ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

MEMBER EDITION

Continuing Education

Fall/Winter 2011-2012 Catalog

Advance Your Career...
Earn CEUs/PDHs You Need

P.E. and F.E. Exam Review
see pages 4 and 51 for details

AUTHORIZED IACET PROVIDER

Now Available!

Fundamentals of Sustainable Engineering
see page 48 for details

Archived Webinars Online
see page 50 for details

Construction/Development
Geotechnical
Geomatics
Environmental
Hydraulics & Water Resources
Management & Leadership
Structural
Transportation/Highways

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ASCE has been committed to providing top quality, state-of-the-practice continuing education to civil engineers and related professionals for more than 38 years. The Society holds more than 300 seminars and computer workshops each year on a wide variety of technical, management, and regulatory topics. These seminars are held in more than 45 cities across the U.S. In addition, ASCE offers customized on-site training and many distance learning programs, including live interactive web seminars, online courses, and courses on DVD and CD.

Assurance & Quality. ASCE offers you the very best. The very best instructors. The very best in course content and materials. The best you'll find anywhere. If you are not satisfied with any seminar you attend, attend another free of charge.

SAVE. Send 3 or more persons from one firm and save 10%. Save even more by bringing ASCE's on-site training to your organization.

CEUs.* Earn Continuing Education Units (convertible to PDHs) needed to meet state registration board requirements for P.E. license renewal. ASCE is an IACET authorized CEU provider and complies with NCEES continuing education guidelines and IACET requirements. All ASCE seminars, computer workshops, webinars, on-site training and most distance learning programs offer CEUs/PDHs.

Experience. ASCE has been committed to providing top quality continuing education for civil engineers and related professionals for more than 38 years.

**Continuing Education Units (CEUs) are convertible to Professional Development Hours (PDHs). 1 CEU = 10 PDHs*

Economical. Customized. Enhanced.

BRING AN ASCE SEMINAR ON-SITE TO MEET YOUR GROUP TRAINING NEEDS

Conduct one of our existing seminars or have ASCE design and deliver a program customized to meet the goals and objectives of your organization and staff. On-site training programs provide direct access to the best professional instruction from the strongest minds in civil engineering today.

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ASCE's On-Site Training is The Answer – Whether your employees need project specific technical training or strategic critical skills, on-site programs are focused solely on their needs and objectives.

PROVEN RESULTS

ASCE's On-Site Training produces practical learning outcomes that stick. Private seminars are 100% applicable to your employees' needs. They drive the curriculum, steer the topics, and are given the confidential forum necessary to discuss sensitive project and proprietary applications.

All of ASCE's seminars are available for on-site presentation. Bringing a program on-site for groups of 15 or more can reduce your per person training costs by more than 25%

For group training needs, call:

John A. Wyrick, Senior Manager
On-Site Training Worldwide
ASCE Continuing Education
1801 Alexander Bell Drive
Reston, VA 20191-4400
Tel.: 703-295-6184
Fax: 703-295-6329
Email: jwyrick@asce.org
www.asce.org/onsitetraining

for all other inquiries use contact info below

A FEW OF OUR PRIVATE CLIENTS:

Engineering Education Australia
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A FEW OF OUR PUBLIC CLIENTS:

Air Force Center for Engineering and the Environment
Autoridad del Canal de Panama
CALTRANS
MTA- NYCT
Tennessee Valley Authority
U.S. Army Corps of Engineers

For a full listing of Private and Public Clients, visit www.asce.org/onsiteclients

If you have other general information questions, or want to register for a public seminar, please call 1-800-548-2723.

M = ASCE Member / NM = NonMember / CEU = Continuing Education Unit

P.E. Exam Review Courses Live on the Web

ASCE's live P.E. Exam Review Courses on the web will help you prepare for and pass the P.E. Exams. Taught by teams of experienced P.E. Exam Review instructors, the courses will be presented as a series of two-hour modules. ASCE also offers four additional sessions in the P.E. Civil Exam Review Course to prepare you for the afternoon depth portion of the P.E. Civil Exam. These sessions will provide you with the focused and deeper knowledge level that you need in each subject area to prepare for the PM session of the P.E. Civil Exam. Register for either the P.E. Civil Exam Review, 12-part series or the P.E. Civil Exam Review, 16-part series including the four depth review sessions. Registration deadline for all Fall 2011 review courses is Thursday, August 18.

ASCE's P.E. Exam Review Courses live on the web are a very cost-effective, convenient way for mid-sized to large firms and public agencies to assist their civil engineers on staff in preparing for the P.E. Exam. Provide the program to 10 or 100 employees for the same fee!

FALL 2011 REVIEW COURSES

All sessions will take place from 3PM to 5PM Eastern Time

P.E. Civil 12 sessions, plus 4 depth sessions

course# 8308W2011

Tuesday	August 23	**Structural Analysis**	J. P. Mohsen
Thursday	August 25	**Strength of Materials**	J. P. Mohsen
Tuesday	August 30	**Structural Design**	J. P. Mohsen
Thursday	September 1	**Geometric Design**	J. P. Mohsen
Tuesday	September 6	**Geomechanics**	Jerry Vandevelde
Thursday	September 8	**Foundation**	Jerry Vandevelde
Tuesday	September 13	**Hydraulics**	N. R. Bhaskar
Thursday	September 15	**Hydrology**	N. R. Bhaskar
Tuesday	September 20	**Waste & Water Treatment**	Andy Winfrey
Thursday	September 22	**Construction Materials**	J. P. Mohsen
Tuesday	September 27	**Engineering Cost Analysis**	J. P. Mohsen
Thursday	September 29	**Construction Scheduling and Estimating**	J. P. Mohsen

Registration Fee*: $1,995 per site *(member)* **$2,395 per site** *(non-member)*

P.E. Civil Exam Review, 16-Part Course

course# 8309W2011

Includes 12 Sessions Above and Four Depth Review Sessions

Monday	October 3	**Geotechnical Depth**	Jerry Vandevelde
Tuesday	October 4	**Water Resources Depth**	N. R. Bhaskar
Wednesday	October 5	**Transportation Depth**	JoAnne Tingle
Thursday	October 6	**Structures Depth**	Terry Weigel

Registration Fee*: $2,545 per site *(member)* **$2,945 per site** *(non-member)*

P.E. Structural Exam Review Course

course# 8307W2011

This course is sponsored by ASCE Continuing Education and ASCE's Structural Engineering Institute (SEI).

Monday	August 22	**Gravity Loads**	Terry Weigel
Wednesday	August 24	**Lateral Loads**	Terry Weigel
Monday	August 29	**Structural Analysis**	Terry Weigel
Wednesday	August 31	**Masonry Design**	Mark McGinley
Wednesday	September 7	**Timber Design**	Mark McGinley
Monday	September 12	**Concrete Buildings**	Richard Miller
Wednesday	September 14	**Pre-Stressed Concrete**	Richard Miller
Monday	September 19	**Bridge Loads**	Mike Wenning
Wednesday	September 21	**Bridge Design**	Mike Wenning
Monday	September 26	**Steel Design**	Terry Weigel
Wednesday	September 28	**Seismic Design**	Terry Weigel

Registration Fee*: $1,825 per site *(member)* **$2,225 per site** *(non-member)*

*Fee is per site. An unlimited number of staff from your organization can attend at your site. The site license does not permit you to have multiple log-ins or phone calls from your site or to transmit information to another site.

P.E. Environmental Exam Review Course course# 8400W2011

This course is sponsored by ASCE Continuing Education and ASCE's Environmental and Water Resources Institute (EWRI).

Friday	August 26	**Air Quality**	Andy Winfrey
Friday	September 9	**Hazardous Waste and Emergency Operations**	Cathy Price
Friday	September 16	**Environmental Assessment & Remediation**	Mark Saliga
Friday	September 23	**Waste & Water Treatment**	Andy Winfrey
Friday	September 30	**Storm Water**	N. R. Bhaskar
Friday	October 7	**Water Quality**	N. R. Bhaskar

Registration Fee*: $995 per site *(member)* **$1,295 per site** *(non-member)*

*Fee is per site. An unlimited number of staff from your organization can attend at your site. The site license does not permit you to have multiple log-ins or phone calls from your site or to transmit information to another site.

What others are saying...

"The review course and support material were very helpful during the exam; I think I referred to them more than any other resource. Having taken a five year break from the engineering field, I was quite surprised to pass the exam on the first try. I'm sure I would not have been able to pass without the review course. Honestly, I didn't even study that much outside of the review course. Thank you for providing such a valuable service. It was worth every bit of the time and money invested."

– Joe Carnall, P.E. MACTEC

How do the Live Review Courses on the web work? We use transmission over the web and teleconferencing to make the course a live and interactive experience. Participants will be able to ask the instructors questions and get real time answers. Practice problems will be worked through during each session. Each site leader will receive course materials to download prior to each session, as well as log-in information for viewing the instructor's presentation during each class.

INSTRUCTORS:

Nageshwar R. Bhaskar, Ph.D., P.E., Professor, Department of Civil and Environmental Engineering, University of Louisville, Louisville, Kentucky.

W. Mark McGinley, Ph.D., P.E., M.ASCE, is a structural engineer and building scientist with over 20 years of research and forensic engineering practice in building systems.

Richard M. Miller, Ph.D., P.E., M.ASCE, is a faculty member in the area of structural engineering and civil engineering materials at the University of Cincinnati, Cincinnati, Ohio.

J.P. Mohsen, Ph.D., M.ASCE, Course Director for ASCE's P.E. Exam Review courses, is Professor and Chair of the Civil and Environmental Engineering Department, University of Louisville, Louisville, Kentucky.

Cathy Price ,CHMM, RS, has nearly 15 years of experience in the hazardous waste industry. She is the Hazardous Waste Coordinator and oversees the collection and transportation of chemical waste, universal waste, and medical waste for over 700 laboratories and clinical areas.

Mark Saliga, P.E., is an engineer with Shield Environmental Associates and has over 20 years of experience in remedial action design and construction management.

JoAnne Tingle, P.E., has been involved in Traffic and Transportation Engineering for over 20 years, including managing a central safety program for the Kentucky Transportation Cabinet.

Gerald T. Vandevelde, P.E., M.ASCE, has over 25 years of experience with both international consulting firms and smaller regional firms.

Terrance A. Weigel, Ph.D., P.E., S.E., M.ASCE, Professor Emeritus, Department of Civil and Environmental Engineering, University of Louisville, Louisville, Kentucky.

Michael Wenning, P.E., F.ASCE, is manager of American Structurepoint's Bridge Department.

Andrew J. Winfrey, P.E., M.ASCE, is involved in the planning, design, construction management, and monitoring of water treatment plants, wastewater treatment plants, sanitary landfills, and hazardous waste management for cities, counties, states and major industries.

What Others Are Saying...

CONSTRUCTION:

*"Excellent material and presentation. I wish I had the opportunity to attend the **Construction Administration for Engineers** seminar a couple of years ago."*

– Thomas McNamara, Jackson & Tull, Washington, DC

*"The **Design-Build Contracting** seminar met and in many areas exceeded my expectations. I plan on encouraging other professionals in my office to take this course."*

– Michael N. Griffin, AIA, Architect, USCE-CEU JUNEAU, Juneau, AK

ENVIRONMENTAL/WATER RESOURCES:

*"**Introduction to Detention Pond Design – Parking Lots and Urban Drainage** provided a very good explanation of the way design is done. Running examples throughout the course was a good way to apply concepts."*

– Robert Cardwell, Auburn University, Auburn, AL

*"The **Low Impact Development Applications for Water Resource Management** instructor's depth of knowledge and experience was phenomenal. It was a pleasure to learn from one of the key innovators in this field."*

– Robert Adair, Construction EcoServices, Houston, TX

*"The **Pumping Systems Design for Civil Engineers** was an excellent seminar! I wish I had attended this earlier so that I could have applied all this knowledge in my previous projects! It was definitely worth the time. The instructor was extremely knowledgeable and clearly knew his materials."*

– Wai Cheong, Project Engineer, SRT Consultants, San Francisco, CA

*"The **HEC-HMS Computer Workshop** was extremely helpful and relevant. It not only covered the functionality of HEC-HMS, but also the basics of the methods and equations that make up the program. The instructor was extremely knowledgeable and kept the course interesting through a hands-on approach."*

– Michael Phillips, Civil Engineer, Project Manager, Neel-Schaffer, Inc., Nashville, TN

GEOTECHNICAL:

*"The **Design of Foundations for Dynamics Loads** seminar really helped me focus on some matters that were not covered during my graduate studies."*

– Agostino Bodini, Dott. Ing. Agostino Bodini, Fano, Italy

*"The **Introduction to Tunnel Design and Construction** seminar covered all aspects of the design and construction of tunneling. The instructor has excellent practical knowledge of the subject."*

– Patrick J. Conway, P.E., PJC & Associates, Rohnert Park, CA

MANAGEMENT

*"I have been looking at financial statements for years and after attending **Financial Management for the Civil Engineer**, I finally know what to look for and what to do with them."*

– Steven Pannone, Pannone Eng. Svc., Anchorage, AK

*"**Leadership Development for the Engineer** was a great seminar. The information I learned will greatly benefit my company and career."*

– Seth Kelly, RLK Engineering, Allen, TX

STRUCTURAL

*"Without a doubt, **Design and Renovation of Wood Structures** was the most practical and comprehensive wood structures seminar that I have experienced in 30 years as an engineer."*

– Gary Rohrer, Director of Special Projects, Washington County Government, Hagerstown, MD

*"**Design of Buildings in Coastal Regions** was helpful in expanding my knowledge of coastal building design. The instructor's real life experience and examples drove home the intentions of the information provided."*

– Thomas Mukavetz, Mullever, Inc., Ballinger, TX

TRANSPORTATION:

*"The **Techniques for Pavement Rehabilitation** instructors were very knowledgeable about the subject matter. This seminar was very informative. I look forward to using what I have learned with upcoming prospects."*

– Marc Grenier, RW Gillespie & Associates, Inc., Portsmouth, NH

*"Tim was the best technical instructor I have ever had. **Planning and Designing of Service and Systems Interchanges in Urban and Suburban Areas** was excellent."*

– Phil Weisbach, SEH Inc., Boulder, CO

On the Web

General Continuing Education Information
www.asce.org/conted

Seminar Registration
www.asce.org/seminars

Webinar Registration
www.asce.org/webinar/list

Distance Learning Orders
www.asce.org/distancelearning

By E-mail

Seminar Information
seminars@asce.org

Webinar Information
webinars@asce.org

Distance Learning
distancelearning@asce.org

General Information
continuingeducation@asce.org

By Fax

703-295-6144

By Phone

9:00-6:00 Eastern Time, Monday – Friday
800-548-2723 or 703-295-6300

By Mail

American Society of Civil Engineers
P.O. Box 79162
Baltimore, MD 21279-0162

FAQs

Have questions about ASCE's Continuing Education program? Go to the Frequently Asked Questions page at

www.asce.org/faq

Construction/ Development

Construction Administration for Engineers

Wayne Reynolds, P.E., M.ASCE

This two-day seminar is aimed at not only resident project representatives on construction projects, but also project managers, contract administrators, architects, engineers, owners, and supervisory and field management personnel. The focus is on the resident project representative and his interaction with all these parties and the problems they encounter and must resolve. The seminar analyzes the construction process to include project delivery systems, documentation, responsibilities, authorities, specifications, preconstruction operations, scheduling, construction operations, risk allocation, and information technology. Attendees will learn procedures and contract specification languages that help minimize disputes and avoid claims.

