

Instructors

The instructors for these courses will be Drs. Robert M. Koerner and George R. Koerner. As a team, they have worked together in guiding the Geosynthetic Institute, and its related institutes, over the past 20-years.

Dr. Robert M. Koerner's (Emeritus Professor at Drexel University) interest in geosynthetics spans thirty years of teaching, research, writing and consulting. He holds his Ph.D. in Geotechnical Engineering from Duke University. He is a registered Professional Engineer in Pennsylvania, a Distinguished Member of ASCE, and a member of the National Academy of Engineering. Bob has authored and co-authored 600+ papers on geosynthetics and geotechnical topics in journals and at national and international conferences. His most widely used publication is the fifth edition of the textbook entitled "Designing with Geosynthetics".

Dr. George R. Koerner (Director Designate of GSI) is in charge of laboratory accreditation, product certification and test method/specification development at the Geosynthetic Institute. He also guides a number of research projects, has published over 100 papers, and developed numerous test methods in his 18-year association with geosynthetics. George's Ph.D. is from Drexel University in Geotechnical Engineering. He is a registered professional engineer in Pennsylvania and quality auditor.

Laboratory Demonstrations: The institute is fully equipped with all ASTM, ISO, and GRI test equipment and devices. Throughout each of these courses, laboratory demonstrations will be conducted to instruct and clarify the information presented during each segment of discussion. This essentially provides a "hands-on" environment thereby illustrating both performance tests (i.e., design oriented, such as direct shear and transmissivity tests) and index tests (as pertains to generic specifications, such as tensile and seam tests).

Format for Both Courses

8:30 AM	Background and Overview
9:00	Part I
10:00	Break & Lab Testing
10:15	Part II
12:00	Lunch (provided in-house)
1:00 PM	Part III
3:00	Break & Lab Testing
3:15	Part IV
4:30	Summary and Conclusions
5:00	Adjourn

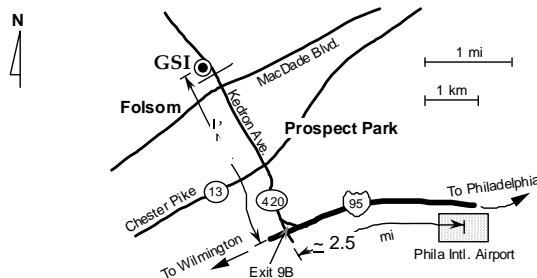
Dates Offered:

- #1 Geosynthetics in Waste Containment Liner and Cover Design
Monday, December 7, 2009
Monday, March 22, 2010
- #2 Quality Control/Quality Assurance of Geosynthetics Installation
Tuesday, December 8, 2009
Tuesday, March 23, 2010
- #3 Examinations for Inspectors Certification
Wednesday, December 9, 2009
Wednesday, March 24, 2010
 - Geosynthetics 8:30 to 10:30 AM
 - Comp. Clay Liners 11:00 to 12:00 Noon

[Exam candidates must be pre-approved; details follow].

Location for both Courses and Exams:

Geosynthetic Institute
475 Kedron Avenue
Folsom, PA 19033-1208
Phone: (610) 522-8440
Fax: (610) 522-8441



Note that GSI is only 4.5 miles from Philadelphia International Airport. (A map of local hotels will be sent upon request)

REGISTRATION FORM GSI's Continuing Education Short Courses

One registration per course per form. Please duplicate this form for additional courses and registrations. Thank you.

PLEASE TYPE OR PRINT CLEARLY

Course Number/Date _____

Name _____

Position _____

Company _____

Address _____

City _____

State _____ Zip _____

Telephone _____

E-mail _____

Registration Fee: \$275/person for each one day course up to one month prior to course date, \$325/person thereafter. (\$175/person for GSI members). Includes notes, lunches, refreshments and lab testing.

Make Check or Purchase Order Payable to:
"Geosynthetic Institute"
Geosynthetic Education Institute
475 Kedron Avenue
Folsom, PA 19033-1208

Mail to:
Marilyn Ashley or Paula Koerner
Phone: (610) 522-8440
Fax: (610) 522-8441

Questions:
E-mail: mvashley@verizon.net

Cancellations:
There will be a \$25 cancellation fee for refunds requested within one month prior to course date -- \$50 thereafter.

Certificates:
Earn 0.8 Continuing Education Units (CEUs) per course, i.e., 1.0 Professional Development Hour = 0.1 CEUs

**Course #1 – Dec. 7, 2009 and
Mar. 22, 2010**

**Geosynthetics in Waste Containment
Liner and Cover Design**

Goal: This one-day course is focused on the proper design, analysis, and testing of geosynthetics used in liner and cover systems for landfills, surface impoundments and waste piles and heap leach pads. Included are the following geosynthetics:

- geomembranes,
- geotextiles,
- geonets,
- geogrids,
- geosynthetic clay liners,
- geocomposites, and
- geopipe.

