

TESTING & CONSULTANCY CELL

Providing Technical Services Since 1979

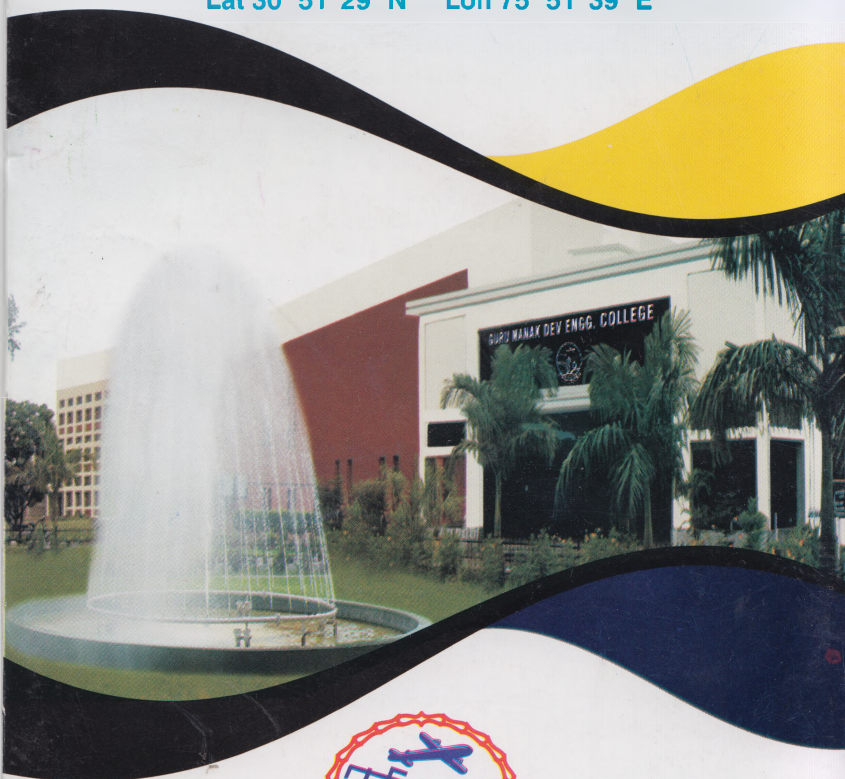
Guru Nanak Dev Engineering College

An Autonomous College Under Section [2(f) and 12(B)] of UGC Act 1956

NBA Accredited, Punjab Govt. Aided Status, ISO : 9001:2008 Certified

GILL ROAD, GILL PARK, LUDHIANA - 141006

Lat 30° 51' 29" N Lon 75° 51' 39" E



**AN INSTITUTE OFFERING ACCREDITED COURSES
& SUPPORTED UNDER THE FIST &
TEQIP SCHEME OF GOI**

**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 trust was founded in memory of the most sacred temple of Sri Nankana Sahib, birth place of Sri Guru Nanak Dev Ji. Shiromani Gurudwara Parbandhak Committee, Amritsar, a premier organisation of Universal Brotherhood, was the main force behind the mission of "Removal of Economic Backwardness through Technology". With this mission, a Polytechnic 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 & Comm. Engineering

Following Postgraduate Courses are running in different departments:

1. Civil Engineering Deptt.

Structural Engineering (Full Time)
Geotechnical Engineering (Full Time & Part Time)
Environment Engineering (Full Time)

2. Mechanical Engineering Deptt.

Production Engineering (Full Time & Part Time)
Industrial Engineering (Full Time & Part Time)

3. Electrical Engineering Deptt.

Power Engineering (Full Time)
Electrical Engineering (Part Time)

4. Computer Science Engg.

Computer Science & Engg. (Full time & Part Time)

5. Electronics Engineering Deptt.

Electronics Engineering (Full time & Part Time)
VLSI Design (Full time & Part Time)