$1,255M/$1,475NM. 1.6 CEUs.

November 3-4, 2011	*Las Vegas, NV*	*60072012*
March 8-9, 2012	*New Orleans, LA*	*60082012*

Construction Contract Management

Glenn H. Haese, Esq. J.D., A.M.ASCE

It is crucial to a successful project that all team members involved understand the dynamics of the construction contract and how it defines their work and responsibilities. This seminar provides a practical and legal coverage of all aspects of construction contracts from the time of bidding to termination and post-termination. This two-day seminar is aimed at resident project representatives, but also project managers, contract administrators, architects, developers, bankers, engineers, owners, and supervisory and field management personnel. Attendees will walk through a step by step analysis of the contract to better understand their role and obligations in the process and properly coordinate their work as project team members and avoid disputes and claims.

COMING IN SPRING/SUMMER 2012

Construction Dewatering and Groundwater Control - Design and Application

See GEOTECHNICAL section

Construction Plans, Specifications and Ethics for Civil Engineers

David Hanna, P.E., M.ASCE

This seminar will provide the civil engineer and constructor with an understanding of construction documents so they can contribute to the development and assembly of project documents as well as how to understand and interpret existing construction documents. Excerpts from actual construction project drawings and specifications will be used as part of this seminar.

$1,255M/$1,475NM. 1.4 CEUs.

March 6-7, 2012	*San Antonio, TX*	*60102012*

Design-Build Contracting

Douglas D. Gransberg, Ph.D., P.E., CCE, FRICS; Carla Lopez del Puerto, Ph.D. and Jennifer S. Shane, Ph.D.

The Design-Build (DB) method of contracting has been increasing steadily. This seminar will help you understand the dynamics of the DB process and will impart the technical and management skills you will need to obtain time and cost savings by properly implementing a DB program. You will learn how to: select projects that will benefit from DB delivery; optimize the balance between performance specified requirements and method specified requirements; avoid costly and time-consuming errors due to poorly written RFPs; develop the skill of proposal evaluation planning; and understand the complex relationships between design and construction on a fast-track project.

$1,255M/$1,475NM. 1.4 CEUs.

September 22-23, 2011	*San Antonio, TX*	*81572011*
March 22-23, 2012	*Scottsdale, AZ*	*60212012*

Earth Retaining Structures: Selection, Design, Construction and Inspection – Now in an LRFD Design Platform

See GEOTECHNICAL section.

Progressive Collapse Mitigation: Practical Analysis Methods and Proven Solutions

See STRUCTURAL section.

Sustainable Land Development – Ensuring Growth in a Green Economy

David E. Johnson, P.E., P.P., F.ASCE

The future of real estate development will change significantly in 2010 and beyond. This seminar focuses on the land development engineer's leadership in effecting this industry change. Cutting edge land development practices will be discussed including; sustainable project approaches, horizontal and vertical mixed use development patterns and ways to forge industry change for sustainable and consistent future growth. Attendees will debate and define new business practices and profit centers. Whether new to the industry or a seasoned professional, learn to launch new practices ahead of your competition.

$1,255M/$1,475NM. 1.4 CEUs.

September 15-16, 2011	*Charleston, SC*	*82512011*
November 3-4, 2011	*Wash. DC Metro*	*61192012*
December 1-2, 2011	*Houston, TX*	*61202012*

Environmental

Design and Operation of Bioreactor Landfills *–Newly Updated*

Milind V. Khire, Ph.D., P.E., M.ASCE
Xuede (Dan) Qian, Ph.D., P.E.

The operation of municipal solid waste landfills as bioreactors offers significant environmental and financial benefits. Bioreactors are the landfills of the modern age, and this short course will provide the latest information and technology about this type of design. It will also provide state-of-the-art knowledge from published works, industry practice, case study, and field-scale research on design, operational, and monitoring aspects for participants to learn best practices, meet regulations, and obtain permits.

COMING IN SPRING/SUMMER 2012

Environmental Bootcamp for Engineers

David Batts; Chris Gesing and John King, CIH

This two-day training covers the most common federal environmental and natural resource regulations encountered by engineers during project development. The seminar focuses on three regulations: the National Environmental Policy Act (NEPA), the Endangered Species Act, and Section 404 of the Clean Water Act. Failure to follow the procedures and analysis required by these regulations can significantly delay your project and increase your costs. This seminar provides training on how to navigate the process effectively; what different federal agencies may require of you and why early contact with them is critical; and integration with other laws. We brief you on the five most common delays and what you can do to prevent them. The seminar provides sound information on what you need to do, and when, to ensure that you complete your project on schedule.

COMING IN SPRING SUMMER 2012

Introduction to Detention Pond Design – Parking Lots and Urban Drainage

See HYDRAULICS & WATER RESOURCES section.

Low Impact Development Applications for Water Resource Management

See HYDRAULICS & WATER RESOURCES section.

NPDES Storm Water Permit Compliance

Craig T. Maske, P.E., CFM

Day one focuses on NPDES storm water permit compliance for municipalities and construction sites with complete discussion of which construction sites need to be permitted and who in the organization is responsible. Day two focuses on EPA's NPDES storm water permit requirements for industrial facilities. You will be guided step-by-step through the process of selecting and completing the permits that are right for your facility, and will learn how to implement an effective employee training program.

$1,265M/$1,485NM. 1.4 CEUs.

March 8-9, 2012	*Atlanta, GA*	*60752012*

Stormwater BMPs That Work: Effective Analysis, Design and Maintenance

Jennifer J. Walker, P.E., D.WRE, CFM

As water quality regulations continue to strengthen, it is more important now than ever to specify stormwater quality Best Management Practices (BMPs) that target specific pollutants of concern to maximize overall benefits. This seminar covers design, analysis, and maintenance of a wide-range of BMPs, including: wet detention basins, first-flush capture, vegetated systems, bioretention and other Low Impact Development (LID), Integrated Management Practices (IMPs), filtration and infiltration methods, and stormwater wetlands. Commercially available systems are also addressed and critical information on long-term effectiveness and maintenance requirements of various BMPs is emphasized. This seminar distills the latest research on the long-term effectiveness of stormwater quality BMPs and discusses the various types of BMPs as well as manufactured systems that are effective for different situations. Participants learn about the pollutant removal efficiencies of various BMPs, how to select and analyze BMPs for specific pollutant removal, and long-term maintenance requirements for various BMPs. Additionally, attendees learn to navigate the International BMP database and become familiar with current and upcoming new programs.

$1,255M/$1,475NM. 1.4 CEUs.

September 29-30, 2011	*Philadelphia, PA*	*82362011*
November 3-4, 2011	*Atlanta, GA*	*61032012*

Wetlands and 404 Permitting

Terry Rice, Ph.D., P.E., M.ASCE

Stay current with the dynamic wetlands program and White House policy initiatives. Learn about 404 permitting regulations and processes, and trends in wetlands banking. Get an update on the status of the delineation controversy, and find out how recent court cases and pending legislation affect the program.

$895M/$1,095NM. 1.1 CEUs.

September 29-30, 2011	*Lake Tahoe, NV*	*82562011*
March 29-30, 2012	*San Antonio, TX*	*61272012*

Geotechnical

Construction Dewatering and Groundwater Control – Design and Application

Greg Landry, P.E., M.ASCE
Paul C. Schmall, P.E., M.ASCE

This seminar will present the variety of dewatering and groundwater control methods available. Topics will include the conditions where different dewatering methods are effective, site subsurface investigations for dewatering projects, including pumping tests; analysis and design of dewatering systems using analytical methods; potential side effects from dewatering; practical applications of dewatering for construction and remediation of contaminated sites, as well as various cut-off methods for providing groundwater exclusion. Both theory and practice will be discussed, with actual case histories.

$1,275M/$1,495NM. 1.4 CEUs.

November 17-18, 2011	*Wash. DC Metro*	*60092012*

Deep Foundations: Design, Construction and Quality Control

Joseph A. Caliendo, Ph.D., P.E., M.ASCE; Jerry DiMaggio, P.E., M.ASCE; Mohamad Hussein, P.E., M.ASCE and Frank Townsend, Ph.D., P.E., F.ASCE

Learn the fundamental principles and modern technologies aiding in the design, installation, testing, and quality control of driven piles and cast-in-place shafts deep foundations. Emphasis will be placed on actual problem solving tools.

$1,275M/$1,495NM. 1.4 CEUs.

September 29-30, 2011	*Wash. DC Metro*	*81502011*
October 27-28, 2011	*Orlando, FL*	*60132012*
March 1-2, 2012	*San Francisco, CA*	*60142012*

Design and Construction of Microtunneling Projects

David G. Abbott, M.ASCE, C.Eng.

This seminar will provide an in depth review of microtunneling using an interactive and systematic approach. Subsurface investigation and characterization as applied to designing, specifying and planning microtunneling, as well as microtunneling tunnel lining systems and the set up of the tunneling equipment, will be discussed in detail. The selection and construction of various shafts for tunneling, and key aspects of microtunneling design, specification, planning, monitoring and management and new trends in microtunneling, will also be discussed. The seminar will include case histories and provide practical applications, group involvement and discussion of the various techniques.

$1,375M/$1,595NM. 2.1 CEUs.

November 16-18, 2011	*San Antonio, TX*	*60152012*

Design and Installation of Buried Pipes

Amster K. Howard, Jr., M.ASCE
Phillip A. Sharff, P.E., M.ASCE

This seminar will demonstrate the important fundamentals of pipe-soil interaction behavior, how soil and pipe behavior can be jointly considered in design, and how proper construction methods can achieve design assumptions in the field. The principles of soil-structure interaction covered in this seminar apply to all types of pipe. You will learn the relationship between pipe and soil and how to apply this information in your own work to build durable, efficient pipe-soil systems, and know how to apply this information in your own work to build durable, efficient pipelines.

$1,255M/$1,475NM. 1.4 CEUs.

February 16-17, 2012	*New York City, NY*	*60162012*
March 29-30, 2012	*Denver, CO*	*60172012*

Design of Foundations for Dynamic Loads

See STRUCTURAL Section.

Design of Waste Containment Liner and Final Closure Systems

Richard Thiel, P.E., G.E., M.ASCE

This seminar will benefit those who work with MSW landfills, hazardous waste landfills, superfund sites, industrial landfills, mine tailing closures, or mine heap leach pads. Comprehensive coverage of the latest technology is covered. Learn how to design waste containment liner systems and final closure systems. Design and failure examples are presented throughout.

$1,255M/$1,475NM. 1.4 CEUs.

January 26-27, 2012	*San Diego, CA*	*60312012*

Earth Retaining Structures: Selection, Design, Construction and Inspection – Now in an LRFD Design Platform

Barry Christopher, Ph.D., P.E., M.ASCE; Jerry DiMaggio, P.E., M.ASCE; Silas Nichols; Paul Sabatini, Ph.D., P.E. and John Wolosick, P.E., D.GE, M.ASCE

Selection, design, and construction of earth retaining systems and their cost are important to today's civil engineers. Urban construction and site development require the use of retaining structures for transportation, commercial and industrial development. This course is intended for: generalist civil engineers, geotechnical specialists, structural specialists, con-tractors and wall system representatives. Today's civil engineers are often poorly prepared to make the correct retaining wall system choice and the use of an inappropriate system has severe construction dispute, cost, and time implications. This seminar has been updated to include the limit states design platform of Load and Resistance Factor Design (LRFD). The new FHWA publication released in June 2008 will be discussed and included with the course handouts. This closely follows the current AASHTO specifications for Bridge and Structures but has a direct standard of practice guidance for all Civil Engineering applications requiring temporary and permanent retaining structures.

