

### **About the GNDEC, Ludhiana.....**

Guru Nanak Dev Engineering College (GNDEC) was established by the Nankana Sahib Educational Trust (NSET) in the year 1956. NSET was founded in the memory of the most sacred temple of Nankana Sahib, birth place of Guru Nanak Dev Ji. The main mission for establishing Guru Nanak Dev Engineering College was 'Removal of Economic Backwardness through Technology'. To fulfill this commitment, a unique admission criterion was adopted by NSET by reserving 70% seats for the students of rural areas. At present seven undergraduate and thirteen post graduate courses are being offered in Engineering apart from MBA and MCA. The college is an QIP centre for Ph.D. admissions by AICTE in Civil Engineering, Mechanical Engineering and Electrical Engineering.

### **About the Department.....**

Civil Engineering Department has been *accredited* since 2004 by NBA and also by NAAC. It is running three full time PG programmes (Structural Engineering.; Geotechnical Engineering.; Environmental Science and Engineering) and one part-time PG programme (Soil Mechanics and Foundation Engineering) along with UG programme in Civil Engineering in two shifts. The department has the state of art facilities for R&D activities and is actively engaged in providing consultancy services to different government and private sector in and around Punjab with an annual turnover of approximately Rs one crore. The department has been declared as **QIP Centre** for Ph.D by AICTE, New Delhi from the session 2011-2012 and is supported under the **FIST** scheme and **TEQIP-II** scheme *GOI*.

### **About the Course.....**

Design is an ever evolving process and it is entirely different now-a-days than it was few decades back due to the better understanding of the material behavior and development of new materials (models). Nevertheless, basic aim of the structural design process remains the same, i.e. to proportion and select various dimensions of the constituent members of the structural system and their other parameters, such as materials, shape, construction technique, etc. so that it must be able to fulfil its purpose with an adequate safety, serviceability and economy; the safety not only implies resistance to the external actions, but it also concentrates on the ductility and robustness of the system.

The material characteristics and its response to the loading play an important role in a design process. It is, therefore, essential that the designer must possess adequate knowledge about the material characteristics going to be used in the construction and their failure envelop describing the safe design stresses.

The course aims to refresh the fundamental concepts related to new and conventional structural materials, their material models and the design of buildings using reinforced concrete as structural material and appraise the participants about the latest developments in the design and practice of RC buildings through some live project/ hands-on-training/ assignments.

### **Course contents.....**

- New material developments
- Material models and the design process
- Fundamental concepts related to the design
- Design of RC members for shear, bending and torsion
- Practical considerations and codal guidelines

*QIP sponsored*  
*Short Term Training Program*

*On*

*Analysis and Design of RC Buildings :  
Concepts and Practice*

**February 19 - 23, 2019**



**Organized by**

**Civil Engineering Department,  
Guru Nanak Dev Engineering College,  
Ludhiana (Punjab)- 141006**

## How to Reach GNDEC, Ludhiana

The institute is located on Ludhiana-Malerkotla road (also, called Gill road) and is around 6 km from the Bus Stand and 7 km from the Ludhiana railway station. It is well connected to other parts of the country by both rail and road. Important trains, like Shatabdi Express, Rajdhani Express, Howrah Mail, Malwa Express, Golden Temple Mail, Pachim Express and Sachkhand Express halt at the Ludhiana railway station. Regular buses (both, AC and Non-AC) are available from New Delhi and Chandigarh. Nearest airport is at Chandigarh, which is around 100 km from the institute.

## Resource Persons

The course will be taught by faculties/experts from the local and near-by academic institutions. Experts from the field will also share their experiences during this course.

## Eligibility

The young faculty of Engineering Colleges / University departments and PG Research scholars with civil engineering background can attend the course. The number of participants will be restricted to 30 as per the QIP norms. The certificate of participation will be awarded to the candidates who fulfil the attendance requirements and successfully completes the assignments/ the project work and secures 70% marks in the evaluation.

## Accommodation

A limited number of rooms with shared accommodation are available in the guest house at Guru Nanak Dev Engineering College campus on request on 'first-come first-serve basis'.

## Registration

There is no registration fee for the participants and TA/DA will be paid to the out station participants as per the norms. Since the seats are limited, the registration will be done on *first-come first-serve basis*. The registration process will be considered complete only when the registration form is received from the participant through a proper channel by **15<sup>th</sup> February, 2019**. However, candidates may send an advance copy through email, post or by hand.

## Organizing Committee

### Patron

Dr. Sehajpal Singh, Principal  
Guru Nanak Dev Engineering College, Ludhiana

### Advisors

Dr K.S. Gill, Professor and Head,  
Dr H.S. Rai, Professor and Dean (Testing & Consultancy),  
Dr Harpal Singh, Professor,  
Department of Civil Engineering,  
Guru Nanak Dev Engineering College, Ludhiana

### Coordinators

Dr Gurdeepak Singh and Dr Inderpreet Kaur  
Department of Civil Engineering,  
Guru Nanak Dev Engineering College, Ludhiana

### Faculty Coordinator

Dr Harvinder Singh  
Professor,  
Department of Civil Engineering,  
Guru Nanak Dev Engineering College, Ludhiana

### Correspondence

Please mail the signed copy of the registration form at the email id: **hs.gndec@gmail.com**  
Contact no.– 9855965901, 9878190300 (Coordinators)  
The hard copy can be addressed to the *Coordinator (STTP -16), Civil Engineering Department, Guru Nanak Dev Engineering College, Gill Road, Ludhiana-141006*.

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## *Analysis and Design of RC Buildings : Concepts and Practice*

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### REGISTRATION FORM

Name:.....

Designation:.....

Department:.....

Organization:.....

Address:.....

Tel./Mobile:.....

E-mail:.....

Academic Qualification with Specialization:  
.....

Accommodation : Required/Not required

Signature and Date: .....

### Sponsorship Certificate

The applicant is hereby sponsored and will be allowed to attend this course, if selected.

Date:.....

Signature and Seal