6. MBA

Two Years (Full Time) Master Degree

7. MCA

Two Years (Full Time) Master Degree

5. Computer Science Engineering
6. Information Technology
7. Production Engineering

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 Station 24. I.O. Limited Jalandhar

TESTING TEAM

FACILITIES

SHORT TERM TRAINING

AREA OF CONSULTANCY

CIVIL ENGINEERING

LABS

GEO-TECHNICAL LAB

- | | |
|--------------------------------|------------------------------|
| 1. Bearing Capacity of Soil by | |
| a) Plate Load Test | b) Standard Penetration |
| 2. Pile Test | 3. Chemical Analysis of Soil |
| 4. Consolidation Test | 5. Compaction Test |
| 6. Field Density Test | 7. Relative Density Test |
| 8. Computerized Triaxial Shear | 9. Rapid moisture meter |
| Testing Machine | |
| 10. Permeability Test | 11. Particle Size Analysis |
| 12. Consistency Limits | 13. Liquifaction analysis |
| 14. Swell Test | 15. Pressure meter |

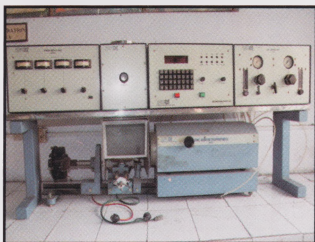


TRANSPORTATION ENGINEERING LAB

1. CBR Test - Digital Equipment
2. Abrasion Value Test
3. Crushing Value Test
4. Impact Value Test



5. Softening Point Test of Bitumen
6. Shape Test
7. Ductility Test of Bitumen
8. Specific Gravity Test
9. Penetration No. of Bitumen
10. Rougho Meter
11. Benkleman 'Beam Apparatus
12. Marshal stability Test
13. Light weight Deflectometer



MATERIAL TESTING LAB

1. Testing of Materials like Cement, Steel, Sand, Aggregates, Concrete
2. Cubes, Flooring Tiles, Pavers, Bricks, Tiles etc.
3. Checking Strength of Hardened Concrete by Non-Destructive Test like Ultra Sonic Technique, Rebound Hammer Technique and load test
4. Abrasion Testing
5. Corrosion Analysis of Rebars
6. 3D Bar Scanner
7. Chemical Analysis of Cement & Concrete
8. Flexural Strength of Concrete Beams
9. Timber (Water Content & Flexural Strength)

SURVEY LAB

1. Preparation of Contour Map with the use of Total Station
2. Marking of Alignment of Different Structures
3. Survey Plan & Leveling
4. Preparation of L Section & X-section
5. Preparation of Digital Maps

ENVIRONMENTAL LAB

1. Analysis of Water Samples for Drinking, Construction & Boiler
2. Analysis of Waste Water
3. Treatability Studies for Industrial Wastes
4. Design & Commissioning of Effluent Treatment Plants
5. Preparation of Project Fesibility Reports for ETPs
6. Design of Air Pollution Control Devices
7. Adequacy reports for Existing/Designed ETPs & APCDs
8. Environmental Auditing
9. Environmental Impact Assessment

ENGINEERING DESIGN

1. Structural Design of Reinforced Concrete Structures Like Industrial Structure, Institutional Building, Other Buildings, Residential Building, OHSR & Treatment Plant
2. Structural Design of Steel Structures
3. Structure Design of Masonry Structure
4. Mix Design
5. Pavement Design

OTHER SERVICES

1. Estimation & Costing of Project
2. Supervision & Quality Control
3. Calibration of different Equipments



TESTING TEAM

GEO-TECHNICAL ENGG.

1. Dr. J.N.Jha, Ph.D.
2. Er. Harjinder Singh, M.E.
3. Er. Kulbir Singh Gill, M.E.
4. Dr. B.S. Walia, Ph.D
5. Er. Gurdeepak Singh, M.Tech.

STRUCTURAL ENGG.

