

❖ Selection and Mode of Payment

Selected candidates will be intimated through Email. They have to remit the necessary course fee to the Bank as per the details given below. Outstation participants requiring accommodation and boarding facilities have to pay Rs.4000 in addition to the course fee.

Account Name	GIAN NITW
Account Number	62447453600
Bank	State Bank of India
Branch	NIT Branch (NIT Campus)
Branch Code	20149
IFSC	SBIN0020149
MICR Code	506004011
SWIFT Code	SBININBB018

***Candidates registering early will be given preference in short listing process.**

For any queries regarding registration of the course, please contact the Coordinators:

❖ Course Coordinators

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❖ About GIAN Courses

MHRD, Govt. of India has launched an innovative program titled 'Global Initiative of Academic Networks' (GIAN) in Higher Education, in order to garner the best international experience. As a part of this, internationally renowned Academicians and Scientists are invited to augment the country's academic resources, accelerate the pace of quality reforms and elevate India's scientific and technological capacity to global excellence.

❖ About the Institute and Warangal

National Institute of Technology, Warangal (NITW) (formerly known as RECW) is, the first among 31 NITs, established in 1959. Over the years, the Institute has established itself as a premier Institution in imparting technical education of a very high standard, leading to B.Tech, M.Sc, MCA, MBA, M.Tech and Ph.D. programmes in various specializations of Science, Management and Engineering streams. Warangal is known for its rich historical and cultural heritage. It is situated at a distance of 140 km from Hyderabad. Warangal is well connected by rail and road. National Institute of Technology, Warangal campus is 3 km away from Kazipet railway station and 12 km away from Warangal railway station

❖ About the Civil Engineering Department

The Department of Civil Engineering offers B.Tech programme in Civil Engineering, 7 M.Tech programmes including Geotechnical Engineering and PhD programme. The Department is a recognized QIP centre since 1978. The Department has well established and well equipped laboratories. The Department has experienced faculty engaged in teaching, research, capacity building activities and industry extension services. Faculty members represent several policy making and professional bodies. The Department has liaison with reputed industries and R&D organizations.

Geotechnical Engineering program was introduced in the year 1964. Geotechnical Engineering Division is one of the four divisions in the Department of Civil Engineering and presently offers M.Tech and PhD programmes. The division has well qualified, motivated and experienced faculty members.



Two Week GIAN Course On

GEOTECHNICAL EARTHQUAKE HAZARDS AND MITIGATION MEASURES

29th August - 08th September 2018

Call for Registration and Participation

International Faculty

Prof. Hemanta Hazarika

Kyushu University, Fukuoka, Japan

Coordinators

Dr. M. Heeralal

Dr. Rakesh J. Pillai

Dr. G. Kalyan Kumar

Organized by

Geotechnical Engineering Division

Department of Civil Engineering

National Institute of Technology Warangal

Telangana - 506004

❖ Overview

Protection of cities from earthquake damage as well as protection of the inhabitants from injury and loss of lives are the responsibilities of engineers. It is very important that the civil engineers in seismic countries understand the nature of earthquakes, and how to design and build structures/ infrastructures to resist strong ground shaking taking into the account the soil-structure interaction involved. The welfare of a city depends very strongly upon the continued supply of water supply, sewers, electric power, gas, transportation, communication network, etc. Every one of those infrastructures mentioned above are connected directly or indirectly to the ground, and thus are vulnerable to earthquakes. The modern day geotechnical engineers and researchers have a huge responsibility to design a city's infrastructures to make them resilient against earthquakes. In order to achieve that, adequate knowledge of earthquakes (origin), nature of earthquakes and ground shaking, seismicity, related hazards from earthquakes and innovative techniques for earthquake hazards mitigation are very important.

This course first focuses on Earthquake Geotechnical Engineering covering aspects of geology, seismology, geotechnical engineering, structural engineering, soil-structure interaction and related areas. The course then explains various earthquake geotechnical hazards through numerous case studies during the past devastating earthquakes from around the world. Finally, the course describes hazard mitigation techniques and strategies covering the recent state-of-art research and development in many industrialized countries.