$1,275M/$1,495NM. 1.4 CEUs.

September 22-23, 2011	*Phoenix, AZ*	*81732011*
November 3-4, 2011	*New York City, NY*	*60362012*
February 9-10, 2012	*Charleston, SC*	*60372012*
March 8-9, 2012	*Houston, TX*	*60382012*

Earthquake-Induced Ground Motions

See STRUCTURAL section.

Finite Elements in Geotechnical Engineering

D. Vaughan Griffiths, Ph.D., D.Sc., P.E., C.Eng., F.ASCE

This Geo-Institute seminar describes a powerful suite of finite element programs suitable for analysis of a broad range of practical problems of interest to geotechnical engineers. Routine geotechnical predictions relating to foundations, slopes and soil/structure interaction performance can often be obtained from charts or standard methods of analysis, but when complex boundary conditions or combinations of material properties are encountered, the classical approaches are severely limited. The finite element method is ideally suited for modeling these more complex problems and most programs can now be run comfortably on a personal computer. After a brief introduction on the finite element method, the course will concentrate on some practical applications of the finite element method, e.g. seepage, settlements and slope stability.

COMING IN SPRING/SUMMER 2012

Instrumentation and Monitoring Bootcamp: Planning, Execution and Measurement Uncertainty for Structural and Geotechnical Construction Projects

Magued Iskander, Ph.D., P.E., F.ASCE

The use of field instrumentation to monitor the on-site behavior of structures is becoming part of many construction projects. Nevertheless, few American universities offer a course on instrumentation as part of their civil engineering curriculum; therefore, many engineers learn instrumentation through the school of hard knocks. This seminar will fill a void in the education of many civil engineers.

$1,275M/$1,495NM. 1.4 CEUs.

September 22-23, 2011 . . .Boston, MA	*81932011*
November 3-4, 2011 . . . . .Chicago, IL	*60562012*
March 29-30, 2012. . . . . .Atlanta, GA	*60572012*

Introduction to Dam and Levee Safety, Evaluation and Rehabilitation

Andy Yung, P.E., CFM and Lane Lease

With the nation's aging infrastructure, concerns over dams and levees across the United States are beginning to arise. Who is responsible for maintaining existing dams and levees? What are the causes and consequences of a failure? Who is responsible and what can be done to prevent failure? How are inspections performed? This course provides basic principles necessary to identify and mitigate the risks associated with a potential structural failure of dams and levees, and to begin to identify means to rehabilitate a deteriorating structure.

$1,275M/$1,495NM. 1.4 CEUs.

September 15-16, 2011 . . .San Diego, CA	*81952011*
January 19-20, 2012. . . . . .Atlanta, GA	*60582012*
March 29-30, 2012. . . . . .Minneapolis, MN	*60592012*

Introduction to Detention Pond Design - Parking Lots and Urban Drainage

See HYDRAULIC AND WATER RESOURCES section.

Introduction to Tunnel Design and Construction

David G. Abbott, C.Eng., M.ASCE

Tunnels are key infrastructure elements and play a key role in urban transportation, water and sewerage transportation and other sectors. This seminar will describe all forms of tunneling in a systematic approach with emphasis on the techniques, their applicability, and on mitigating the risks involved in tunneling together with a comprehensive review of techniques for subsurface investigation and characterization for soft ground, hard rock tunneling, microtunneling and their use in tunnel design and specification. Tunneling methods will be covered including hand and simple mechanical excavation, NATM, various forms of soft ground and rock mechanical excavation, drill and blast tunneling, pipe and box jacking and microtunneling with the appropriate tunnel lining. In addition, key aspects of tunnel design, specification, cost and construction management will be addressed with particular emphasis on risk management during the design and construction process. New trends and innovative techniques in tunneling, numerous case studies and case history group workshop sessions are included.

$1,375M/$1,595NM. 2.1 CEUs.

September 14-16, 2011 . . .NYC Metro Area	*81992011*
January 18-20, 2012. . . . . .Charlotte, NC	*60612012*
February 22-24, 2012. . . . .Las Vegas, NV	*60622012*
March 21-23, 2012. . . . . .Wash. DC Metro	*60632012*

Pipe and Pipeline Renewal

Dec Downey, Ph.D., C.Eng.

This two-day seminar will review the methods for replacing and renovating the existing water and wastewater infrastructure with a minimum of disruption to the community. Beginning with condition assessment and prioritization, it will take the student through the design and technology selection procedures drawing on best practice and emerging codes reflecting the U.S. and international experience of the presenter. It will present installation procedures, reinstatement, quality control and troubleshooting measures with a strong emphasis on the practical aspects and round off with project examples. Students are welcome to bring their own problems to the table for discussion.

COMING SPRING/SUMMWER 2012

Risk Assessment in Geotechnical Engineering

Gordon Fenton, Ph.D., P.Eng., M.ASCE

D. Vaughan Griffiths, Ph.D., D.Sc., P.E., C.Eng., F.ASCE

Soils and rocks are among the most variable of all engineering materials and are therefore highly amenable to a probabilistic treatment. The purpose of using probabilistic methods in geotechnical design is to estimate the probability of failure (or inadequate performance) as a supplement, or even an alternative to the more traditional "Factor of Safety" approach. The course will provide a comprehensive coverage of the rationale and analysis tools available for probabilistic geotechnical analysis in this rapidly growing field.

COMING SPRING/SUMMWER 2012

Soil and Rock Slope Stability

Stanley Miller, Ph.D., P.E., M.ASCE
Sunil Sharma, Ph.D., P.E., M.ASCE

Landslides and slope failures are responsible for millions of dollars of damage to public and private property every year. The primary factors driving this trend include aging slopes constructed for major transportation systems in the U.S. during the 1950s and 1960s and the ever-increasing need to develop land on steep natural slopes and fills for public and private purposes. Because slopes consist of native or transported earth materials, engineering properties and behaviors are quite variable and unpredictable to precise limits. This variability is compounded by the frequent presence and influence of surface water runoff and groundwater infiltration that often trigger landslide movements. Today, the analysis, solution and prevention of landslide problems requires an understanding of geology, hydrology, seismology, geotechnical exploration and engineering, computerized analytical methods, and practical and constructible engineering solutions. The seminar will target three main areas of interest related to slopes: collecting and evaluating geologic and geotechnical data; analytical methods for soil and rock slopes; and stabilization methods.

$1,255M/$1,475NM. 1.4 CEUs.

September 29-30, 2011 . . .Los Angeles, CA	*82332011*
November 17-18, 2011 . . .Atlanta, GA	*60972012*
February 16-17, 2012. . . . .Phoenix, AZ	*60982012*

"***Design of Foundations for Dynamics Loads*** *was compact with a lot of information that isn't easy to find in books. The instructors were excellent and had a lot of experience in the field."*

– GERARDO CASTILLO, INELECTRA SA, MIAMI, FL

"***Soil and Rock Slope Stability*** *is a very good course for practicing geotechnical design engineers. It provided insight into practical applications of the design criteria and areas of concern during construction."*

– RICHARD GREGORI, PRESIDENT, GREGORI CONSTRUCTION & ENGINEERING, SARVER, PA

Register at:
www.asce.org/seminars

Hydraulics & Water Resources

Dam Breach Analysis Using HEC-RAS

Christopher R. Goodell, P.E., D.WRE, M.ASCE; Martin J. Teal, P.E., P.H., D.WRE, M.ASCE; Brian Wahlin, Ph.D., P.E., D.WRE, M.ASCE; Raymond Walton, Ph.D., P.E., D.WRE, M.ASCE

This intensive, workshop-oriented, three-day seminar will prepare the engineer and water resource professional to use the HEC-RAS computer program for running dam breach simulations. Participants will learn how to approach and conduct a dam breach study, estimate breaching parameters, construct a HEC-RAS unsteady flow model of the dam breach, and eliminate errors and instabilities in the model run.

$1,475M/$1,685NM. 2.4 CEUs.

December 7-9, 2011. . . . . .Las Vegas, NV	*60112012*
March 28-30, 2012. . . . . .Pittsburgh, PA	*60122012*

GIS for Hydraulic and Hydrologic Modeling Using ArcGIS Desktop

Kurt Baron; James Heyen, P.E., M.ASC
Kenneth Puhn, CFM and Rebecca Yalcin

This workshop-oriented, three-day seminar presents the practical application of the ArcGIS extensions ArcHydro, HEC-GeoHMS, and HEC-GeoRAS. GIS data models and concepts supporting hydraulic and hydrologic modeling are also discussed. Participants will learn how to process data and create hydro networks using ArcHydro, develop HEC-RAS geometry and process HEC-RAS data results, build a project in GeoHMS and prepare the data files for HEC-HMS, and set up projects within the HEC-RAS and HEC-HMS environments.

$1,485M/$1,695NM. 2.4 CEUs.

September 28-30, 2011 . . .Chicago, IL	*81832011*
October 12-14, 2011 . . . . .Denver, CO	*60472012*
January 25-27, 2012. . . . . .Seattle, WA	*60462012*

HEC-HMS Computer Workshop

Siavash Beik, P.E., CFM, D.WRE, M.ASCE; Thomas T. Burke, Ph.D., P.E., CFM and Scott Kenner, P.E., M.ASCE

This intensive two-day seminar and workshop provides practical hands-on training in the use of the HEC-HMS software, the Corps of Engineers HEC-1 for Windows. Learn to apply HEC-HMS for the typical hydrologic analyses required in so many projects. Seminar price includes software and course notes.

$1,295M/$1,515NM. 1.4 CEUs.

September 15-16, 2011 . . .San Diego, CA	*81862011*
November 17-18, 2011 . . .Portland, OR	*60482012*
February 9-10, 2012. . . . . .Orlando, FL	*60492012*
March 8-9, 2012. . . . . .Dallas, TX	*60502012*

HEC-RAS Computer Workshop

Chris Bahner, P.E., D.WRE; James Heyen P.E., M.ASCE; Dragoslav Stefanovic, Ph.D., P.E., D.WRE, M.ASCE; Martin J. Teal, P.E., P.H., D.WRE, M.ASCE; Brian Wahlin, Ph.D., P.E., D.WRE, M.ASCE; Raymond Walton, Ph.D., P.E., D.WRE, M.ASCE

This intensive three-day seminar and workshop provides practical hands-on training in the Hydrologic Engineering Center's River Analysis System (HEC-RAS) program. It covers water surface profiles, bridge hydraulics, and flood plain information studies. Seminar price includes software and user's manuals.

$1,485M/$1,695NM. 2.4 CEUs.

September 21-23, 2011 . . .NYC Metro Area	*81902011*
October 26-28, 2011 . . . . .San Diego, CA	*60512012*
November 16-18, 2011 . . .St. Louis, MO	*60522012*
February 15-17, 2012. . . . .Manchester, NH	*60532012*
March 21-23, 2012. . . . . .Charlotte, NC	*60542012*

HEC-RAS Computer Workshop for Unsteady Flow Applications

Christopher R. Goodell, P.E., D.WRE, M.ASCE; Martin J. Teal, P.E., P.H., D.WRE, M.ASCE; Brian Wahlin, Ph.D., P.E., D.WRE, M.ASCE and Raymond Walton, Ph.D., P.E., D.WRE, M.ASCE

This seminar begins with an introduction to using the unsteady flow component of HEC-RAS. Additional lectures present unsteady flow theory, steps for developing an unsteady flow simulation, and procedures for creating a stable and calibrated model. Guidance is given for techniques on modeling bridges and storage areas in the unsteady flow environment. Students are shown the inline and lateral weir features that can be added in both steady and unsteady flow models. Workshops accompanying these lectures provide practical application experience in HEC-RAS unsteady flow modeling. New features of HEC-RAS are also discussed.

$1,485M/$1,695NM. 2.4 CEUs.

March 7-9, 2012. . . . . .Chicago, IL	*60552012*

Introduction to Dam and Levee Safety, Evaluation and Rehabilitation

See GEOTECHNICAL section.

Introduction to Detention Pond Design – Parking Lots and Urban Drainage

Mark Peterson, P.E., M.ASCE

Detention ponds are designed to provide numerous functions, including reducing peak discharges and improving water quality. Improperly designed, they can be a hazard to the public. This seminar will provide the information needed to design an appropriately sized detention pond that will provide numerous benefits and limit liabilities. Topics covered include: rainfall data sources, rainfall runoff modeling, inlet grate capacity analysis, outlet capacity design and analysis, detention pond design, routing a hydrograph through a detention pond, impacts of ponds on water quality design and hazards of detention ponds and when not to use them.

$1,255M/$1,475NM. 1.4 CEUs.

October 27-28, 2011 . . . . .St. Louis, MO	*60602012*

Low Impact Development Applications for Water Resource Management

Rodney Frederick, P.E., D.WRE., F.ASCE
Aaron Poresky, P.E., A.M.ASCE

Low Impact Development (LID) is an innovative approach to stormwater management that is being implemented by federal agencies, state and local governments for aquatic resource protection and regulatory compliance. LID is a site level stormwater management design approach with an objective of maintaining the hydrologic cycle or meeting targeted watershed objectives. This is accomplished by a combination of planning and design strategies that use conservation approaches and techniques to reduce site development impacts in combination with Integrated Management Practices (IMPs). IMPs are small-scale stormwater management devices that are distributed throughout the site, on buildings, and throughout the infrastructure to meet the control objectives. This seminar will focus on the engineering and technical issues associated with the planning, engineering, and construction of LID. It will give the practicing engineer a foundation to begin to design LID projects and incorporate LID into local stormwater management programs.

