

Course Fees :

The course fee is been nominally charged (excluding 18% GST) as mentioned below:

Practicing Engineers from Public & Private Sectors	8000 INR + GST
Academic (Faculty) & Research (Scientists) Staff	6000 INR + GST
Postgraduate & Doctoral Students	3000 INR + GST
Participants from Abroad	200 USD + GST

The above fee includes all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 × 7 internet facility, working lunch and refreshments on course session days. It will be very helpful if you can bring your laptop for the course.

Course Content:

The main objective of this course is to discuss the basic fundamentals and recent advancements in earthquake engineering.

Module A: Geological Aspects – The first part of the course covers Geodynamics; Engineering Seismology; Seismic Hazard Analysis; Structural Geology; Rock Engineering; Rock Mechanics; Mechanics of fracturing and faulting in rocks; Field Case studies of Geological formation, identification & Exploration in Central India; Geological maps & Profiling of Folds, Faults, dykes; Problems on Strike, Dip, thickness, and depth of strata. Reconnaissance study & Reminiscence of Jabalpur and adjacent Region.

Module B: Geotechnical Aspects - The second part of the course covers site response analysis; Dynamic soil-structure interaction; Soil constitutive relationships under dynamic and cyclic loading; Dynamic Soil Properties; Laboratory and field evaluation; Computational modeling for dynamic analysis; Seismic analysis of earth and water retaining structures; Seismic analysis of piles and piled embankments; limit state design, performance-based seismic design, and codal provisions; Hands-on tutorial sessions.



Patron

Prof. Pramod M. Padole
Director, VNIT Nagpur

Chairman

Dr. Yashwant B. Katpatal
Professor and Head,
Civil Engineering Department

Convener

Dr. Anirban Mandal
Associate Professor,
Geotechnical Engineering,
Civil Engineering Department

Course Coordinators

Dr. Srinivasan V.
Assistant Professor, Phone : 0712-280-2254
Geotechnical Engineering,
Civil Engineering Department
Email : srinivasanv@civ.vnit.ac.in

Dr. Shrabony Adhikary
Assistant Professor, Phone : 0712-280-1206
Geotechnical Engineering,
Civil Engineering Department
Email : sadhikary@civ.vnit.ac.in

Support Team (Research Scholars, Civil Engineering Department)

Mr. Aakash Sharma, Mobile : 9098935955
Mr. Rahul Shende, Mobile : 7020738064
Mr. Omkar P. Navagire, Mobile : 7391924249
Mr. Dhananjay Rahangdale, Mobile : 9404026322



शिक्षा मंत्रालय
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GLOBAL INITIATIVE OF ACADEMIC NETWORKS



GIAN Lecture Series – 2 Weeks Course

Integrated Approach on Geological & Geotechnical Aspects of Earthquake Engineering : Review & Revisit

04 - 15 July, 2022

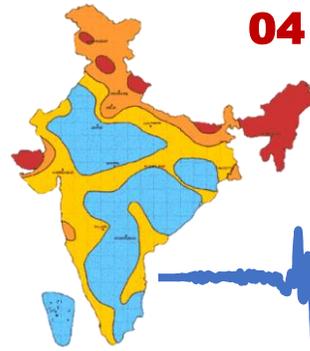


Image Source : @IITK



Department of Civil Engineering
Visvesvaraya National Institute of Technology
South Ambazari Road, Nagpur-440010



How to Reach VNIT

From Railway Station : It takes 17 minutes to travel from Nagpur Railway Station to VNIT Nagpur. Approximate driving distance between Nagpur Railway Station and VNIT Nagpur is 5.9 kms or 3.7 miles.

From AirPort : It takes 20 minutes to travel from Nagpur Airport to VNIT. Approximate driving distance between Nagpur Airport and VNIT is 7 kms or 3.9 miles.
(Travel time refers to the time taken if the distance is covered by a car)

Accommodation

The participants may be provided hostel guestrooms (AC / Non AC) accommodation, depending on the availability, on additional payment basis (GST not applicable). Extra charges shall be incurred on breakfast & dinner. Request for accommodation should be submitted to: Mr. Rahul Shende (Support Team) rahul.shende1996@gmail.com

Technical Tour

A field visit on 09-10 Jul 2022 (intermediate weekend) for paleo-seismic study, reminiscence and reconnaissance survey on the traces of damages & failures of past major earthquake is also a part of the course which is optional for participants @4000 INR (GST not applicable) per participant against travel, boarding & lodging. Request for participation in technical tour should be submitted to: Mr. Omkar Navagire (Support Team) omkarnavagire@gmail.com

(It is worth mentioning that Technical Tour will be arranged only if the minimum number of participants are more than 30. In case of Cancellation of the tour by the Organizers, this amount will be reimbursed.)

