalica Tractors & Cars Ltd, (Punjab & H.P)
21. Big Industrial Houses like Hero Cycles, Oswal Woollen Mills, OCM Woollen Mills, Vardhman Knitting Yarn Mills etc.
22. BBMP, Charkhi Dadri (Haryana)
23. INDIAN Depot Oil AIR FORCE Halwara State
24. I.O. Limited Jalandhar

**CIVIL ENGINEERING LABORATORIES**

- Geo-technical Lab**  
Bearing Capacity of Soil by  
Plate Load Test  
Standard Penetration  
Pile Test  
Chemical Analysis of Soil  
Consolidation Test  
Compaction Test  
Field Density Test  
Relative Density Test  
Computerized Triaxil Shear Testing Machine  
Rapid moisture meter  
Permeability Test  
Particle Size Analysis  
Consistency Limits  
Liquefaction analysis  
Swell Test  
**Transportation Engineering Lab**  
CBR Test - Digital Equipment  
Abrasion Value Test  
Crushing Value Test  
Impact Value Test

- Softening Point Test of Bitumen  
Shape Test  
Ductility Test of Bitumen  
Specifc Gravity Test  
Penetration No. of Bitumen  
Rougho Meter  
Benkleman 'Beam Apparatus  
Marshal stability Test  
**Material Testing Lab**  
Testing of Materials like Cement, Steel, Sand, Aggregates, Concrete Cubes, Flooring Tiles, Pavers, Bricks, Tiles etc.  
Checking Strength of Hardened Concrete by Non-Destructive Test like  
Ultra Sonic Technique  
Rebound Hammer Technique  
Chemical Analysis of Cement & Concrete  
Flexural Strength of Concrete Beams  
Timber (Water Content & Flexural Strength)  
**Survey Lab**  
Preparation of Contour Map with the use of Total Station  
Marking of Alignment of Different Structures  
Survey Plan & Leveling  
Preparation of L Section & X-section  
Preparation of Digital Maps  
**Environmental Lab**  
Analysis of Water Samples for Drinking, Construction & Boiler  
Analysis of Waste Water  
Treatability Studies for Industial Wastes  
Design & Commissioning of Effluent Treatment Plants  
Preparation of Project Fesibility Reports for ETPs  
Design of Air Pollution Control Devices  
Adequacy reports for Existing/Designed ETPs & APCDs  
Environmental Auditing  
Environmental Impact Assessment  
**Engineering Design**  
Structural Design of Reinforced Concrete Structures

- Like Industrial Structure, Institutional Building, Other Buildings, Residential Building, OHSR & Treatment Plant  
Structural Design of Steel Structures  
Structure Design of Masonry Structures  
Mix Design  
Pavement Design  
**Other Services**  
Estimation & Costing of Project  
Supervision & Quality Control  
Calibration of different Equipments  
**TESTING TEAM**  
*Geo-Technical Engg.*  
Dr. J.N.Jha, Ph.D.  
Er. Harjinder Singh, M.E.  
Er. Kulbir Singh Gill, M.E.  
Dr. B.S. Walia, Ph.D  
Er. Gurdeepak Singh, M.Tech.  
*Structural Engg.*  
Dr. Hardeep Singh Rai, Ph.D.  
Dr. Harpal Singh, Ph.D.  
Dr. Harvinder Singh, Ph.D  
Er. Prashant Garg, M.E.  
*Highway Engg.*  
Er. Kulbir Singh Gill, M.E.  
Er. Prashant Garg, M.E.  
*Material Testing*  
Er. Kanwarjit Singh Bedi, M.Tech.  
Dr. Jagbir Singh, Ph.D  
*Survey*  
Dr. B.S. Walia, M.E.  
Er. Kanwarjit Singh Bedi, M.Tech.  
*Environmental Engg.*  
Dr. R.P. Singh, Ph. D.  
Er. Puneetpal Singh Cheema, M.E.  
**ELECTRICAL ENGINEERING LABORATORIES**  
**Electrical Machines**  
**High Voltage**  
**Power Electronics and Microprocessors**