1. Dr. Hardeep Singh Rai, Ph.D.
2. Dr. Harpal Singh, Ph.D.
3. Dr. Harvinder Singh, Ph.D
4. Er. Prashant Garg, M.E.

HIGHWAY ENGG.

1. Er. Kulbir Singh Gill, M.E.
2. Er. Prashant Garg, M.E.

MATERIAL TESTING

1. Er. Kanwarjit Singh Bedi, M.Tech.
2. Dr. Jagbir Singh, Ph.D

SURVEY

1. Dr. B.S. Walia, Ph.D.
2. Er. Kanwarjit Singh Bedi, M.Tech.

ENVIRONMENTAL ENGG.

1. Dr. R.P. Singh, Ph. D.
2. Er. Puneetpal Singh Cheema, M.E.

FACILITIES

SHORT TERM TRAINING

AREA OF CONSULTANCY

ELECTRICAL ENGINEERING

LABS

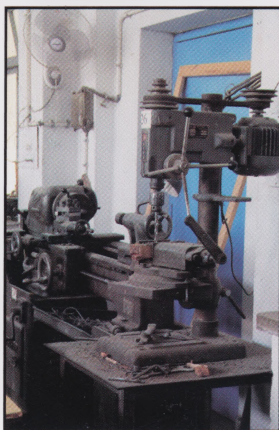
1. Electrical Machines
2. High Voltage
3. Power Electronics and Microprocessors
4. Electrical Measurement
5. PowerSystems and Control
6. Basic Electrical Engg.
7. Computer
8. Applied Electronics

TESTING TEAM

1. Er. Jaswinder Singh, M.E.
2. Er. Khushdeep Singh, M.E.
3. Er. Rupinderjit Singh, B.E.
4. Er. Preetinder Singh, B.E.
5. Er. Kanwardeep Singh, M.Tech.
6. Er. Gagandeep Singh Sodhi, M.Tech.
7. Er. Navneet Singh Bhanguoo, M.Tech.

FACILITIES

1. Design, Development and testing facilities for power electronic gadgets like Inverters, Choppers etc.



2. Testing & verification of rating for electric motors upto 100 H.P.
3. Testing of Insulators for impulse and power frequency, dry and wet, Flashover and Breakdown voltage.
4. Testing of Transformer oil at power frequency.
5. Testing and Calibration of various electrical measuring instruments.
6. Detection & Localization of Underground Cable faults.
7. Determination of Earth Resistivity & Earth Resistance.
8. Electrical Energy Auditing of Industrial & Commercial Houses.
9. Design of Modern Lighting System for industrial & commercial houses.
10. Design and implementation of digital controllers for process industry.
11. Installation & layout Design for substations upto 66 K.V.

SHORT TERM TRAINING

AREA OF CONSULTANCY

4. ELECTRONICS ENGINEERING

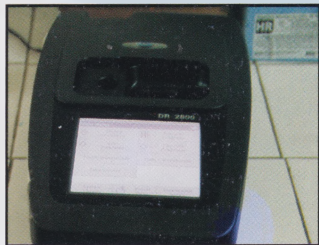
LABS

1. Communication and T.V.
2. Micro-wave
3. Digital Electronics and Project
4. Electronics Design and Automation Lab
5. Microprocessor and Hardware
6. Fiber optics & Multimedia



TESTING TEAM

1. Er. Nirmal Singh Grewal M.Tech.
2. Er. Ameeta Seehra, M.Tech.
3. Dr. S.S. Gill, Ph.D.
4. Er. Narwant Singh, M.Tech.
5. Er. B.S. Dhaliwal, M.Tech.
6. Dr. Munish Rattan, Ph.D.
7. Er. Baljeet Kaur



FACILITIES

1. Projects based on installation, interfacing, programming and testing on Micro controllers, Microprocessors, and PLCs.
2. Industrial Electronics Based Application and trouble shooting
3. Fuzzy Logic Based control systems
4. PCB Design and Development.
5. Projects on Antenna (Simulation & Design)

