# Landfills and Geo-environmental Engineering

## Overview

Geo-environmental engineering is an inclusive discipline which recognizes many environmental challenges that cannot be solved by one traditional discipline alone. The term Geo-environmental Engineering is a broad one covering the contributions that geotechnical engineers, environmental engineers, hydrogeologists, earth scientists, geochemists, water engineers, biologists, and ecologists, amongst others, make to environmental management, site characterization, environmental risk assessment, waste disposal, soil and groundwater remediation, habitat protection, and environmental rehabilitation.

Since the nature of the problems addressed in Geo-environmental Engineering is diverse, solutions to *Geo-environmental problems* typically require the expertise of a variety of professionals who possess a similar diversity in terms of educational background and training. Because of this diversity, efficient and effective technical interaction among these professionals can be problematic. Thus, professionals who have attained a breadth of knowledge in a variety of the disciplines associated with Geo-environmental problems can facilitate the professional interaction needed for successful completion of Geo-environmental projects within a *multidisciplinary setting*. Geo-environmental engineering is an emerging and exciting field that offers numerous technical challenges and great opportunities to understand multi-disciplinary problems and develop solutions to protect public health and the environment and encourage sustainable development.

<table>
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<th>Modules</th>
<th>Landfills and Geo-environmental Engineering (May 30- June 3, 2016)</th>
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<tr>
<td></td>
<td>• Basic Principles</td>
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<td></td>
<td>• Remediation Technologies</td>
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<td>• Landfills</td>
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<td>• Emerging Technologies</td>
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<td>• Case Studies</td>
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Number of participants for the course will be limited to fifty (50).

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<th>You Should Attend If…</th>
<th>You Should Attend If…</th>
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<tbody>
<tr>
<td></td>
<td>• Geotechnical engineers</td>
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<tr>
<td></td>
<td>• Environmental engineers</td>
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<tr>
<td></td>
<td>• Hydrogeologists</td>
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<td></td>
<td>• Earth scientists</td>
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<td>• Geochemists</td>
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<td>• Water engineers,</td>
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<td>• Biologists and ecologists</td>
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<th>Fees</th>
<th>The participation fee for joining the course would be:</th>
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<td>Students/Research Scholars: Rs. 1000/-</td>
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<td>Faculty/Staff of Academic Institutions: Rs. 2,000/-</td>
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<tr>
<td></td>
<td>Industry/Research Personnel: Rs. 2,500/-</td>
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<td>Participants from abroad: US$ 100/-</td>
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The above fee includes the instructional materials, internet facility and snacks. The accommodation will be provided on payment basis subject to availability otherwise participants may arrange their own accommodation.
The Faculty

**Dr. Krishna Reddy** is a Professor of Civil and Environmental Engineering, the Director of Sustainable Engineering Research Laboratory, and also the Director of the Geotechnical and Geo-environmental Engineering Laboratory in the Department of Civil and Materials Engineering at the University of Illinois, Chicago, USA. Dr. Reddy received his Ph.D. in Civil Engineering from the Illinois Institute of Technology, Chicago, USA. Dr. Reddy has over 25 years of teaching, consulting and research experience within the fields of geotechnical and geo-environmental engineering, focused on geotechnical infrastructure, environmental remediation, landfills and waste management, and sustainable engineering. He has published 3 books, 172 journal papers, and 160 full conference papers (with h-index of 38 and number of citations over 5000). Dr. Reddy has given 146 invited presentations in the USA and 15 other countries. Dr. Reddy is an Associate Editor or Editorial Board Member of over 10 different journals. He has been an active member of various professional societies, including the ASCE. Dr. Reddy has received several awards for excellence in research and teaching, including the ASTM Hogentogler Award, the University Distinguished Researcher Award, the University of Illinois Scholar Award, and the University of Illinois Award for Excellence in Teaching. He is a Fellow of ASCE, a Diplomate of Geotechnical Engineering, a registered Professional Civil Engineer and an Envision™ Sustainability Professional.

**Prof Manoj Datta** is Professor and Head, Civil Engineering Department, IIT Delhi where he has been teaching since 1980. He is currently involved with Ministry of Urban Development and Ministry of Environment and Forests in guiding the national policy on design, construction and closure of MSW and HW Landfills.

**Prof Arvind Agnihotri** is at present Professor, Department of Civil Engineering at Dr B R Ambedkar NIT Jalandhar. He did Ph D from University of Roorkee in the year 1998. He has over 26 years of experience in teaching, research and consultancy. The research area of Prof. Agnihotri includes Geotechnical and Geo-environmental Engineering, Ground improvement, Geosynthetics and recycled waste materials.

**Dr Ajay Bansal** is Associate Professor in the Department of Chemical Engineering at Dr B R Ambedkar NIT Jalandhar. He received his M Tech from IIT Delhi and later Ph D from Panjab University Chandigarh in 2005. He has over 21 years of teaching and research experience. The research areas of Dr Bansal include Environmental Engineering, Multiphase Reactors and Flow, Rheologically Complex Fluids, Advanced Oxidation Processes and Photocatalysis.

