

Fundamentals of Geosynthetic Engineering

(Under the aegis of MHRD—Global Initiative of Academic Networks)

Overview

Geosynthetics is a generic name representing a broad range of planer products manufactured from the polymeric materials, namely *geotextiles, geogrids, geonets, geomembranes, geocells* and *geocomposites*, which are used in contact with soil, rock and/or any other civil engineering-related material as an integral part of a man-made project, structure, or system. Geosynthetics are being used extensively worldwide as they offer the most efficient, cost-effective and environment-friendly solutions to several civil engineering problems as well some problems in mining, agricultural and aquacultural engineering. The rational design methods, based on sound concepts and standardized test techniques for determining the technical properties of geosynthetics, are now available, thus placing the geosynthetics on a firm base. The continued growth in application of geosynthetics attests to the fact they have arrived as viable construction materials for their use in a sustainable and environment-friendly manner. Hence the geosynthetics have been included in the list of construction materials worldwide, including India. The subject of geosynthetics and their applications is known as the 'Geosynthetic Engineering', which is defined as follows: *Geosynthetic engineering deals with the application of scientific principles and methods to the acquisition, interpretation and use of knowledge of geosynthetic products for the solution to the problems in geotechnical, transportation, environmental and hydraulic engineering, and also in some areas of agricultural, aquacultural and mining engineering.*

In view of the wide applications of geosynthetics, the practicing civil and mining engineers/professionals and also all those dealing with geosynthetics-based solutions in the areas of agriculture and aquaculture engineering require an exposure to the fundamentals of geosynthetics and their applications. This course provides the fundamental concepts of this subject to students of all levels (BTech/MSc/MTech/PhD), executives, engineers and researchers from academic and technical institutions, construction companies and government organizations in the engineering fields of civil, mining, agricultural and aquacultural engineering.

The course participants will learn the topics through lectures and tutorials. Also case studies and assignments will be shared to stimulate the research motivation of participants.

Modules	A: Fundamentals of Geosynthetic Engineering: Dates: 11 July 2016 - 22 July 2016 Last date of registration: 20 June 2016 Number of participants for the course are limited to sixty.
You Should Attend If...	<ul style="list-style-type: none">• Executives, engineers, planners, policy makers and regulators and researchers from manufacturing, service and government organizations including R&D laboratories.• Faculty from academic and technical institutions and R&D centre's.• Civil, mining and environmental engineers.

	<ul style="list-style-type: none"> • Senior B.Tech./B.E./B.Sc. Eng students, M.Tech. and Ph.D. students working in the areas of civil, mining, agricultural, environmental, and aquacultural engineering from academic, technical and research institutions. • Practicing engineers, specialized contractors and executives from private and government engineering organizations.
Fees	<p>The participation fee for taking the course is as follows:</p> <p>Participants from abroad : US \$300</p> <p>Industry: Rs. 9000</p> <p>Academic/Technical Institutions and R&D units: Rs. 5000</p> <p>Students: Rs. 1500</p> <p>The above fee includes all instructional materials, computer use for tutorials and assignments, and laboratory equipment usage charges. The participants will be provided with accommodation on payment basis.</p>

The Faculty



Dr. Sanjay Kumar Shukla is the Program Leader of Discipline of Civil and Environmental Engineering at the School of Engineering, Edith Cowen University (ECU), Perth, Australia. His areas of research interest include geosynthetics and their applications, ground improvement, soil-structure

interaction, soil dynamics, rock engineering, pavement engineering, and mining and environmental geotechnics. He has over 20 years of teaching, research and consultancy experience in the field of geotechnical and geosynthetic engineering. He has authored more than 150 research papers and 8 books, including four popular books on geosynthetic engineering. He serves on the editorial boards of several international journals, and he is founding editor-in-chief of the International Journal of Geosynthetics and Ground Engineering.



Dr. B. Hanumantha Rao is an Assistant Professor at the School of Infrastructure, Indian Institute of Technology, Bhubaneswar. His areas of research interest include instrumentation in geomechanics, expansive soils, behavior of unsaturated soils,

geotechnics of waste and waste utilization, and electrical & thermal properties of soils. He is currently executing many research projects funded by CSIR, DST, and NALCO in the area of geotechnical engineering and environmental geotechnics.

Course Co-ordinator

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