- Electrical Measurement**  
**PowerSystems and Control**  
**Basic Electrical Engg.**  
**Computer**  
**Applied Electronics**  
**TESTING TEAM**  
Er. Jaswinder Singh, M.E.  
Er. Khushdeep Singh, M.E.  
Er. Rupinderjit Singh, B.E.  
Er. Preetinder Singh, B.E.  
Er. Kanwardeep Singh, M.Tech.  
Er. Gagandeep Singh Sodhi, M.Tech.  
Er. Navneet Singh Bhangoo, M.Tech.  
**FACILITIES**  
Design, Development and testing facilities for power electronics gadgets like Inverters, Choppers etc.  
Testing & verification of rating for electric motors upto 100 H.P.  
esting of Insulators for impulse and power frequency, dry and wet, Flashover and Breakdown voltage.  
Testing of Transformer oil at power frequency.  
Testing and Calibration of various electrical measuring instruments.  
Detection & Localization of Underground Cable faults.  
Determination of Earth Resistivity & Earth Resistance.  
Electrical Energy Auditing of Industrial & Commercial Houses.  
Design of Modern Lighting System for industrial & commercial houses.  
Design and implementation of digital controllers for process industry.  
Installation & layout Design for subslations upto 66 K.V.  
**ELECTRONICS ENGINEERING LABORATORIES**  
**Communication and T.V.**  
**Micro-wave**  
**Digital Electronics and Project**  
**Electronics Design and Automation Lab**



Microprocessor and Hardware

Fiber optics & Multimedia

TESTING TEAM

Er. Nirmal Singh Grewal M.Tech.

Er. Ameeta Seehra, M.Tech.

Dr. S.S. Gill, Ph.D.

Er. Narwant Singh, M.Tech.

Er. B.S. Dhaliwal, M.Tech.

Dr. Munish Rattan, Ph.D.

Er. Baljeet Kaur

FACILITIES

Projects based on installation, interfacing, programming and testing on Micro controllers, Microprocessors, and PLCs.

Industrial Electronics Based Application and trouble shooting

Fuzzy Logic Based control systems

PCB Design and Development.

Projects on Antenna (Simulation & Design)

SHORT TERM TRAINING

VLSI Design

Programming and Hardware Implementation using VHDL

Electronic circuit design and analysis using OR-CAD/PSPICE

Training module on Fiber optics

Training module on Digital Signal processing

Training module on Wireless communication systems

Training module on MAT LAB

MECHANICAL ENGINEERING & PRODUCTION TECHNOLOGY

LABORATORIES

Heat Engines & Thermal Sciences

Metrology & Mechanical Measurements

Heat Transfer

Hydraulic Machines

Machine Tools

Metal Forming

CAM and Automation

Dynamics of Machines

Metallurgy and Heat Treatment

Computer Aided Design (CAD)

TESTING TEAM

Dr. Sehijpal Singh, Ph.D .

Dr. Paramjit Singh, Ph.D.

Dr. Harwinder Singh, Ph.D.

Dr. Rupinder Singh, Ph.D.

Er. Jatinder Kapoor, M.Tech.

Er. Ravi-Inder Singh, M.Tech.

Er. Prem Singh, M.Tech.

Er. G.S. Brar, Ph.D.

FACILITIES

Engineering Design & CAD

Design verification/validation of structural design of Multi-axle trailers, cranes and other mechanical components.

Product conceptualization & 3-D Modeling of Industrial components, computer aided drawing generation through reverse Engineering.

Design of press tools, moulds and dies for casting & plastic injection dies.

Design of Mechanisms.

Design & Testing of Hoists, Lifts, Lifting mechanisms & safety provision etc.

Pressure Gauge & Pipe Testing

Manufacturing & Industrial Engineering

Optimisation of Industrial/Manufacturing processes.

Operation Management (inventory Management & Control, Material Management & Line Balancing etc.)

Supply Chain Management & Waste Minimisation

Metallurgical & Micro structural analysis

Capacity Utilization

Thermal Engineering

Refrigeration & Air Conditioning system design.

Fuel Testing & Combustion characteristics of different fuels.

Energy Management & Auditing.

Performance Testing of Centrifugal Pumps, Submersible Pump.