$1,275M/$1,495NM. 1.4 CEUs.

September 29-30, 2011....Charleston, SC	*82082011*
December 8-9, 2011.....Portland, ME	*60732012*
February 16-17, 2012.....Seattle, WA	*60742012*

Pipe Selection for Municipal Facilities

Mark Peterson, P.E., M.ASCE

There are many choices in pipe material when designing a project that includes water lines, sanitary sewer lines or storm sewer lines. Proper selection of pipe material can save your project money. Improper selection can result in higher costs or premature failures. Do you know what the "best" pipe material is for your project? This seminar will provide information on the advantages and disadvantages of numerous pipe materials. Topics covered include PVC, ductile iron and HDPE pressure pipes and PVC, concrete and HDPE gravity pipes. The course also includes information on the wide variety of joint types available and on structural requirements to resist live and dead loads.

$895M/$1,095NM. 1.1 CEUs.

February 9-10, 2012.....New Orleans, LA	*60772012*

Practical Hydrology of Rural and Urban Watersheds

Jerry Michel, P.E. and Mark Peterson, P.E., M.ASCE

This seminar will provide instruction on a variety of processes and methods used to develop peak flow estimates and hydrographs, for both rural drainages and urban basins. It will examine the data sources for rainfall information along with the impact that soils, vegetation, land use and slope have on runoff. A variety of methods to estimate time of concentration will be presented. A short discussion on statistical analysis will be included, but this is not a course dedicated to statistical analysis of runoff data.

$1,255M/$1,475NM. 1.4 CEUs.

November 17-18, 2011 . . .Atlanta, GA	*60792012*

Pumping Systems Design for Civil Engineers

David Hanna, P.E., M.ASCE

This seminar presents the basics of pumping system design and specification for civil engineers. It emphasizes the application of pumping systems in municipal water and wastewater systems. Topics covered include: pump and system hydraulics; centrifugal pump selection; interpretation of manufacturer's pump head-capacity curves; types of pumping stations; series and parallel operation; variable speed systems; friction losses in sludge pumping; wet well design; specifying of pumps; shop drawing review considerations; and some common pump operating problems.

$1,275M/$1,495NM. 1.4 CEUs.

October 13-14, 2011 .....Charleston, SC		*60842012*
November 17-18, 2011 . . .Syracuse, NY		*60852012*
*January 4-6, 2012.....Las Vegas, NV***		*60862012*
February 9-10, 2012.....Chicago, IL		*60872012*
March 8-9, 2012.....San Antonio, TX		*60882012*
*** Three-Day-Course*	*$1,435M/$1,645NM*	*2.1 CEUs*

Sediment Transport Analysis Using HEC-RAS

Christopher R. Goodell, P.E., D.WRE, M.ASCE;
Dragoslav Stefanovic, Ph.D., P.E., D.WRE, M.ASCE
Martin J. Teal, P.E., P.H., D.WRE, M.ASCE

This intensive three-day seminar will prepare the engineer and water resource professional to use the HEC-RAS computer program for running sediment transport analyses. Led by experts from WEST Consultants with practical experience in sediment transport modeling, participants will learn how to approach and conduct a sediment transport study using HEC-RAS, including handling input parameters and boundary conditions, selecting a transport function, and performing calibration and sensitivity analyses.

COMING SPRING/SUMMWER 2012

Storm Sewer System Design Using SWMM

Mark Peterson, P.E., M.ASCE

Storm sewer design requires an understanding of urban hydrology, surface flow hydraulics, inlet hydraulics and pipe flow hydraulics, and often an understanding of the computer software that is used for analysis. This seminar will provide instruction on how to go through the entire process of designing a storm sewer system. The course is based on the current version of the EPA Storm Water Management Model (SWMM). It includes other important analyses that are not part of SWMM.

$1,255M/$1,475NM. 1.4 CEUs.

December 8-9, 2011.....Nashville, TN	*61002012*

NEW PROGRAM

Storm Water Treatment Using Detention Ponds and Commercial Devices

Mark Peterson, P.E., M.ASCE

Storm water treatment has become a significant responsibility in many jurisdictions. There are many ways to improve the quality of storm water runoff before it is discharged to a receiving stream, but determining which method to use and what level of treatment might be achieved is challenging. This seminar will cover routing of hydrographs through detention ponds, and the impacts that various outlet structures have on the outflow hydrograph and on water quality. It will also cover various design techniques to improve water quality from detention ponds. The seminar will cover a variety of commercial devices that have been developed to treat storm water, their general functions and the potential water quality improvements that can be expected with their use.

$1,255M/$1,475NM 1.4 CEUs.

January 19-20, 2012. . . . . Austin, TX	*61012012*
March 15-16, 2012. . . . . Las Vegas, NV	*61022012*

Stormwater BMPs That Work: Effective Analysis, Design and Maintenance

See ENVIRONMENTAL section.

Streambank Stabilization for Restoration and Flood Control Projects

Chris Bahner, P.E., D.WRE, M.ASCE
Thomas Grindeland, P.E., D.WRE, M.ASCE
Hans R. Hadley, P.E., P.G., CFM, M.ASCE

This course provides design guidance for streambank stabilization measures for both restoration and flood control projects. Traditional 'hard' structural-type techniques such as rock riprap, gabions, and articulated concrete blocks as well as redirective techniques including bendway weirs, rock vanes, and spur dikes are presented along with information on bioengineering solutions. In this course, you will learn the applicability and limitations of the various techniques, and recognize the importance of adequate toe protection.

$1,435M/$1,645NM. 2.1 CEUs.

November 2-4, 2011 . . . . . San Jose, CA	*61042012*
February 22-24, 2012. . . . . Atlanta, GA	*61052012*

Upgrading Treatment Plants and Pumping Stations

David Hanna, P.E., M.ASCE

This seminar will examine the engineering considerations and approach to upgrading water and wastewater systems emphasizing treatment plants and pumping stations. Basic engineering process and plant design are integrated with expansion and rehabilitation of water and wastewater treatment plants and with pumping station upgrades. Included will be process design theory supported with engineering calculations. Also, discussed will be the various aspects of treatment plant and pumping station expansion and upgrade: plant infrastructure; structural upgrade; mechanical upgrade; electrical upgrade; and hydraulic upgrade. Several plant case studies will also be presented.

$1,255M/$1,475NM. 1.4 CEUs.

January 26-27, 2012. . . . . Pittsburgh, PA	*61252012*

Water Hammer in Transmission and Distribution Systems

Jim C.P. Liou, Ph.D., P.E., M.ASCE
E. Benjamin Wylie, Ph.D., P.E., F.ASCE

This course addresses liquid transient flow problems with a particular emphasis on wave propagation. The intended audiences are the water, wastewater, power, and oil pipeline industries. Lectures, real-life examples, demonstrations, and problem solving, including hands-on computer simulations, comprise the format of the course. Care is given to concepts that distinguish normal unsteady flow events from more rapid undesirable events. Numerical modeling techniques are developed and demonstrated. Wave transmission and reflection are described in the time-distance plane to show how to visualize and interpret transients. The selection, sizing, operation, and modeling of control valves, air/vacuum valves, surge relief valves, air chambers, and surge tanks are discussed. The phenomena and modeling of pump power failure transients and column separation, often the main concerns in pipeline design, are also discussed. The seminar concludes with a discussion on surge control where real-life examples are used to integrate the concepts introduced throughout the course.

$1,255M/$1,475NM. 1.4 CEUs.

September 15-16, 2011 . . . San Antonio, TX	*82552011*
February 23-24, 2012. . . . . Scottsdale, AZ	*61262012*

*"Overall, **Streambank Stabilization for Restoration and Flood Control Projects** was the best presentation of bank stabilization methods I have attended in many years."*

– DONALD CHRISTOPHER SPRINGER,
SALT LAKE COUNTY PUBLIC WORKS,
SALT LAKE CITY, UT

Management and Leadership

Construction Plans, Specifications and Ethics for Civil Engineers

See CONSTRUCTION/DEVELOPMENT section.

NEW PROGRAM

Managing the Design Process – Keeping on Schedule, Within Budget, and Selecting the Right Resources

Lonny Simonian, P.E., P.M.P.
Thomas M. Korman, P.E., P.L.S.

This seminar provides participants with the knowledge and skills necessary to effectively manage the design process and prepare construction documents. Specific time and cost management skills, as well as quality control/assurance techniques, will be presented to enable design engineers, engineering consultants, and civil service professionals to produce cost effective construction documents for building and civil infrastructure projects.

$1,275M/$1,495NM 1.4 CEUs.

January 26-27, 2012. . . . . .NYC Metro Area	*60322012*
March 29-30, 2012 . . . . . .San Antonio, TX	*60332012*

Financial Management for the Professional Engineer

David Wahby

One of the most common concerns of managers and leaders of architectural, engineering and planning firms is understanding and managing the financial health of their practice. Learning to evaluate financial performance through interpretation of income statements, balance sheets, cash flow statements, and project reports is critical to their personal success as well as the success of the business. However, managers have limited access to training programs which can provide the skills to be effective financial managers. This seminar teaches the design professional how to read and interpret the income statement, including gross revenue, net revenue, direct and reimbursable expenses, indirect expenses, net profit before taxes, depreciation, gross profit and net profit after taxes. It examines the primary benchmarks of performance: multiplier, utilization rate, direct personal expense ratio, and overhead. In addition, the seminar examines the balance sheet components of assets (current, fixed and other), liabilities (current and long-term loans), and stakeholder equity. Important benchmarks such as current ratio, quick ratio, receivable turn, aging receivables, and debt to equity ratio are also explored.

$1,255M/$1,475NM. 1.4 CEUs.

September 29-30, 2011 . . .St. Louis, MO	*81802011*
November 3-4, 2011 . . . . .Austin, TX	*60422012*
December 8-9, 2011. . . . . .Boston, MA	*60432012*
January 26-27, 2012. . . . . .Charlotte, NC	*60442012*
March 8-9, 2012. . . . . .Seattle, WA	*60452012*

How to Resolve Disputes Without Costly Litigation: Engineers' Workshop on Arbitration and Mediation

Peter Liloia III, A.M.ASCE

Disputes are a fact of life in the engineering and construction business. How problems and disagreements are handled and resolved (or not resolved) can have a profound impact on an organization's operations and bottom line. Because of dissatisfaction with costly, time-consuming and ineffective litigation, construction project participants are turning to alternative ways of solving their contractual dilemmas out of court. This course is designed to provide all parties involved in engineering and construction with a thorough understanding of how to settle disputes without litigation. It will be presented in an informal, interactive style using examples from real life. Attendees will learn the benefits of mediation and arbitration over going to court. Through role-playing in mock arbitrations and mediations based on actual cases, participants will gain practical, hands-on advice and guidance on how to conduct themselves (and how not to). This workshop will provide valuable, timely and immediately useful advice for anyone involved in engineered construction projects.

COMING SPRING/SUMMER 2012

How to Successfully Use Value Engineering on Capital Projects

Don H. Stafford, P.E., CVS, CTM, M.ASCE

Almost all public agency capital project managers, city/county engineers, public works directors and design project managers will encounter value engineering at some point in their careers, and our engineering schools teach very little, if anything, about value engineering. Through lectures and class exercises, this seminar teaches what value engineering is, what to expect from it, and how to use it on your projects to maximize its benefits to the project, the owner and the designer. This seminar is for anyone who manages capital projects larger than $2 million in construction cost.

COMING SPRING/SUMMER 2012

Law School for Engineers

James J. Mangraviti, Jr., J.D., Esq.

The law affects every aspect of your professional and personal life. In order to succeed you must have an advanced knowledge of the law and the American legal system. Specially designed for civil engineers, this seminar will teach you how to read, think, speak, and analyze like a lawyer. At the completion of the seminar, you will be much better able to understand and deal with attorneys and legal issues. This seminar is ideal for any civil engineer who needs to work closely with statutes or regulations, who is or may become involved in litigation, who serves as an expert witness, would like to deal more effectively with attorneys and talk their language, or who is at all considering pursuing a legal degree.

$1,255M/$1,475NM. 1.4 CEUs.

October 13 - 14, 2011 . . . .Boston, MA	*60642012*

NEW PROGRAM

Laws and Rules for Florida Engineers – Plus, Practical Tools for Avoiding Trouble

Peter Liloia III, A.M.ASCE

This course will cover the legal and ethical standards applicable to engineers and how the Board of Professional Engineers and the courts interpret those standards. Attendees will learn how to properly document the job and why it is essential. In addition, they will learn how to head off problems by using the right contract language, including clean and fair terms. Advice will be given on actions to take during the design phase and the construction phase which will minimize problems that inevitably surface. These topics will be presented in an informal, interactive style using real life examples and cases. Participants will be given practical, hands-on advice and guidance on how to best conduct themselves and thus, avoid trouble.

This seminar fully satisfies the 8-hour biennial continuing education requirement for Florida Professional Engineers (4 hours on Florida Laws and Rules, and 4 hours on Areas of Practice).

$395M/$495NM 0.7 CEUs.

November 4, 2011 . . . . . .Orlando, FL	*60652012*

Leadership Development for the Engineer

Charles Calhoun, Jr., P.E., D.NE, F.ASCE

As we advance into the 21st century, the engineering manager must not only be technically competent but must possess the leadership skills to move an organization forward and to advance in his/her career. This updated seminar will help you develop or expand your leadership skills. You will learn how to: successfully lead an organization or a department; understand yourself and your staff including generational differences; apply a leadership style which is appropriate to the situation; apply systematic decision-making processes while considering the critical role of intuition; lead change while maintaining motivation; apply the "art" of leadership or the "discipline" of management; effectively communicate and provide feedback considering the differences in the way men and women communicate; and form and lead effective teams.The seminar includes one hour of ethics training.

