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.

<table>
<thead>
<tr>
<th>Account Name</th>
<th>GIAN NITW</th>
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<tr>
<td>Account Number</td>
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<tr>
<td>Bank</td>
<td>State Bank of India</td>
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<tr>
<td>Branch</td>
<td>NIT Branch (NIT Campus)</td>
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<td>Branch Code</td>
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<td>IFSC</td>
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<td>MICR Code</td>
<td>506004001</td>
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<td>SWIFT Code</td>
<td>SBININIB018</td>
</tr>
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</table>

*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

Dr. G. Kalyan Kumar
Assistant Professor
Department of Civil Engineering
National Institute of Technology Warangal
Warangal – 506 004,
Telangana State,
India Phone: 8332969265
E-mail: kalyan@nitw.ac.in

Dr. Rakesh J. Pillai
Assistant Professor
Department of Civil Engineering
National Institute of Technology Warangal
Warangal – 506 004,
Telangana State,
India Phone: 8332969264
E-mail: rakeshpilla@nitw.ac.in

Dr. M. Heeralal
Associate Professor
Department of Civil Engineering
National Institute of Technology Warangal
Warangal – 506 004,
Telangana State,
India Phone: 8332969251
E-mail: mhl@nitw.ac.in

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.
**Overview**

Computational Geotechnics is one of the topics which is at the forefront of teaching and research within the broader area of geotechnical engineering. The complex material behaviour and uncertainties involved in the ground conditions pose a great challenge in modelling and simulation of wide verities of problems in geotechnical engineering. Numerical techniques like finite difference method and finite element method are widely adopted in computational geotechnics. Many commercial and open source softwares based on these numerical techniques are available for the practicing engineers and students for analyzing geotechnical problems. Even though these softwares are very useful and time saving they pose the danger of “Garbage In … Garbage Out” if we use them without the background knowledge. Basic knowledge about these numerical techniques and proper usage and know-how of these softwares are highly desirable for all the practitioners and very essential for post graduate level students and researchers.

In this course on “Computational Geotechnics” the basics of finite difference formulation and modelling will be taught in detail. Iterative procedures and coding in MATLAB will be discussed along with the convergence criteria and error minimization so that the participants will have a hands-on experience on modelling using the finite difference method (FDM). Different applications in geotechnical engineering like seepage problems, consolidation, Winkler model, beam on elastic foundation, laterally loaded piles etc. will be solved using the FDM and deliberated during the course.

The international expert for this GIAN course is Dr. Fethi Azizi from university of Plymouth. Dr. Azizi has more than 35 years of experience in the area of Geomechanics as practitioner, consultant, researcher and teacher. He has authored 7 books in the area of geotechnics and geomechanics and published several articles in reputed journals and conference proceedings. Dr. Azizi will be sharing his vast knowledge gained during his successful career during the course lectures and discussion.

**Course details**

- FD formulation and modelling
- FD modelling of piles subjected to active lateral loading
- Design of combined foundations

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

**International Expert:**

*Prof. Fethi Azizi (FA)* is a Professor in Geomechanics, School of Engineering, University of Plymouth. His research interests are Finite Element Modelling of the Creep Behaviour of Glaciers and Frozen Soils, Environmental Impact of the Legacy of Metal Mining in the Tamar Valley, South West of England

**Institute Expert:**

*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.

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

**Who can participate?**

i) Field engineer or research scientist working in the fields of hydrology, water resources management, water pollution and climate change impact.

ii) Student or faculty from academic institution interested in learning how to work/carrying out research in qualitative and quantitative assessment of the water resources

**How to Register?**

**Stage -1:**

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 “Computational Geomechanics” from the list and click on ‘Save’ option. Confirm your registration by Clicking on ‘Confirm Course’.

**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 “Computational Geomechanics” from the list and click on ‘Save’ option. Confirm your registration by Clicking on ‘Confirm Course’.

**Registration Fees:**

<table>
<thead>
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<th>Category</th>
<th>Fees</th>
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</thead>
<tbody>
<tr>
<td>Faculty and scientists</td>
<td>Rs. 7000</td>
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<tr>
<td>Participants from industry/ Training organizations/ consultancy firms</td>
<td>Rs. 15000</td>
</tr>
<tr>
<td>Students and research scholars</td>
<td></td>
</tr>
<tr>
<td>Without award of grade</td>
<td>Rs. 3000</td>
</tr>
<tr>
<td>With award of grade</td>
<td>Rs. 4000</td>
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<tr>
<td>Student participants from abroad</td>
<td>USD 100</td>
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<tr>
<td>Other participants from abroad</td>
<td>USD 200</td>
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</tbody>
</table>

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.