How to Apply : Please follow the following Steps for the registration :

Step 1: GIAN Web (Portal) Registration (Individuals who have already registered to GIAN earlier do not need to repeat)

Go to GIAN website (<http://www.gian.iitkgp.ac.in/GREGN/index>) and create login user ID and Password. Fill up the registration form and do web registration. First time users need to register and pay a one-time fee of INR 500/-.

Please do not confuse GIAN web registration with course registration. The course registration fee is separate. The candidate has to pay course registration fee as per step 3 given below.

Step 2: Course Registration (Through GIAN Portal)

Click on "Course Registration" option given at the top of the registration form. Select the Course titled "Integrated Approach on Geological and Geotechnical Aspects of Earthquake Engineering – Review & Revisit" from the list and click on "Save" option. Confirm your registration by Clicking on "Confirm Course". Once you enrol for the course, an Enrolment/Application number will be generated, and the course coordinators will be notified.

Last date for GIAN Portal Registration:
10th June 2022

Step 3: Course Fee Payment (Only selected candidates)

Only Selected Candidates will be intimated through e-mail by the Course Coordinators. They have to remit the necessary course fee through Online Payment Gateway of VNIT intimated through the email. The Online Payment Receipt along with the signed hard copy of the filled in application form (<https://bit.ly/3H8IX9q>) should be scanned and sent to : Dr. Srinivasan srinivasanv@civ.vnit.ac.in

Last date for Course Registration:
24th June 2022

For any queries, you may contact:
Mr. Aakash Sharma aakash@students.vnit.ac.in

Overview:

Earthquake is one of the major natural hazard which causes detrimental effects on life and infrastructure and in-turn growing economy. Engineers & Scientists are aware of the fact that the dynamic or cyclic behaviour of any solid or fluid is rather a complex phenomenon than static behaviour. Understanding and simulating its nature and mechanism involves deeper insight of physics, mechanics and mathematics. Over many decades, geologists have made noble contribution towards this field of Earthquake Engineering, wherein we have understood the origin & composition of earth's surface, volatility of the crustal plate movements, major classification of the globe based on seismic activity etc. On the other hand geotechnical researchers made scientific breakthrough like site specific ground characterization and micro-zonation of the terrain for better understanding of ground acceleration during earthquake; base isolation (to prevent the damage to foundation systems), design of earthquake resistant structures to safeguard from vulnerable damage. With considerable advancements in both (Geological & Geotechnical) the aspects on earthquake, it is very much necessary and essential to share and understand the know-hows which can culminate into a multi-disciplinary area covering geology, geophysics, geodynamics, and dynamics of soil-fluid-structure interaction.

Who should Attend :

- If you are a student at post-graduate (M.E./M.Tech./M.S./M.Sc) or higher level (Ph.D.) specialized in Geotechnical Engineering, Earthquake Engineering, Applied Geology, Earth Science or any other allied areas.
- If you are a Faculty / Scientist / Research Staff / Technical Personnel from Academic Institutions / Research organizations / National laboratories specialized in above mentioned areas.
- If you are an Executive / Practicing Engineer / Proficient Employee from private (consultancy firm / Design studios etc.) or public (PSUs / PSC etc.) sectors working in relevant areas.



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External Experts:



Dr. Sanjay Nimbalkar is a Senior Lecturer in the School of Civil and Environmental Engineering at the University of Technology Sydney (UTS) in Australia. He is actively involved with research activities related to seismic analyses of earth retaining structures, railway embankment stability analyses, ground improvement techniques, tailing dams, constitutive and numerical modelling. He is Chartered Professional Engineer: CPEng (Engineers Australia) and an Australian Earthquake Engineering Society member. He has published a number of research papers in peer-reviewed journals and conference proceedings. His doctoral research on the pseudo-dynamic method of analyses for earth retaining structures is considered one of the most significant contributions to the field of geotechnical earthquake engineering. He is the recipient of the Thomas Telford Premium award from the Institution of Civil Engineer (ICE), UK (2014) and 'Professor Joseph M Sussman Best Paper Prize' from Frontiers in Built Environment, Switzerland (2020). He is a EMCR fellow of Australian Academy of Science supported by the Australia-India Strategic Research Fund (AISRF) 2020.

Host Faculties:



Dr. Yashwant Bhaskar Katpatal is a Professor (HAG) and Head of the Civil Engineering Department at VNIT Nagpur. His areas of interest: are Remote Sensing & Geographic Information System, Water Resource Management, and Environmental Impact Assessment. He has published more than 102 research papers in peer-reviewed journals and conference proceedings.