$1,195M/$1,415NM. 1.6 CEUs.

September 22-23, 2011 . . .Portland, OR	*82022011*
November 17-18, 2011 . . .Cincinnati, OH	*60662012*
January 19-20, 2012. . . . . .Las Vegas, NV	*60672012*
March 29-30, 2012. . . . . .Manchester, NH	*60682012*

Liability of Engineers: How to Stay Out of Trouble

Peter Liloia III, A.M.ASCE

There has been an increasing expansion of the liability of engineers and architects in recent years for design, job site inspection, safety, and contract administration. This course is designed to provide a basic understanding of A/E responsibility and liability, the various kinds of dilemmas faced by A/E's on a construction project, ways to avoid and minimize problem situations, and how to effectively resolve those disputes that inevitably do arise. It will be presented in an informal, interactive style, using examples from real life. Participants will be given practical, hands-on advice and guidance.

$1,195M/$1,415NM. 1.4 CEUs.

September 15-16, 2011 . . .Baltimore, MD	*82042011*
December 1-2, 2011. . . . . .Los Angeles, CA	*60692012*
March 1-2, 2012 . . . . . .NYC Metro Area	*60702012*

Management Skills All Engineers Need to Know (with emphasis on effective communication techniques)

Gary D. Bates, Ph.D., P.E., F.ASCE

Great managers become great "agents for change." This seminar gets to the heart of what separates an effective manager from just being a boss – at any level. It will introduce participants to the concepts of supervision and management in an engineering environment. It will evolve from the basic principals of what management is and the tools for managing one's time, to creative thinking and problem solving. The seminar will include a review of all of the various functions that a manager must perform and the required skills to do so, with special emphasis on effective communication.

COMING SPRING/SUMMER 2012

Ownership Transition Planning, Company Valuations and Strategic Planning

John Pruitt, CPA, CVA

The more effectively a business plans and executes its plans, the more successful and profitable a business tends to be. In this seminar, you will learn how to develop viable strategic and ownership transition plans and the vital role they provide in a well-run firm. Some of the other topics included are: how to determine the value of your firm and ideas on how to increase the value, the process of developing strategic initiatives that are both meaningful and actually get accomplished, retirement and company buy-in funding issues and solutions, legal structuring issues including how LLCs are being used, the due diligence process in buying and selling firms, how ownership transition plans really work, possible roles of deferred compensation plans and ESOPs in transition strategies, and the "Golden Rule" of ownership transitioning. This seminar is specially designed for owners, potential owners, and managers of firms who want to better understand how to develop effective strategic and ownership transition plans, and techniques used to value design firms.

$1,255M/$1,475NM. 1.4 CEUs.

January 26-27, 2012. . . . . .Orlando, FL	*60762012*

Perfect Your Negotiating Skills: Increase Your Profitability

Gary D. Bates, Ph.D., P.E., F.ASCE

Negotiation, as the process to manage or resolve conflict, is much more than a method to buy and sell products or services. It is a process that affects all human interaction. Most engineers find themselves being at the mercy of their clients because they do not know how to negotiate. Learn the underlying principles of win-win negotiation and the techniques to achieve it. "Practice makes (near) perfect."

COMING SPRING/SUMMER 2012

Project Management

Ann M. Tomalavage, P.E., PMP, LEED AP, M.ASCE

Projects have traditionally been the basic unit of work for many engineering organizations – consulting, design, and construction firms. Other types of engineering organizations – government agencies, utilities, manufacturing – are using projects more and more as a way to tackle problems, make improvements, or bring new products and services to market more quickly and efficiently. This seminar involves participants in a project leadership model that you can take back to your workplace and apply immediately. The course addresses all phases of a project: initiating, planning, executing, controlling, and closing.

$1,195M/$1,415NM. 1.5 CEUs.

September 22-23, 2011 . . . Orlando, FL	*82172011*
March 29-30, 2012 . . . . . Scottsdale, AZ	*60832012*

Surviving and Prospering in Hard Times: Workshop for Owners and Leaders of Engineering Firms

John Pruitt, CPA, CVA

This unique, two-day interactive workshop offers each participant a tremendous learning opportunity. Not only will you hear the advice and opinions of an expert design firm consultant, you will doubly benefit through participating in lively group discussions and case studies. Share and learn with your peers, from all across the United States, their thoughts and ideas on coming to terms with some of the most pressing issues facing engineering firms. This is a rare chance to see how other engineering firms handle similar situations and how they solve their problems that face every owner/leader in day-to-day operations. This seminar is limited to 25 participants!

COMING SPRING/SUMMER 2012

Testifying and Forensic Report Writing Skills for Civil Engineers

Steven Babitsky, J.D.

Civil engineers are constantly being called upon to serve as expert witnesses. In order to excel as a civil engineering expert witness, you need to understand what the attorneys on both sides of the case are looking for, the law governing the litigation process, and how to clearly and effectively present your sworn testimony. Testifying Skills For Civil Engineers provides comprehensive training for both the novice and the experienced civil engineering expert witnesses. This practical, hands-on program emphasizes your participation in trial and deposition testimony demonstrations. You will have the opportunity to have your actual CV or forensic report critiqued by the faculty and to be cross-examined on it.

$1,255M/$1,475NM. 1.4 CEUs.

March 15-16, 2012 . . . . . Tampa, FL	*61242012*

*"The **Project Management** seminar was complete, concise, meaningful, practical, and presented professionally. The critical paths and CPM cost estimating techniques are some of the best aspects of this course."*

– HOOSHMAND AFSHAR, BRANCH MANAGER, HOLMBERG & HOWE INC., NORTH CHELMSFORD, MA

Register at:
www.asce.org/seminars

Structural

Aluminum Structural Design with the 2010 Aluminum Design Manual

Randy Kissell, P.E.

The biggest change in aluminum structural design in 43 years has just occurred - the Specification for Aluminum Structures, the bible of aluminum structural design, has undergone its first reorganization since its original edition in 1967. Included in the many changes are major revisions regarding safety and resistance factors, new alloys, and changes to welded member design. This one and a half day seminar is intended to bring you up to speed in the new aluminum specification so you can design with it as confidently as you would in steel or concrete.

$895M/$1,095NM. 1.1 CEUs.

November 3-4, 2011 . . . . .Nashville, TN	*60012012*
March 22-23, 2012. . . . . .Boston, MA	*60022012*

Bridge Condition Assessment and Performance Monitoring

Larry D. Olson, P.E., M.ASCE

Learn about integrating traditional visual assessment and field/laboratory destructive testing programs with state-of-the-art internal condition assessment through nondestructive evaluation of concrete, steel, masonry and wood bridges. Performance monitoring with strain, load, temperature, deformation and environmental measurements can be integrated with structural analysis for load capacity ratings. The course covers bridge substructure and superstructure projects from quality assurance, repair and rehabilitation perspectives and service life estimations.

COMING SPRING/SUMMER 2012

Bridge Rehabilitation

Jim Zhao, P.E., M.ASCE

With rapid aging of the national highway infrastructure, state and local governments are spending more and more money on bridge rehabilitation. Currently, most states spend more money on bridge replacement and rehabilitation than building new bridges. This trend will certainly continue. This two-day seminar covers subjects such as: structure condition evaluation, bridge load rating and rehabilitation analysis, state-of-the-art rehabilitation techniques, alternative analysis models, new material applications, construction methods and constructability analysis, and project lifecycle cost analysis.

$1,255M/$1,475NM. 1.4 CEUs.

September 22-23, 2011 . . .St. Louis, MO	*81392011*
November 17-18, 2011 . . .San Francisco, CA	*60032012*
December 8-9, 2011. . . . . .Houston, TX	*60042012*
February 23-24, 2012. . . . .Atlanta, GA	*60052012*

Cable-Stayed Bridges: Key Design, Construction and Management Issues

Don Bergman, P.ENG., P.E.; Andrew Griezic, Ph.D., P.ENG., P.E. and Peter Taylor, Ph.D., P.ENG., P.E.,

This very timely seminar will deal with both the design and construction aspects of cable-stayed bridges. It will cover aspects relating to planning, design, procurement, construction and maintenance of cable-stayed bridges. It will highlight the key issues of which you need to be aware to achieve success on cable-stayed bridge projects. This seminar will discuss the different stages of a cable-stayed project and will provide strategies for how problems can be avoided, or mitigated once they occur. The interaction of various decisions in the planning and design process will be illustrated by discussing their consequences on the construction and maintenance of the structure. The information provided in this seminar will allow managers of cable-stayed bridge projects to develop a good understanding of the key engineering and management issues that are unique to these structures. The important aspects of planning, designing, tendering, constructing and maintaining cable-stayed bridges will be examined in sufficient detail so that you will be able to ask the right questions during the development of the project and ensure that they are completely answered. This seminar will provide you with a series of tools that will make your next cable-stayed bridge project more successful.

$1,275M/$1,495NM. 1.4 CEUs.

November 17-18, 2011 . . .New York City, NY	*60062012*

Design and Renovation of Wood Structures

Alexander Newman, P.E., F.ASCE

This seminar provides practical answers to a multitude of questions related to design and renovation of wood framing. The discussion is focused on wood-framed buildings, although much of the material applies to other wood structures as well. The first day of the seminar is devoted to design and construction practices of various wood framing components: joists, rafters, columns, studs, connections, trusses, and engineered lumber. Drawing on decades of consulting and forensic experience, the instructor presents many proven design details, including those for difficult roof configurations. The challenging topic of design for lateral loading follows. The discussion addresses the code provisions related to wood design, including those of AF&PA National Design Specification and the International Building Code, with several step-by-step design examples. The second day is devoted to the topics of wood renovation and retrofit for wind and seismic loads. After an overview of wood problems and methods of their detection, the instructor discusses various renovation techniques and illustrates them with design examples and case studies. Particular attention is given to repair and strengthening of wood trusses, a common source of framing problems.

$1,275M/$1,495NM. 1.4 CEUs.

September 15-16, 2011 . . .Baltimore, MD	*81542011*
December 15-16, 2011 . . .San Francisco, CA	*60182012*

Design and Strengthening of Shallow Foundations for Conventional and Pre-Engineered Buildings

Alexander Newman, P.E., F.ASCE

This practical seminar provides a broad overview of the issues encountered by foundation designers. It starts with a brief discussion of soil types and how to determine their bearing capacities. The instructor explains the basics of wall and column footing design using long-hand calculations, reference tables, and software. The participants follow several step-by-step design examples for combined, cantilever, and eccentric column footings. The discussion proceeds to the unique challenges of designing foundations for pre-engineered metal buildings, including estimating column reactions and methods of resisting horizontal forces and uplift on foundations. The nuts-and-bolts of shear and tension transfer from column base to the foundation and the complexities of designing tie rods, hairpins, and moment-resisting foundations are explained and illustrated in several design examples. An overview of various foundation problems is followed by examination of practical methods of repair and strengthening shallow foundations. Proven design details and case studies for foundation upgrade are included.

$1,275M/$1,495NM. 1.4 CEUs.

October 27-28, 2011 . . . . .Philadelphia, PA	*60192012*
February 2-3, 2012. . . . . .Las Vegas, NV	*60202012*

Design, Construction, and Renovation of Masonry Structures

Alexander Newman, P.E., F.ASCE

The first day of the seminar covers the basics of design and construction of various masonry structures. Special emphasis is given to concrete masonry walls, the most common type of structural masonry used today. The selected masonry provisions of 2008 and 2005 editions of TMS 402/ACI 530/ASCE 5 Building Code Requirements for Masonry Structures and those of the International Building Code are examined and augmented with commentary and must-have practical suggestions. With the basics explained, the instructor illustrates and discusses the design details and construction techniques commonly used for load bearing, shear-wall, and curtain-wall applications. Drawing on more than three decades of practical design and forensic experience, he gives many of these details a critical look and suggests the solutions that have worked better than others.

$1,275M/$1,495NM. 1.4 CEUs.

December 1-2, 2011. . . . . .Phoenix, AZ	*60342012*
March 15-16, 2012. . . . . .Charleston, SC	*60352012*

Design of Buildings in Coastal Regions

William Coulbourne, P.E., M.ASCE
Thomas Lee Smith, AIA, RRC, CSI

There has been increased interest in the impact natural disasters have on our built environment with Hurricane Katrina striking the Gulf Coast in 2005, the multiple hurricanes that devastated Florida in 2004 and the predictions of continued strong hurricane activity in the years to come. Engineers and architects located in areas potentially impacted by these devastating storms need to know the latest findings from the past events in order to improve upon future designs. Learn about the latest in coastal best practices from two of the nation's experts in the practice of natural hazard design concepts.

$1,255M/$1,475NM. 1.4 CEUs.

September 29-30, 2011 . . .Austin, TX	*81592011*
November 17-18, 2011 . . .Boston, MA	*60222012*
March 29-30, 2012. . . . . .New Orleans, LA	*60232012*

Design of Cold Formed Steel Structures: The New 2007 Specifications

Roger A. LaBoube, Ph.D., P.E., M.ASCE
Reinhold M. Schuster, Ph.D., P.E.