Course Benefits: The course provides the latest information on design, analysis, and testing of geosynthetics in solid waste containment. Included are considerations regarding both hazardous and nonhazardous materials. The thrust is design-by-function that leads to the determination of a factor of safety. Numerous examples are utilized to illustrate different design procedures. Thus, a quantitative approach toward proper design of geosynthetics in this important environmental area is presented. Course notes are provided.

Instructors: Bob and George Koerner

Targeted Audiences: Federal, regional and state EPA regulatory agencies, Dept. of Defense and Dept. of Energy personnel with abandoned (and new) sites involving solid waste disposal problems; private and municipal landfill owner/operators; consulting engineers and testing laboratories servicing these organizations; academic and research groups; manufacturers and representatives of geosynthetic materials; contractors and installers of geosynthetic materials; citizens groups and others desiring technically related information on liners and covers for landfills, surface impoundments, waste piles and heap leach mining.

**Course #2 – Dec. 8, 2009 and
Mar. 23, 2010**

**Quality Control/Quality Assurance of
Geosynthetics Installation**

Goal: This one-day course is focused on the quality control and quality assurance of geosynthetics as placed in permanent and/or critical applications. Specifications and testing are emphasized. It focuses on both the manufactured geosynthetics and on the installation processes. Applications are mainly in the waste containment area, i.e., landfills and surface impoundments, but applicability to walls, slopes, dams, canals, mining, etc., will also be discussed. Included are the following geosynthetics:

- geomembranes,
- geosynthetic clay liners,
- geosynthetic drainage systems (geotextiles and geocomposites),
- vertical cutoff walls,
- ancillary materials & appurtenances

Course Benefits: The course provides the latest information on manufacturing and installation of all types of geosynthetics. It follows closely the 2nd Edition of U.S. EPA Technical Guidance Document (EPA/600R-93/18) of the same title as this course. The guidance document has been updated in 2007 by the course presenters. The updated information is included. Included are manufacturing QC and QA, as well as construction QC and QA. The course is very descriptive with numerous example situations and case histories. It is illustrated by current test methods and procedures. Course notes are provided.

Instructors: Bob and George Koerner

Targeted Audiences: Manufacturers and representatives of geosynthetic materials; as well as installers and contractors; manufacturing and construction quality assurance organizations; owners of facilities; engineering consultants; federal, state and regional agency personnel (both environmental and transportation); and private developers.

**Examinations for Inspector Certification
Dec. 9, 2009 and Mar. 24, 2010**

The Geosynthetic Institute is delighted to announce the availability of an Inspector Certification Program for Waste Containment Systems, i.e., landfills, surface impoundments, closures, and related facilities. It is available for geosynthetic materials and/or compacted clay liners. There are presently over 300 certified inspectors.

The process calls for a specific application procedure consisting of a recommendation letter and work resume. At least 6-months CQA experience is necessary to be admitted to the program. A multiple choice test follows the application after it is reviewed and accepted. For the geosynthetic materials certification program, questions are given in seven categories (total of 140 questions). The categories are as follows:

- Overview of CQA (20)
- Geotextiles (20)
- Geonet/Geocomposites (20)
- Geogrids (10)
- Geomembranes (35)
- Geosynthetic Clay Liners (20)
- Geopipe (15)

For the compacted clay liners program, the test consists of 50 questions. Upon correctly answering 70% of the questions in either program, the candidate is considered to be certified under the following designation:

**Geosynthetic Certification Institute's
Inspectors Certification Program
(or GCI-ICP)**

The cost involved for five-years of certification is \$400 for either the geosynthetic materials or compacted clay liners program, or \$500 for five-years for both programs. The next examinations are at GSI in Philadelphia, PA on Dec. 9, 2009 and Mar. 24, 2010. Note that this program is separate from the coursework described. For additional information see our Website at <<www.geosynthetic-institute.org>> under the heading of "Inspector Certification Examinations" or contact:

Ms. Jamie Koerner
Geosynthetic Institute
475 Kedron Avenue
Folsom, PA 19033
Ph: 610-522-8440 Fax: 610-522-8441
E-mail: jrkoerner@verizon.net

Introduction to GSI

The Geosynthetic Institute (GSI) is a consortium of organizations interested in, and involved with, geosynthetics. All types of geosynthetic materials are involved: geotextiles, geomembranes, geogrids, geonets, geocomposites, geosynthetic clay liners, geopipe, and geofoam.

The member organizations include federal and state governmental agencies, facility owners, designers, consultants, QA organizations, testing laboratories, resin and additive suppliers, manufacturers, manufacturers representatives, and installation contractors. It currently consists of seventy organizations.

GSI functions under the general oversight of an elected board of directors and the regular interaction with its members. The entire membership meets each year and suggests topics and directions. Member organizations share these results as well as a number of subsidiary benefits. These benefits include enrollment in professional courses and seminars at nominal cost, free laboratory training for employees, direct interaction with GSI staff and students, and access to product information services, specifications and test methods. Also available is a controlled access section of our home page.

The five subsidiary institutes within GSI are focused on research, information, education, accreditation, and certification. See our Newsletter/Report at <<www.geosynthetic-institute.org>> for our current activities.