SHORT TERM TRAINING

1. VLSI Design
2. Programming and Hardware Implementation using VHDL

3. Electronic circuit design and analysis using ORCAD/PSPICE.
4. Training module on Fiber optics
5. Training module on Digital Signal processing
6. Training module on Wireless communication systems
7. Training module on MAT LAB

AREA OF CONSULTANCY

5. MECHANICAL ENGINEERING & PRODUCTION TECHNOLOGY

LABS

1. Heat Engines & Thermal Sciences
2. Metrology & Mechanical Measurements
3. Heat Transfer
4. Hydraulic Machines
5. Machine Tools
6. Metal Forming
7. CAM and Automation
8. Dynamics of Machines
9. Metallurgy and Heat Treatment
10. Computer Aided Design (CAD)



TESTING TEAM

1. Dr. Sehijpal Singh, Ph.D.
2. Dr. Paramjit Singh, Ph.D.
3. Dr. Harwinder Singh, Ph.D.
4. Dr. Rupinder Singh, Ph.D.
5. Dr. Jatinder Kapoor, Ph.D.
6. Dr. Ravi-Inder Singh, Ph.D.
7. Er. Prem Singh, M.Tech.
8. Dr. G.S. Brar, Ph.D.



FACILITIES

ENGINEERING DESIGN & CAD

1. Design verification/validation of structural design of Multi-axle trailers, cranes and other mechanical components.
2. Product conceptualization & 3-D Modeling of Industrial components, computer aided drawing generation through reverse Engineering.
3. Design of press tools, moulds and dies for casting & plastic injection dies.
4. Design & Testing of Hoists, Lifts, Lifting mechanisms & safety provision etc.
5. Pressure Gauge & Pipe Testing.
6. Non-Conventional Energy System Design.
7. Submersible Pump Testing Lab. (NABL Accredited)

MANUFACTURING & INDUSTRIAL ENGINEERING

1. Optimisation of Industrial/Manufacturing processes.
2. Operation Management (inventory Management & Control, Material Management & Line Balancing etc.)
3. Supply Chain Management & Waste Minimisation
4. Metallurgical & Micro structural analysis
5. Capacity Utilization
6. Non Conventional Machining Process

THERMAL ENGINEERING

1. Refrigeration & Air Conditioning system design.
2. Fuel Testing & Combustion characteristics of different fuels.
3. Energy Management & Auditing.
4. Performance Testing of Centrifugal Pumps, Submersible Pump.
5. Engine performance testing.
6. 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.

Area of Consultancy

7. COMPUTER SCIENCE ENGINEERING & INFORMATION TECHNOLOGY

LABS

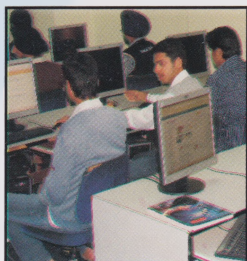
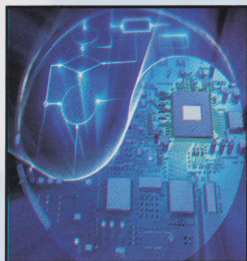
- | | |
|---------------------------|----------------------------|
| 1. Operating System Lab-I | 2. Operating System Lab-II |
| 3. Project lab-I | 4. Project lab-II |
| 5. Hardware - Lab | 6. Software Lab-I |
| 7. Software Lab-II | 8. Web Development Lab |
| 9. DBMS Lab | 10. Computer Network Lab |
| 11. Research Lab | |