The concepts of cold-formed steel design are not taught typically in engineering schools; therefore, engineers are required to self-teach these concepts. This seminar will provide an understanding of the behavior and design principles for cold-formed steel members and connections. These principles are applicable to many aspects of cold-formed steel design to include tension member, columns, beams, and bolted, welded and screw connections. The seminar covers the spectrum of cold-formed steel applications to include wall studs, joists, purlins, girts, panels, and deck. Cold-formed systems using wall studs, trusses, and headers will be discussed. The 2007 editions of both the North American Specification for the Design of Cold-Formed Steel Structural Members and the AISI Cold-Formed Steel Framing Standards will be covered. Example problems are presented based on the American Iron and Steel Institute's 2007 edition of the North American Specification for the Design of Cold-Formed Steel Structural Members.

$895M/$1,095NM. 1.1 CEUs.

September 15-16, 2011 . . .San Diego, CA	*81622011*
November 3-4, 2011 . . . . .Kansas City, MO	*60242012*
January 26-27, 2012. . . . . .Portland, OR	*60252012*
March 22-23, 2012. . . . . .Atlanta, GA	*60262012*

Register at:
www.asce.org/seminars

Design of Foundations for Dynamic Loads

M. Hesham El Naggar, Ph.D., P.E., M.ASCE
Ayman Shama, Ph.D., P.E., M.ASCE

This seminar will provide a better understanding to practicing engineers and architects of the design and evaluation of shallow and pile foundations subjected to dynamic loads such as rotating machines and seismic events. Topics to be discussed include: Basic principles of soil dynamics and geotechnical earthquake engineering; response and design of shallow and pile foundations to rotating machine loads; remedial measures for machine foundations; evaluation of soil springs for seismic analysis; and solved seismic design examples for shallow foundations, retaining walls, and caissons.

$1,485M/$1,695NM. 2.4 CEUs.

September 28-30, 2011….Boston, MA	*81652011*
October 19-21, 2011 . . . . .Nashville, TN	*60272012*
December 14-16, 2011 . . .Denver, CO	*60282012*
March 14-16, 2012. . . . . .Philadelphia, PA	*60292012*

Design of Lateral Force Resisting Systems Using the 2009 International Building Code

Dave Adams, S.E.

In your engineering practice, how certain are you that Building Code Requirements are being properly followed? Do you know how to efficiently coordinate multiple code books in order to produce contractor-friendly working drawings? This seminar will provide tools for effectively designing and detailing a Building's Lateral Force Resisting System; which is what defines structural behavior and stability.

$1,255M/$1,475NM. 1.5 CEUs.

September 22-23, 2011. . .Las Vegas, NV	*81672011*
March 15-16, 2012. . . . . .Denver, CO	*60302012*

Earth Retaining Structures: Selection, Design, Construction and Inspection – Now in an LRFD Design Platform

See GEOTECHNICAL section

Earthquake-Induced Ground Motions ***~Newly Updated***

Praveen K. Malhotra, Ph.D., P.E. M.ASCE

This seminar presents a step-by-step evaluation of seismic ground motions for design and assessment of geotechnical and structural systems. The evaluation of site-specific ground motions requires an interaction between geology, seismology, geotechnical engineering and structural engineering. Professionals in any of these fields possess some knowledge of the related fields, but, invariably gaps are left in this knowledge. This seminar is aimed at closing those gaps through an intuitive approach.

$1,255M/$1,475NM. 1.6 CEUs.

September 29-30, 2011. . .San Francisco, CA	*81762011*
October 20-21, 2011 . . . . .NYC Metro Area	*60392012*
January 19-20, 2012. . . . . .Chicago, IL	*60402012*
March 15-16, 2012. . . . . .Portland, OR	*60412012*

Instrumentation and Monitoring Bootcamp: Planning, Execution and Measurement Uncertainty for Structural and Geotechnical Construction Projects

See GEOTECHNICAL Section

Load Rating of Highway Bridges

Bala Sivakumar, P.E.

The purpose of this course is to concentrate on the fundamentals of load rating highway bridges using the latest AASHTO Manual for Bridge Evaluation (2008). The LRFR and LFR approaches are broken down into their basic components and detailed explanations are provided on procedures specific to each methodology. Examples will be used to illustrate the LRFR and LFR rating procedures.

$1,265M/$1,485NM. 1.4 CEUs.

September 8-9, 2011 . . . . .Houston, TX	*82062011*
November 3-4, 2011 . . . . .Pittsburgh, PA	*60712012*
February 9-10, 2012. . . . . .Phoenix, AZ	*60722012*

Progressive Collapse Mitigation: Practical Analysis Methods and Proven Solutions

Jesse E. Karns, P.E., S.E., M.ASCE

The threat of terrorism now affects how we design structures in the United States. Attacks on strategically sensitive buildings over the past decade have resulted in the development of national antiterrorism building design guidelines and standards. Until now, there were no practical up-to-date courses to assist in the understanding and implementation of these new and evolving design requirements, nor to understand their development and design implications. Using actual design projects as teaching models, this seminar puts an end to this shortage of timely information by providing a down-to-earth two-day feast of practical "how to" knowledge in progressive collapse mitigation design of structures and connections, including a toolkit of proven cost-effective solutions.

$1,275M/$1,495NM. 1.4 CEUs.

September 8-9, 2011. . . . . .St. Louis, MO	*82152011*
September 15-16, 2011….Philadelphia, PA	*82162011*
November 17-18, 2011 . . .Dallas, TX	*60802012*
January 26-27, 2012. . . . . .Baltimore, MD	*60812012*
February 23-24, 2012. . . . . .Minneapolis, MN	*60822012*

Risk-Based Seismic Evaluation and Design

Praveen K. Malhotra, Ph.D., P.E.

The purpose of seismic design is to reduce the risk to life and property to a tolerable level. The tolerable risk is implied in the building code procedures, but it is not explicitly stated. It is also not the same everywhere. Therefore, it cannot be said with any certainty that the risk from a code-designed structure is tolerable to the stakeholders (owner, occupant, investor, insurer, etc.). This seminar presents the various steps needed to achieve a risk-based seismic design. All material is presented in an intuitive manner with illustrations. Sources of information needed to perform a risk-based seismic design/evaluation are presented.

$1,255M/$1,475NM. 1.6 CEUs.

February 16-17, 2012. . . . .Boston, MA	*60892012*

Seismic Design and Performance of Building Structures

Howard Hill, P.E., S.E
Conrad Paulson, P.E., S.E, M.ASCE

Day one covers seismic design approaches, current building code theory, and design principles for providing seismic resistance in structures. Day two concentrates on performance of actual structures subjected to earthquakes and methods for evaluating performance.

$1,255M/$1,475NM. 1.6 CEUs.

March 29-30, 2012. . . . . .Chicago, IL	*60902012*

Seismic Design of Highway Bridges

Fadel Alameddine, Ph.D., P.E.
Roy A. Imbsen, Ph.D., P.E., D.Eng., Aff.M.ASCE

Learn more about the newly developed LFRD Seismic Design Criteria for Highway Bridges and its application to typical bridges. The displacement based approach, replacing the previously force based approach, is used to take advantage of the latest technology and research findings.

$1,255M/$1,475NM. 1.4 CEUs.

September 29-30, 2011. . . .Denver, CO	*82272011*
November 3-4, 2011 . . . . .Chicago, IL	*60912012*
January 19-20, 2012. . . . . .San Francisco, CA	*60922012*

Seismic Design of Liquid Storage Tanks

Praveen K. Malhotra, Ph.D., P.E., M.ASCE

In recent years, significant advances have occurred in linear and nonlinear dynamic analyses of tank-liquid-foundation systems. Advances have also occurred in site-specific estimates of ground motion parameters. Modern seismic analyses are based on probabilistic response spectrum rather than deterministic peak ground acceleration. This seminar will present a step-by-step discussion of advances in ground motion estimates and dynamic response analyses.

$735M/$845NM. 0.8 CEUs.

September 9, 2011. . . . . .San Diego, CA	*82282011*
November 18, 2011. . . . . .Las Vegas, NV	*60932012*

Seismic Loads for Buildings and Other Structures

Finley Charney, Ph.D., P.E., F.ASCE and Sanj Malushte Ph.D, SE, P.E. (Civil), P.E. (Mechanical), CEng, F.ASCE

With the introduction of ASCE 7-05 Minimum Loads Standards and the 2006 International Building Code (IBC), some consideration of seismic resistant design is required for most building structures in the United States. The use of these documents can be daunting, particularly for those engineers that have little formal training in seismology, seismic hazard analysis, structural dynamics, and inelastic behavior. Given this perspective, this seminar has been designed to provide guidance on how to use the code based procedures, while at the same time, providing sufficient technical background to explain why the provisions are written the way they are. Where possible, the technical background is presented simultaneously with the explanation of the building code provisions. In many cases, such explanations are presented as part of a series of detailed numerical examples that are presented throughout the seminar. Some information is provided on the seismic detailing requirements of structural steel and reinforced concrete structures, but this is presented in the context of building system selection and behavior, and not as separate topics.

$1,275M/$1,495NM. 1.4 CEUs.

October 27-28, 2011 . . . . .Denver, CO	*60942012*
January 26-27, 2012. . . . . .Austin, TX	*60952012*
March 8-9, 2012. . . . . .Baltimore, MD	*60962012*

Steel-Framed Buildings: Practical Issues in Design and Renovation

Alexander Newman, P.E., F.ASCE

This seminar provides answers to a multitude of practical questions related to design and renovation of steel-framed buildings. The main emphasis is on low and mid-rise buildings framed with structural steel; discussion includes related materials, such as open-web joists and lintels. Day one is devoted to new construction, including design for lateral loads, changes in the 2005 AISC Specification for Structural Steel Buildings, and other publications, which are explained and illustrated with design examples. Drawing on decades of consulting and forensic experience, the instructor goes beyond the basics, offering proven design details and exploring some controversial issues not well covered elsewhere. Day two is devoted to the topics of building renovation and retrofit for wind and seismic loads. Because existing iron and steel framing can present many challenges, from identification to establishing its design capacity, the discussion covers the problems, evaluation methods, and various renovation techniques for beams, girders, columns, and connections, illustrated with design examples and case studies.

$1,175M/$1,395NM. 1.4 CEUs.

November 3-4, 2011 . . . . .Boston, MA	*60992012*

Register at:
www.asce.org/seminars

Structural Condition Assessment of Existing Structures

Brian K. Brashaw; Zhiyong Cai, Ph.D., P.E.; Gregory Fehr, P.E.; Larry D. Olson, P.E., M.ASCE; Robert J. Ross, Ph.D., Dennis Sack, P.E. and Xiping Wang, Ph.D.

Learn the latest techniques and procedures for assessing the physical condition of buildings, bridges, and other structures including assessment approach, structural material and system assessment, non-destructive examination, report writing and case studies. Day one covers concrete and masonry. Day two covers wood and steel.

$1,275M/$1,495NM. 1.4 CEUs.

September 29-30, 2011....Minneapolis, MN	*82422011*
October 13-14, 2011 .....Las Vegas, NV	*61062012*
January 19-20, 2012.....St. Louis, MO	*61072012*
February 16-17, 2012.....Houston, TX	*61082012*
March 29-30, 2012.....San Francisco, CA	*61092012*

Structural Design of Buildings and Industrial Facilities for Blast Loads and Accidental Chemical Explosions

C. Raj Sundarajan, Ph.D., M.ASCE

This course discusses load computation, structural material behavior under intense short-duration, dynamic loads, structural response analysis, progressive collapse analysis and design of steel and concrete structures. A number of fully worked out examples are presented. The detailed step-by-step analysis/design procedures illustrated in these examples will serve as useful guides for your projects. Participants will have ample opportunity to interact with the instructor and discuss their problems. No prior knowledge of structural dynamic analysis is necessary.

$1,435M/$1,645NM. 2.1 CEUs.

September 14-16, 2011...Atlanta, GA	*82452011*
November 16-18, 2011 ...Chicago, IL	*61102012*
January 18-20, 2012.....Phoenix, AZ	*61112012*
March 14-16, 2012.....Tampa, FL	*61122012*

Structural Design of Industrial Facilities

Kasi V. Bendapudi, P.E., S.E., B.S., M.S., M.ASCE

Efficient structural design of industrial facilities requires engineers to have the integrated knowledge of theories and practices and all aspects that have impact on their stability, safety, and serviceability. This course presents structural design of industrial facilities in a systematic manner including loads and the load combinations, different types of structural systems and framing concepts including crane runways and elevated floors. It discusses the essential concepts of strength and stability, serviceability and safe structural design. The intricacies of various structural elements associated with industrial plants are reviewed. Connections and anchorage required for assembling a safe and serviceable structure are enumerated. Deep and shallow foundation designs required for industrial facilities including the equipment foundations are investigated. The course covers the analysis of industrial floor slabs subjected to moving loads (traffic) and establishes structural design procedures by illustrating them with numerical examples similar to those usually encountered in design offices. Most commonly used materials and the selection of appropriate materials are discussed. To ensure a complete understanding, the course concludes with a design workshop that integrates the concepts and procedures learned.

COMING SPRING/SUMMER 2012

Structural Design of Residential Buildings Using the 2009 International Residential Code

Dave Adams, S.E.

Do you know what it takes to efficiently engineer a wood-frame residence? Are you able to coordinate economical conventional construction provisions with requirements for engineering, using the International Residential and Building Codes? This seminar will provide tools for completing an efficient structural design for even the most complicated wood-frame residence.

$1,255M/$1,475NM. 1.4 CEUs.