Prof. Deepankar Choudhury is Institute Chair Professor of Civil Engineering Department at Indian Institute of Technology (IIT) Bombay, Mumbai, India, and Adjunct Professor of Academy of Scientific and Innovative Research (AcSIR) of CSIR laboratories (connected to CSIRCBRI Roorkee) of India. a. Prof. Choudhury also worked as a faculty at IIT Kanpur, new IITs at Gandhinagar and Dharwad, and as a Visiting Fellow/Faculty at NUS Singapore, UoW Australia, UC Berkeley USA, Kagoshima Univ. Japan, TU Darmstadt Germany and Incheon National Univ. South Korea. Prof. Choudhury is the only Geotechnical Engineer of India who is an elected Fellow (FNASc) of the oldest Science Academy of India, viz. The National Academy of Sciences, India. Internationally he is an Alexander von Humboldt Fellow of Germany, JSPS Fellow of Japan, and TWAS-VS Fellow of The World Academy of Sciences, Italy, in addition to National Fellow of Institution of Engineers India (FIE), Indian Geotechnical Society (FIGS), Indian Society of Earthquake Technology (FISET). Prof. Choudhury's Video lectures in YouTube through NPTEL, Govt. of India on topics 'Soil Dynamics' and 'Geotechnical Earthquake Engineering' are highly popular all over the world.



Dr. Anirban Mandal is an Associate Professor in Civil Engineering Department at VNIT Nagpur. His areas of interest are Rock Engineering Tunneling and Underground Excavation Soil Dynamics. He also handled Project "Seismic Behaviour of Underground Structures" funded by DST of Rs 53.7 lacks sanctioned in 2014. He has guided 3 Ph.D. thesis and 8 M.Tech thesis along with enormous peer-reviewed publications in Geotechnical Engineering at VNIT.



Dr. Santanu Misra is an Associate Professor in the Department of Earth Sciences of Indian Institute of Technology, Kanpur (IITK). He is also a DST Swarnajayanti Fellow, and INSA Young Scientist. He led the Experimental Rock Deformation Laboratory at IIT Kanpur. He received his Ph.D. degree from Jadavpur University, India (2007), and Post-doctoral research at ETH Zurich in Switzerland (2009). The research was focused on achieving a better understanding of the micro-process of rock mechanics by high pressure and temperature experimental rock deformation. In 2009, he was offered a lecturer position in the same department at ETH Zurich and worked as a full-time lecturer and researcher for the next four years until 2012. He believes that modern understandings of Structural Geology and Rock Deformation are no more restricted to describing the geometry and disposition of rock architecture but are closely integrated with other subjects like Rheology, Solid Earth Geophysics, Metamorphic Petrology, and advanced mechanics. Most of his courses are designed to integrate all such parameters.



Dr. Srinivasan V. is an Assistant Professor in the Department of Civil Engineering at VNIT Nagpur since 2018. His area of expertise include the Coalescence of shallow foundations and anchor systems, Physical and Numerical modeling of geotechnical systems. His research contributions include 10 peer-reviewed journals of international repute and 9 articles in prestigious conferences indexed in SCI/Scopus.



Mr. Naveen Kumar Meena is a Research Scholar as well as Casual Academic staff at the School of Civil and Environmental Engineering, University of Technology Sydney (UTS). He received Bachelor's in civil engineering from Rajasthan Technical University Kota, India, and a Master's in structural engineering from Motilal Nehru National Institute of Technology Allahabad (MNNIT or NIT Allahabad). He have 5 years of academic experience. He received Awarded runner-up award in poster presentation in CEE school showcase 2020(UTS), Awarded National Overseas Scholarship for doctoral study from the Government of India. Duration: 2018-2021, and also Post Graduate (PG) scholarship recipient during M. Tech. degree from MHRD. He has published a number of research papers in peer-reviewed journals and conference proceedings.



Dr. Shrabony Adhikary is currently working as an Assistant Professor in the Department of Civil Engineering, VNIT Nagpur. Dr. Adhikary has done her M.Tech. and Ph.D. in 2010 and 2015 respectively from the Department of Earthquake Engineering, IIT Roorkee. Her research interest includes Soil amplification and site response analysis; Soil-structure interaction; Machine foundation; Performance-based seismic design; Geotechnical Earthquake Engineering. Dr. Adhikary has been awarded the Early Career Research Award (SERB-DST) of 32 lakhs for the year (2017-2020). Dr. Adhikary has published 15 research papers in reputed international journals and 11 international/national conferences.