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**Course Co-ordinators**

**Dr Arvind K Agnihotri**  
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Department of Civil Engineering  
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Phone: +91 9876082977

**Dr Ajay Bansal**  
Associate Professor  
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Dr B R Ambedkar NIT Jalandhar.  
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Phone: +91 9417223839

http://www.gian.iitkgp.ac.in  
http://www.nitj.ac.in
**Registration Process**

**151024C01: Landfills and Geo-environmental Engineering**

**Step 1: One time Registration**

Registration for GIAN courses is not free because of constraint in the maximum number of participants allowed to register for a course. In order to register for any course under GIAN, candidate will have to get registered one time first to GIAN Portal of IIT Kharagpur using the following steps:

1. Create login and password at http://www.gian.iitkgp.ac.in/GREGN/index
2. Login and complete the registration form.
3. Select courses
4. Confirm your application and payment information.
5. Pay Rs. 500/- (non-refundable) through online payment gateway.
6. **Download and print “pdf file”** of your enrolment application form for your personal records and copy of the same to be sent to the course coordinator.

**Step 2: Institute Registration**

1. Institute registration process is an **offline process**. Interested candidates are requested to download the Registration Form (docx/pdf)

2. **Course Fee (Non-refundable):**

   - Participants from abroad: US $100.
   - Students/Research Scholars: Rs. 1000/-
   - Faculty/Staff of Academic Institutions: Rs. 2,000/-
   - Industry/Research Personnel: Rs. 2,500/-

3. The Registration fee has to be paid via **Demand Draft/ NEFT**, in favour of “GIAN: Landfills and Geo-environmental Engineering” payable at Jalandhar.

4. Scanned copy of the filled in **“Registration Form”** along with scanned copy of **“Demand Draft/ receipt of NEFT”** and Application form generated in **Step 1** must be sent via email lagee2016@gmail.com to the Programme Coordinator of the programme, on or before **May 16, 2016**.

5. Hard copy of the above mentioned documents must reach to the Programme Coordinator of the programme on or before **May 23, 2016**.
HOW TO APPLY:

1. Registration form should accompany demand draft(s) of respective registration fees (non-refundable) and/or accommodation fees (non-refundable) as applicable, which should be drawn in favour of “GIAN: Landfills and Geo-environmental Engineering” payable at Jalandhar. Payment can also be done through National Electronic Funds Transfer (NEFT) to the account of “GIAN: Landfills and Geo-environmental Engineering” (Account No.- 65249207964; State Bank of Patiala, REC branch, Jalandhar)

2. Scanned copy of duly filled up registration form, and the demand draft/NEFT must be emailed to the coordinator to lagee2016@gmail.com before May 16, 2016.

3. Hard copy of the form and draft must also be sent by post/courier to Dr. Arvind K Agnihotri, Professor and Course Coordinator GIAN, Department of Civil Engineering, Dr. B.R.Ambedkar National Institute of Technology, Jalandhar-144 011, Punjab before May 23, 2016.

4. Selection will be made purely on First Come First Serve basis. (Subject to fulfilling the seats available).

5. Maximum fifty (50) participants will be accommodated in the course.

6. The brochure and the registration form may be downloaded from the Institute website www.nitj.ac.in.

IMPORTANT INFORMATION:

1. The students will obtain academic credits for this course based on the evaluation and grading process. The host institute will only provide information on the grading system, subject syllabus, and the academic policy. The home university of the student will be mainly responsible for transferring academic credits.

2. As per the host Institute and instruction from GIAN, the course consisting of 30 lectures is of TWO credits. This credit can be included in the student’s marks for seminar/presentation/college tour or any other suitable subject as per the participating Institute/College rules and regulation.

3. Participants will be provided registration kit & course material covering the entire course.

4. After successful completion of the course, all participants will get participation certificates. Those participating in examinations will get completion certificates with grades and credits.

5. No TA, DA will be provided to the participants.

6. Limited accommodation are available in the Institute campus which will be provided on First come and first serve basis on payment mode.

7. Additional Fees for Accommodation (if required):

   - Rs 500/day for Students (Including Food): …………………………………………………*
   - Rs 800/day for Faculty (Guest House-Including Food): …………………………………
   - Rs 120/meal for Day Scholars: ………………………………….

8. List of selected participants will be available on institute website.
REGISTRATION FORM

Name (Block Letters): ..........................................................................................................
M/F ..................................................................................................................................
Designation/Professional Title: ..........................................................................................
Organization: .....................................................................................................................
Address: .............................................................................................................................
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Tel.: .................................................................................................................................
Tel.: .................................................................................................................................
Organization: .....................................................................................................................
Address: .............................................................................................................................
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Application Id (Generated during One time registration at GIAN portal of IIT Kharagpur):
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Course Fee: Covers only course materials without boarding and lodging
Participants from abroad: US $100.
Students/Research Scholars: Rs. 1000/-
Faculty/Staff of Academic Institutions: Rs. 2,000/-
Industry/Research Personnel: Rs. 2,500/-
* Limited shared accommodation is available in Institute Guest house/Hostels on request against the
advance payment on first come and first serve basis

Accommodation Required: Yes/ No.

If Accommodation required, then Additional Fees for Required Accommodation:
Rs 500/day for Students (Including Food): .................................................................
Rs 800/day for Faculty (Guest House-Including Food) ..............................................
Rs 120/meal for Day Scholars: ...................................................................................

Payment may be made through:
1. Demand Draft: In favour of “GIAN: Landfills and Geo-environmental Engineering” payable at
   Jalandhar, DD/Cheque no: ________________________, Date:__________________
   Amount: ______________________ Bank: _________________________________________
   OR

2. National Electronic Funds Transfer (NEFT) to the account “GIAN: Landfills and Geo-
   environmental Engineering” (Account No. 65249207964 ; Bank: State Bank of Patiala, IFSC
   Code: STBP0000841)

Date:............................ Signature of Candidate:

APPROVAL FROM AFFILIATED INSTITUTE OF CANDIDATE:

The applicant will be permitted to attend the above Course, if selected.

Date: ......................... Signature and Seal of approving authority