The course contents consist of three parts. Part I focuses on the fundamentals of Earthquake Geotechnical Engineering including seismology, ground motion, and site-specific ground motion. Part II describes various laboratory and field tests to determine the dynamic properties of soils. Part III focuses on the earthquake related geotechnical hazards such as liquefaction, landslides, slope failures, retaining wall failures etc. This part also describes many well established techniques for mitigation of such hazards and their design aspects.

This course targets young researchers and practitioners who have interest in the earthquake resistant design of structures including the soil-structure interaction problems. Engineers and researchers will find it helpful in refining their knowledge on earthquake geotechnical engineering. This course will also help students, researchers and engineers in understanding the principles of earthquake geotechnical engineering, knowing the assumptions and hypothesis in those principles, and applying those in the selection of adequate hazards prevention techniques.

The course will be delivered by an expert who have several years of teaching as well as practical and consulting experiences in Japan, a country known for its earthquake vulnerabilities and its technological know-how in this field. The lectures will be delivered based on the expert's experiences on Earthquake Geotechnical Engineering research in the past twenty-five years in Japan

❖ Course details

- Part I: Fundamentals of geotechnical earthquake engineering
- Part II: Dynamic properties of soils (Field and Laboratory Investigations)
- Part III: Earthquake related hazards and their mitigations including soil-structure interaction

Number of participants for the course will be limited to fifty.

❖ International Expert:



Hemanta Hazarika, Professor in the Department of Civil Engineering, Kyushu University, Fukuoka, Japan. His research interests include soil-structure interaction, stability of soil- structures during earthquakes and tsunamis, ground improvement, application of recycled waste and lightweight materials in constructions, stability of cut slopes, and landslides and protection against them.

❖ Institute Expert:



Dr. M. Heeralal is an Associate Professor of Civil Engineering at NIT, Warangal. His research interests are Recycled Aggregate in Pavements and Geo Environmental Engineering.



Dr. Rakesh J. Pillai, is an Assistant Professor of Civil Engineering at NIT, Warangal. His research interests are Soft clay engineering, Cyclic behavior of clays, Constitutive modelling and Tunneling



Dr. Kalyan Kumar is an Assistant Professor of Civil Engineering at NIT, Warangal. His research interests are Soil Dynamics, Seismic hazard, Seismic Microzonation, Disaster Management and Subsurface Investigation.

❖ Who can participate?

Registration is open to:

- i) Field engineer or research scientist working in the fields of Civil, Earthquake and Geotechnical Engineering.
- ii) Student or faculty from academic institution interested in the area of Earthquake Geotechnical Engineering, Seismic hazard analysis and construction practices.

❖ How to Register?

Stage -1:

Web (Portal) Register: Visit GIAN Website at the link: <http://www.gian.iitkgp.ac.in/GREGN/index> and create login User ID and Password. Fill up the blank registration form and do web registration by paying Rs 500/- online through Net Banking / Debit / Credit card. This provides him/her with life time registration to enrol in any number of the GIAN courses offered.

Stage -2:

Course Registration (Through GAIN Portal): Log in to the GIAN portal with the user ID and password created. Click on 'Course Registration' option given at the top of the registration form. Select the course titled "**Geotechnical Earthquake Hazards and Mitigation Measures**" from the list and click on 'Save' option. Confirm your registration by Clicking on 'Confirm Course'.

❖ Registration Fees:

Faculty and scientists	Rs. 3000
Participants from industry/ Training organizations/ consultancy firms	Rs. 5000
Students and research scholars	
• Without award of grade	Rs. 1000
• With award of grade	Rs. 1500
Student participants from abroad	USD 100
Other participants from abroad	USD 200

The registration fee includes instructional materials, tutorials, laboratory and computer use, free internet facility, working lunch, mid sessions tea and snacks. Outstation participants will be provided accommodation and boarding in visitors Block/Hostel in the campus on payment.