Engine performance testing.

Thermal properties testing of different material.

SHORT TERM TRAINING

Training Module on Product Design, 3D Modeling & CAD, Lean & Supply Chain Management, Six-Sigma, Thermal System design & optimisation, Non-Traditional Manufacturing, Maintenance & Reliability.

COMPUTER SCIENCE ENGINEERING & INFORMATION TECHNOLOGY

LABORATORIES

Operating System Lab-I

Operating System Lab-II

Project lab-I

Project lab-II

Hardware - Lab

Software Lab-I

Software Lab-II

Web Development Lab

DBMS Lab

Computer Network Lab

Research Lab

TESTING TEAM

Er. Akshay Girdhar, M.Tech. (IT)

Er. Amanpreet Singh Brar, M.Tech. (CSE)

Er. Parminder Singh, M.Tech. (CSE)

Er. Jasbir Singh Saini, M.Tech. (IT)

Er. Kulwinder Singh Mann, M.Tech. (IT)

Er. Manpreet Singh, M.Tech. (CSE)

Er. Kiran Jyoti, M.Tech. (CSE)

Er. Amandeep Kaur Sohal. M.Tech. (CSE)

Er. Raninder Kaur, MS (S/W Systems)

Er. Sumeet Kaur, M.Tech. (CSE)

Er. Amit Kamra, M.Tech. (IT)

Er. Vivek Thapar, M.Tech. (IT)

Er. Sukhjit Singh, M.Tech. (CSE)

Er. Pankaj Bhambri M.Tech. (CSE)

Er. Kamaljit Kaur Dhillon M.Tech. (CSE)

Parminder Kaur Wadhwa M.Tech (CSE)

FACILITIES

Networking-installation and Maintenance

Hardware fault Diagnosis & Testing

Installation & Configuration of Servers

Desktop publishing (DTP)

Computerized layout plan

Software packages development for Automation

SHORT TERM TRAINING

Training Module on Python/PHP

Training Module on Oracle/SQL

Training Module on Java

Training Module on C++, C

Training Module on Networking

Training Module on Hardware

APPLIED SCIENCES

LABORATORIES

Applied Chemistry Lab

TESTING TEAM

Dr. R.P. Singh, Ph. D.

Er. Punit pal Singh Cheema, M.Tech

FACILITIES

Chemical Analysis of Cement (Silica, Calcium oxide, Magnesium oxide, Iron oxide, Chromium oxide, Loss on ignition, Insoluble residue)

Chemical Analysis of Cement Mortar (Ratio of cement and sand)

Chemical Analysis of Cement Concrete (Ratio of cement, sand, aggregate)

Test of Water (Chlorides, sulphates, pH value dissolved solids, hardness, alkalinity)

Chemical Analysis of Soil/Sand (Chlorides, sulphates, Calcium carbonate)

Chemical Analysis of Coarse/Fine Aggregates (Sodium and magnesium sulphate, clay lumps, fine material, deleterious materials)

Chemical Analysis of Boiler water

Flash Point of Fuels

Penetration Number of Lubricant

CENTRAL WORKSHOP

LABORATORIES

Machine Shop

Fitting Shop

Electric Shop

Carpentry Shop

Foundry Shop

Blacksmithy Shop

Welding Shop

Sheet Metal and Plumbing Shop

TESTING TEAM

Er. Jasmaninder Singh Grewal M.E.

Er. Ranjit Singh

FACILITIES

Material handling

Machines Maintenance (Lathe & Milling)

Faults Finding in Electric Motors

Consultancy of Welding of Odd Job.

SHORT TERM TRAINING

Fault Finding and Repair of Domestic Appliances

Material Metrology and Engineering inspection

Carpenter

Pattern Making

Motor Winding

Welder

Machinist

Turner

Fitter

Moldel

Fabrication

MBA

TESTING TEAM

Dr. Sukhdev Singh, MBA, M.Com, DPMIR, Ph.d

Prof. Parampal Singh, M.Sc., MBA

Amanjot K. Gill, MCBA

Prof. H.S. Dhall

AREA OF CONSULTANCY

Financial Management

Marketing Management

Human Resource Management