December 8-9, 2011.....Baltimore, MD	*61132012*
January 19-20, 2012.....Atlanta, GA	*61142012*

Structural Renovation of Buildings

Alexander Newman, P.E., F.ASCE

Learn renovation techniques for major types of building structures – steel, concrete, masonry, and wood. Study practical solutions for strengthening and repair of structures with proven design details. Discuss the challenges and practical solutions for building upgrade for wind and seismic loads. Discover which widely touted renovation methods should be approached with caution. Examine renovation provisions of building codes and the issues of renovation vs. rebuilding. This easy-to-follow seminar will benefit not only structural engineers, but also civil engineers, facility managers, building officials, and technically competent contractors seeking to broaden their knowledge of building renovation methods.

$1,275M/$1,495NM. 1.4 CEUs.

November 17-18, 2011 ...Nashville, TN	*61152012*
February 16-17, 2012.....Baltimore, MD	*61162012*

Structural Vibration Analysis, Design and Troubleshooting

C. Raj Sundarajan, Ph.D., M.ASCE

Learn how to analyze and design structures for dynamic forces due to wind, earthquakes, waves, machinery operations, traffic, human activities and explosions. A variety of methods for reducing excessive vibrations are discussed. On completion of the course, participants will know how to identify potential vibration problems during the design stage and design against them economically. They will also learn how to fix excessive vibrations in existing structures. A number of fully worked out examples are presented. Engineers, engineering supervisors and those responsible for auditing, reviewing, or approving vibration analysis tasks will benefit from the course. Participants will have ample opportunity to interact with the instructor and discuss their problems. No prior knowledge of structural vibrations is necessary.

$1,435M/$1,645NM. 2.1 CEUs.

September 21-23, 2011....Atlanta, GA	*82492011*
December 14-16, 2011 . . .Scottsdale, AZ	*61172012*
March 7-9, 2012.....Tampa, FL	*61182012*

Wind and Seismic Retrofit of Buildings

Alexander Newman, P.E., F.ASCE

Lateral-load resisting capacity of existing buildings slated for renovation is often insufficient, and many buildings need strengthening to enable them to resist hurricanes and earthquakes. The building-code provisions for lateral-load retrofit are often unclear and contradictory, particularly in the degree of compliance with the code for new construction. A topic of code analysis is among the first discussed in the seminar. The participants review typical code provisions for lateral-load retrofit and the instructor's opinions on their interpretation. The process of evaluating existing lateral-load resisting systems, and investigating field conditions. The largest part of the seminar is devoted to specific methods of building upgrade for wind and seismic loads. Each major framing system – steel, wood, concrete, and masonry – is addressed. You will learn how to reinforce building diaphragms of various types, how to incorporate new shear walls and braced frames into existing buildings, and how to strengthen walls, frames, and vertical bracing when needed. The proposed solutions include the traditional and proven approaches, as well as new and emerging technologies. Several case studies illustrate the process of designing a program for lateral-load strengthening.

COMING SPRING/SUMMER 2012

Wind Loads for Buildings and Other Structures

Jon Raggett, Ph.D., P.E., S.E., M.ASCE

This seminar covers wind effects and damages and the wind load provisions of ASCE 7-10. Learn current approaches for assessing wind loads and for examining building performance in severe storms including fundamentals of aerodynamics and structural dynamics. Although ASCE 7-05 is the standard that is currently incorporated in IBC, the focus in the seminar will be on ASCE 7-10.

$1,255M/$1,475NM. 1.4 CEUs.

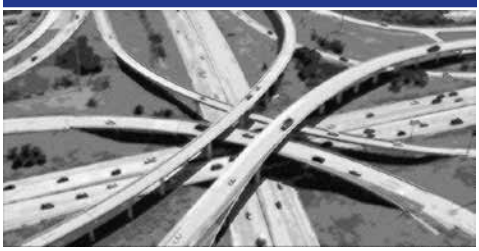
September 29-30, 2011 . . .NYC Metro Area	*82582011*
November 3-4, 2011 . . . . .St. Louis, MO	*61282012*
December 8-9, 2011. . . . . Charlotte, NC	*61292012*
February 9-10, 2012. . . . . Austin, TX	*61302012*
March 8-9, 2012. . . . . Portland, ME	*61312012*

*"**Structural Design of Buildings and Industrial Facilities for Bomb Blasts and Accidental Chemical Explosions** was a great seminar by an experienced and knowledgeable instructor. If you need to learn about blast loads, you should take this course."*

– GORDAN GJERAPIC, GEOTECHNICAL ENGINEER, GOLDER ASSOCIATES, LAKEWOOD, CO

Register at:
www.asce.org/seminars

Transportation/ Highways



Load Rating of Highway Bridges

See STRUCTURAL section.

Modern Detectors for Traffic Surveillance Management and Traveler Information

Lawrence A. Klein, Ph.D., P.E.

This course is designed to assist novice and more experienced practitioners from transportation agencies and contractors who install detectors (sensors) to obtain the knowledge required to operate and set up detectors for effective gathering of city street and freeway traffic flow information. As a training tool, the course is responsive to the needs of personnel in agencies, jurisdictions, and regions desiring current knowledge of modern traffic detectors.

$1,225M/$1,445NM. 1.4 CEUs.

September 15-16, 2011	*NYC Metro Area*	*82102011*

Planning and Design of Service and Systems Interchanges in Urban and Suburban Areas

Timothy A. Neuman, P.E.

Learn the latest tools and techniques for the planning and design of service interchanges. This seminar will examine: typical service interchange forms, including special forms for constrained locations; how to identify and evaluate a range of alternatives for solving interchange problems; types of diamond interchanges, including traffic operational and safety characteristics and design guidelines for each type; the latest computer-aided tools and techniques for performing interchange design studies; advanced tools for effective communication of design impacts to the public and affected agencies; and lessons learned in the planning and design process. Attendees will be given an opportunity to work an interchange reconstruction problem in groups.

$1,195M/$1,415NM. 1.4 CEUs.

October 20-21, 2011	*Las Vegas, NV*	*60782012*

Techniques for Pavement Rehabilitation

Newton C. Jackson, P.E.

James M. Signore, Ph.D., P.E.

Learn reliable and cost-effective rehabilitation alternatives for existing flexible and rigid pavements. This three-day seminar examines rehabilitation for both pavement types in a logical sequence: existing pavement structural evaluation and condition assessment; distress mechanisms; needs assessment; assignment of feasible alternatives from four categories of reconstruction, restoration, recycling, and resurfacing (4R); selection of preferred alternatives; overall design and construction. The seminar combines lectures and workshop sessions to provide participants with hands-on experience with the techniques for pavement rehabilitation.

$1,375M/$1,595NM. 2.1 CEUs.

September 14-16, 2011	*NYC Metro Area*	*82542011*
November 16-18, 2011	*New Orleans, LA*	*61212012*
February 8-10, 2012	*Las Vegas, NV*	*61222012*
March 21-23, 2012	*St. Louis, MO*	*61232012*

*"**Techniques for Pavement Rehabilitation** was very informative, very useful for engineers of all levels of experience. The instructors were experts in the field."*

– REED THURSBY, KISINGER CAMPO & ASSOCIATES, TAMPA, FL

Seminar Listing by Geographic Region

NORTHEAST

MAINE

Portland

Low Impact Development Applications for Water Resource Management
» **December 8-9, 2011**

Wind Loads for Buildings and Other Structures
» **March 8-9, 2012**

MARYLAND

Baltimore

Design and Renovation of Wood Structures
» **September 15-16, 2011**

Liability of Engineers: How to Stay Out of Trouble
» **September 15-16, 2011**

Structural Design of Residential Buildings Using the 2009 International Residential Code
» **December 8-9, 2011**

Progressive Collapse Mitigation: Practical Analysis Methods & Proven Solutions
» **January 26-27, 2012**

Structural Renovation of Buildings
» **February 16-17, 2012**

Seismic Loads for Buildings and Other Structures
» **March 8-9, 2012**

MASSACHUSSETTS

Boston

Instrumentation and Monitoring Bootcamp: Planning, Execution and Measurement Uncertainty for Structural and Geotechnical Construction Projects
» **September 22-23, 2011**

Design of Foundations for Dynamic Loads
» **September 28-30, 2011**

Law School for Engineers
» **October 13-14, 2011**

Steel-Framed Buildings: Practical Issues in Design and Renovation
» **November 3-4, 2011**

Design of Buildings in Coastal Regions
» **November 17-18, 2011**

Financial Management for the Professional Engineer
» **December 8-9, 2011**

Risk- Based Seismic Design and Evaluation
» **February 16-17, 2012**

Aluminum Structural Design with the 2010 Aluminum Design Manual
» **March 22-23, 2012**

NEW HAMPSHIRE

Manchester

HEC-RAS Computer Workshop
» **February 15-17, 2012**

Leadership Development for the Engineer
» **March 29-30, 2012**

NEW YORK

New York City

Earth Retaining Structures Selection, Design, Construction and Inspection: Now in an LRFD Design Platform
» **November 3-4, 2011**

Cable-Stayed Bridges: Key Design, Construction and Management Issues
» **November 17-18, 2011**

Design and Installation of Buried Pipes
» **February 16-17, 2012**

New York City Metro Area

Introduction to Tunnel Design and Construction
» **September 14-16, 2011**

Techniques for Pavement Rehabilitation
» **September 14-16, 2011**

Modern Detectors for Traffic Surveillance Management, and Traveler Information
» **September 15-16, 2011**

Wind Loads for Buildings and Other Structures
» **September 29-30, 2011**

Earthquake Induced Ground Motions
» **October 20-21, 2011**

Managing the Design Process- Keeping on Schedule, Within Budget, and Selecting The Right Resources –***New!***
» **January 26-27, 2012**

Liability of Engineers: How to Stay out of Trouble
» **March 1-2, 2012**

Syracuse

Pumping Systems Design for Civil Engineers
» **November 17-18, 2011**

HEC-RAS Computer Workshop
» **September 21-23, 2011**

PENNSYLVANIA

Philadelphia

Progressive Collapse Mitigation: Practical Analysis Methods & Proven Solutions
» **September 15-16, 2011**

Stormwater BMPs That Work: Effective Analysis, Design and Maintenance
» **September 29-30, 2011**

Design and Strengthening of Shallow Foundations for Conventional and Pre-Engineered Buildings
» **October 27-28, 2011**

Design of Foundations for Dynamic Loads
» **March 14-16, 2012**

Pittsburgh

Load Rating of Highway Bridges
» **November 3-4, 2011**

Upgrading Treatment Plants and Pumping Stations
» **January 26-27, 2012**

Dam Breach Analysis using the HEC-RAS
» **March 28-30, 2012**

WASHINGTON, DC

Washington, DC Metro Area

Deep Foundations: Design, Construction and Quality Control
» **September 29-30, 2011**

Sustainable Land Development- Ensuring Growth in a Green Economy
» **November 3-4, 2011**

Construction Dewatering and Groundwater Control - Design and Application
» **November 17-18, 2011**

Introduction to Tunnel Design and Construction
» **March 21-23, 2012**

SOUTHEAST

FLORIDA

Orlando

Project Management
» **September 22-23, 2011**

Deep Foundations: Design, Construction and Quality Control
» **October 27-28, 2011**

Laws and Rules for Florida Engineers – Plus, Practical Tools for Avoiding Trouble –***New!***
» **November 4, 2011**

Ownership Transition Planning, Company Valuations and Strategic Planning
» **January 26-27, 2012**

HEC-HMS Computer Workshop
» **February 9-10, 2012**

Tampa

Structural Vibration Analysis, Design and Troubleshooting
» **March 7-9, 2012**

Structural Design of Buildings and Industrial Facilities for Blast Loads and Accidental Chemical Explosions
» **March 14-16, 2012**

Testifying and Forensic Report Writing Skills for Civil Engineers
» March 15-16, 2012

GEORGIA

Atlanta

Structural Design of Buildings and Industrial Facilities for Blast Loads and Accidental Chemical Explosions
» September 14-16, 2011

Structural Vibration Analysis, Design and Troubleshooting
» September 21-23, 2011

Stormwater BMPs That Work: Effective Analysis, Design and Maintenance
» November 3-4, 2011

Practical Hydrology of Rural and Urban Watersheds
» November 17-18, 2011

Soil and Rock Slope Stability
» November 17-18, 2011

Introduction to Dam and Levee Safety, Evaluation and Rehabilitation
» January 19-20, 2012

Structural Design of Residential Buildings Using the 2009 International Residential Code
» January 19-20, 2012

Streambank Stabilization for Restoration and Flood Control
» February 22-24, 2012

Bridge Rehabilitation
» February 23-24, 2012

NPDES Strom Water Permit Compliance
» March 8-9, 2012

Design of Cold Formed Steel Structures - The New 2007 Specification
March 22-23, 2012

Instrumentation and Monitoring Bootcamp: Planning, Execution and Measurement Uncertainty for Structural and Geotechnical Construction Projects
» March 29-30, 2012

LOUISIANA

New Orleans

Techniques for Pavement Rehabilitation
» November 16-18, 2011

Pipe Selection for Municipal Facilities
» February 9-10, 2012

Construction Administration for Engineers
» March 8-9, 2012

Design of Buildings in Coastal Regions
» March 29-30, 2012

NORTH CAROLINA

Charlotte

Wind Loads for Buildings and Other Structures
» December 8-9, 2011

Introduction to Tunnel Design and Construction
» January 18-20, 2012

Financial Management for the Professional Engineer
» January 26-27, 2012

HEC-RAS Computer Workshop
» March 21-23, 2012

SOUTH CAROLINA

Charleston

Sustainable Land Development-Ensuring Growth in a Green Economy
» September 15-16, 2011

Low Impact Development Applications for Water Resource Management
» September 29-30, 2011