TESTING TEAM

1. Er. Akshay Girdhar, M.Tech. (IT)
2. Er. Amanpreet Singh Brar, M.Tech. (CSE)
3. Er. Parminder Singh, M.Tech. (CSE)
4. Er. Jasbir Singh Saini, M.Tech. (IT)
5. Er. Kulwinder Singh Mann, M.Tech. (IT)
6. Er. Manpreet Singh, M.Tech. (CSE)
7. Er. Kiran Jyoti, M.Tech. (CSE)
8. Er. Amandeep Kaur Sohal, M.Tech. (CSE)
9. Er. Raninder Kaur, MS (S/W Systems)
10. Er. Sumeet Kaur, M.Tech. (CSE)
11. Er. Amit Kamra, M.Tech. (IT)
12. Er. Vivek Thapar, M.Tech. (IT)
13. Er. Sukhjot Singh, M.Tech. (CSE)
14. Er. Pankaj Bhambri M.Tech. (CSE)
15. Er. Kamaljit Kaur Dhillon M.Tech. (CSE)
16. Er. Parminder Kaur Wadhwa M.Tech (CSE)

FACILITIES

1. Networking-installation and Maintenance
2. Hardware fault Diagnosis & Testing
3. Installation & Configuration of Servers
4. Desktop publishing (DTP)



5. Computerized layout plan
6. Software packages development for Automation

SHORT TERM TRAINING

1. Training Module on Python/PHP
2. Training Module on Oracle/SQL
3. Training Module on Java
4. Training Module on C++ , C
5. Training Module on Networking
6. Training Module on Hardware

AREA OF CONSULTANCY

9. APPLIED SCIENCES

LABS

APPLIED CHEMISTRY LAB

TESTING TEAM

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

Er. Punit pal Singh Cheema, M.Tech

Facilities

1. Chemical Analysis of Cement (Silica, Calcium oxide, Magnesium oxide, Iron oxide, Chromium oxide, Loss on ignition, Insoluble residue)
2. Chemical Analysis of Cement Mortar (Ratio of cement and sand)
3. Chemical Analysis of Cement Concrete (Ratio of cement, sand, aggregate)
4. Test of Water (Chlorides, sulphates, pH value dissolved solids, hardness, alkalinity)
5. Chemical Analysis of Soil/Sand (Chlorides, sulphates, Calcium carbonate)
6. Chemical Analysis of Coarse/Fine Aggregates (Sodium and magnesium sulphate, clay lumps, fine material, deleterious materials)
7. Chemical Analysis of Boiler water
8. Flash Point of Fuels
9. Penetration Number of Lubricant



SHORT TERM TRAINING

AREA OF CONSULTANCY

10. CENTRAL WORKSHOP

LABS

- | | |
|------------------|---------------------|
| 1. Machine Shop | 2. Fitting Shop |
| 3. Electric Shop | 4. Carpentry Shop |
| 5. Foundry Shop | 6. Blacksmithy Shop |
| 7. Welding Shop | |

SHEET METAL AND PLUMBING SHOP

TESTING TEAM

Er. Jasmaninder Singh Grewal M.E.

Er. Ranjit Singh

FACILITIES

1. Material handling
2. Machines Maintenance (Lathe & Milling)
3. Faults Finding in Electric Motors
4. Consultancy of Welding of Odd Job.

SHORT TERM TRAINING

1. Fault Finding and Repair of Domestic Appliances
2. Material Metrology and Engineering inspection
3. Carpenter
4. Pattern Making
5. Motor Winding
6. Welder
7. Machinist
8. Turner
9. Fitter
10. Model
11. Fabrication



AREA OF CONSULTANCY

11. MBA

TESTING TEAM

1. Dr. Sukhdev Singh, MBA, M.Com, DPMIR, Ph.d
2. Prof. Parampal Singh, M.Sc., MBA
3. Prof. Amanjot K. Gill, MCBA
4. Prof. H.S. Dhall

FACILITIES

SHORT TERM TRAINING

AREA OF CONSULTANCY

1. Financial Management
2. Marketing Management
3. Human Resource Management

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TESTING & CONSULTANCY CELL

PROVIDING TECHNICAL SERVICES SINCE 1979

GURU NANAK DEV ENGINEERING COLLEGE

TOP RANKED ENGINEERING COLLEGE OF PUNJAB

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