Pumping Systems Design for Civil Engineers
» October 13-14, 2011

Earth Retaining Structures Selection, Design, Construction and Inspection: Now in an LRFD Design Platform
» February 9-10, 2012

Design, Construction, and Renovation of Masonry Structures
» March 15-16, 2012

TENNESSEE

Nashville

Design of Foundations for Dynamic Loads
» October 19-21, 2011

Aluminum Structural Design with the 2010 Aluminum Design Manual
» November 3-4, 2011

Structural Renovation of Buildings
» November 17-18, 2011

Storm Sewer System Design using SWMM
» December 8-9, 2011

MIDWEST

ILLINOIS

Chicago

Construction Contract Management
» September 8-9, 2011

GIS for Hydraulic and Hydrologic Modeling Using ArcGIS Desktop *–New!*
» September 28-30, 2011

Instrumentation and Monitoring Bootcamp: Planning, Execution and Measurement Uncertainty for Structural and Geotechnical Construction Projects
» November 3-4, 2011

Seismic Design of Highway Bridges
» November 3-4, 2011

Structural Design of Buildings and Industrial Facilities for Blast Loads and Accidental Chemical Explosions
» November 16-18, 2011

Earthquake Induced Ground Motions
» January 19-20, 2012

Pumping Systems Design for Civil Engineers
» February 9-10, 2012

HEC-RAS Computer Workshop for Unsteady Flow Applications
» March 7-9, 2012

Seismic Design and Performance of Building Structures
» March 29-30, 2012

MINNESOTA

Minneapolis

Structural Condition Assessment of Existing Structures
» September 29-30, 2011

Progressive Collapse Mitigation: Practical Analysis Methods & Proven Solutions
» February 23-24, 2012

Introduction to Dam and Levee Safety, Evaluation and Rehabilitation
» March 29-30, 2012

MISSOURI

Kansas City

Design of Cold Formed Steel Structures - The New 2007 Specification
» November 3-4, 2011

St. Louis

Progressive Collapse Mitigation: Practical Analysis Methods & Proven Solutions
» September 8-9, 2011

Bridge Rehabilitation
» September 22-23, 2011

Financial Management for the Professional Engineer
» September 29-30, 2011

Introduction to Detention Pond Design – Parking Lots and Urban Drainage
» October 27-28, 2011

Wind Loads for Buildings and Other Structures
» November 3-4, 2011

HEC-RAS Computer Workshop
» November 16-18, 2011

Structural Condition Assessment of Existing Structures
» January 19-20, 2012

Techniques for Pavement Rehabilitation
» March 21-23, 2012

OHIO

Cincinnati

Leadership Development for the Engineer
» **November 17-18, 2011**

SOUTHWEST

COLORADO

Denver

Seismic Design of Highway Bridges
» **September 29-30, 2011**

GIS for Hydraulic and Hydrologic Modeling Using ArcGIS Desktop
» **October 12-14, 2011**

Seismic Loads for Buildings and Other Structures
» **October 27-28, 2011**

Design of Foundations for Dynamic Loads
» **December 14-16, 2011**

Design of Lateral Force Resisting Systems Using the 2009 International Building Code
» **March 15-16, 2012**

Design and Installation of Buried Pipes
» **March 29-30, 2012**

TEXAS

Austin

Design of Buildings in Coastal Regions
» **September 29-30, 2011**

Financial Management for the Professional Engineer
» **November 3-4, 2011**

Storm Water Treatment using Detention Ponds and Commercial Devices ***–New!***
» **January 19-20, 2012**

Seismic Loads for Buildings and Other Structures
» **January 26-27, 2012**

Wind Loads for Buildings and Other Structures
» **February 9-10, 2012**

Dallas

Progressive Collapse Mitigation: Practical Analysis Methods and Proven Solutions
» **November 17-18, 2011**

HEC-HMS Computer Workshop
» **March 8-9, 2012**

Houston

Load Rating of Highway Bridges
» **September 8-9, 2011**

Sustainable Land Development-Ensuring Growth in a Green Economy
» **December 1-2, 2011**

Bridge Rehabilitation
» **December 8-9, 2011**

Structural Condition Assessment of Existing Structures
» **February 16-17, 2012**

Earth Retaining Structures Selection, Design, Construction and Inspection: Now in an LRFD Design Platform
» **March 8-9, 2012**

San Antonio

Water Hammer in Transmission and Distribution Systems
» **September 15-16, 2011**

Design Build Contracting
» **September 22-23, 2011**

Design and Construction of Microtunneling Projects
» **November 16-18, 2011**

Construction, Plans, Specifications and Ethics for Civil Engineers
» **March 6-7, 2012**

Pumping Systems Design for Civil Engineers
» **March 8-9, 2012**

Managing the Design Practice – Keeping on Schedule, Within Budget, and Selecting The Right Resources ***–New!***
» **March 29-30, 2012**

Wetlands and 404 Permitting
» **March 29-30, 2012**

WEST

ARIZONA

Phoenix

Earth Retaining Structures Selection, Design, Construction and Inspection: Now in an LRFD Design Platform
» **September 22-23, 2011**

Design, Construction, and Renovation of Masonry Structures
» **December 1-2, 2011**

Structural Design of Buildings and Industrial Facilities for Blast Loads and Accidental Chemical Explosions
» **January 18-20, 2012**

Load Rating of Highway Bridges
» **February 9-10, 2012**

Soil and Rock Slope Stability
» **February 16-17, 2012**

Scottsdale

Structural Vibration Analysis, Design and Troubleshooting
» **December 14-16, 2011**

Water Hammer in Transmission and Distribution Systems
» **February 23-24, 2012**

Design Build Contracting
» **March 22-23, 2012**

Project Management
» **March 29-30, 2012**

CALIFORNIA

Los Angeles

Soil and Rock Slope Stability
» **September 29-30, 2011**

Liability of Engineers: How to Stay out of Trouble
» **December 1-2, 2011**

San Diego

Seismic Design of Liquid Storage Tank
» **September 9, 2011**

Design of Cold Formed Steel Structures The New 2007 Specification
» **September 15-16, 2011**

HEC-HMS Computer Workshop
» **September 15-16, 2011**

Introduction to Dam and Levee Safety, Evaluation and Rehabilitation
» **September 15-16, 2011**

HEC-RAS Computer Workshop
» **October 26-28, 2011**

Design of Waste Containment Liner and Final Closure Systems
» **January 26-27, 2012**

San Francisco

Earthquake Induced Ground Motions
» **September 29-30, 2011**

Bridge Rehabilitation
» **November 17-18, 2011**

Design and Renovation of Wood Structures
» **December 15-16, 2011**

Seismic Design of Highway Bridges
» **January 19-20, 2012**

Deep Foundations: Design, Construction and Quality Control
» **March 1-2, 2012**

Structural Condition Assessment of Existing Structures
» **March 29-30, 2012**

San Jose

Streambank Stabilization for Restoration and Flood Control
» **November 2-4, 2011**

NEVADA

Lake Tahoe

Wetlands and 404 Permitting
» **September 29-30, 2011**

Las Vegas

Design of Lateral Force Resisting Systems Using the 2009 International Building Code
» **September 22-23, 2011**

Structural Condition Assessment of Existing Structures
» **October 13-14, 2011**

Planning and Design of Service and Systems Interchanges in Urban and Suburban Areas
» **October 20-21, 2011**

Construction Administration for Engineers
» **November 3-4, 2011**

Seismic Design of Liquid Storage Tanks
» **November 18, 2011**

Dam Breach Analysis using the HEC-RAS
» **December 7-9, 2011**

Pumping Systems Design for Civil Engineers
» **January 4-6, 2012**

Leadership Development for the Engineer
» **January 19-20, 2012**

Design and Strengthening of Shallow Foundations for Conventional and Pre-Engineered Buildings
» **February 2-3, 2012**

Techniques for Pavement Rehabilitation
» **February 8-10, 2012**

Introduction to Tunnel Design and Construction
» **February 22-24, 2012**

Storm Water Treatment using Detention Ponds and Commercial Devices –***New!***
» **March 15-16, 2012**

OREGON

Portland

Leadership Development for the Engineer
» **September 22-23, 2011**

HEC-HMS Computer Workshop
» **November 17-18, 2011**

Design of Cold Formed Steel Structures The New 2007 Specification
» **January 26-27, 2012**

Earthquake Induced Ground Motions
» **March 15-16, 2012**

WASHINGTON

Seattle

GIS for Hydraulic and Hydrologic Modeling Using ArcGIS Desktop
» **January 25-27, 2012**

Low Impact Development Applications for Water Resource Management
» **February 16-17, 2012**

Financial Management for the Professional Engineer
» **March 8-9, 2012**

For general information on ASCE Continuing Education, call 1-800-548-2723

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3	Purchase 16 to 25 Courses	**30**%
4	Purchase 26 Courses or more	**35**%

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CONSTRUCTION
- Construction Administration for Engineers
- Construction Contract Management
- Design-Build Contracting - ***New***

ENVIRONMENTAL AND WATER RESOURCES
- GIS Applications in Water, Wastewater, and Stormwater Systems
- Introduction to Detention Pond Design
- Treatment Plant Hydraulics for Civil Engineers

GEOTECHNICAL/PIPELINES
- Pipe and Pipeline Renewal
- Risk Assessment in Geotechnical Engineering - ***New***

MANAGEMENT AND LEADERSHIP
- Financial Management for the Professional Engineer
- Leadership Development
- Perfect Your Negotiating Skills: Increase Your Profitability

STRUCTURAL
- Aluminum Structural Design with the 2010 Aluminum Design Manual - ***New***
- Design, Construction, and Renovation of Masonry Structures
- Fundamentals of Earthquake Engineering
- Steel Framed Buildings: Practical Issues in Design and Renovation

SUSTAINABILITY
- Fundamentals of Sustainability Engineering - ***New***

For additional information, go to **www.asce.org/onlinecourses**

Seminar Listing by Calendar

SEPTEMBER 2011

September 8-9, 2011	Construction Contract Management	Chicago, IL
September 8-9, 2011	Load Rating of Highway Bridges	Houston, TX
September 8-9, 2011	Progressive Collapse Mitigation: Practical Analysis Methods and Proven Solutions	St. Louis, MO
September 9, 2011	Seismic Design of Liquid Storage Tanks	San Diego, CA
September 14-16, 2011	Introduction to Tunnel Design and Construction	NYC Metro Area
September 14-16, 2011	Structural Design of Buildings and Industrial Facilities for Blast Loads and Accidental Chemical Explosions	Atlanta, GA
September 14-16, 2011	Techniques for Pavement Rehabilitation	NYC Metro Area
September 15-16, 2011	Design and Renovation of Wood Structures	Baltimore, MD
September 15-16, 2011	Design of Cold Formed Steel Structures - The New 2007 Specification	San Diego, CA
September 15-16, 2011	HEC-HMS Computer Workshop	San Diego, CA
September 15-16, 2011	Introduction to Dam and Levee Safety, Evaluation and Rehabilitation	San Diego, CA
September 15-16, 2011	Liability of Engineers: How to Stay out of Trouble	Baltimore, MD
September 15-16, 2011	Modern Detectors for Traffic Surveillance Management, and Traveler Information	NYC Metro Area
September 15-16, 2011	Progressive Collapse Mitigation: Practical Analysis Methods and Proven Solutions	Philadelphia, PA
September 15-16, 2011	Sustainable Land Development- Ensuring Growth in a Green Economy	Charleston, SC
September 15-16, 2011	Water Hammer in Transmission and Distribution Systems	San Antonio, TX
September 21-23, 2011	HEC-RAS Computer Workshop	NYC Metro Area
September 21-23, 2011	Structural Vibration Analysis, Design and Troubleshooting	Atlanta, GA
September 22-23, 2011	Bridge Rehabilitation	St. Louis, MO
September 22-23, 2011	Design Build Contracting	San Antonio, TX
September 22-23, 2011	Design of Lateral Force Resisting Systems Using the 2009 International Building Code	Las Vegas, NV
September 22-23, 2011	Instrumentation and Monitoring Bootcamp: Planning, Execution and Measurement Uncertainty for Structural and Geotechnical Construction Projects	Boston, MA
September 22-23, 2011	Leadership Development for the Engineer	Portland, OR
September 22-23, 2011	Project Management	Orlando, FL
September 22-23, 2011	Earth Retaining Structures Selection, Design, Construction and Inspection: Now in an LRFD Design Platform	Phoenix, AZ
September 28-30, 2011	Design of Foundations for Dynamic Loads	Boston, MA
September 28-30, 2011	GIS for Hydraulic and Hydrologic Modeling Using ArcGIS Desktop *–NEW!*	Chicago, IL
September 29-30, 2011	Deep Foundations: Design, Construction and Quality Control	DC Metro Area
September 29-30, 2011	Design of Buildings in Coastal Regions	Austin, TX
September 29-30, 2011	Earthquake Induced Ground Motions	San Francisco, CA
September 29-30, 2011	Financial Management for the Professional Engineer	St. Louis, MO
September 29-30, 2011	Low Impact Development Applications for Water Resource Management	Charleston, SC
September 29-30, 2011	Seismic Design of Highway Bridges	Denver, CO
September 29-30, 2011	Soil and Rock Slope Stability	Los Angeles, CA
September 29-30, 2011	Stormwater BMPs That Work: Effective Analysis, Design and Maintenance	Philadelphia, PA
September 29-30, 2011	Structural Condition Assessment of Existing Structures	Minneapolis, MN
September 29-30, 2011	Wetlands and 404 Permitting	Lake Tahoe, NV
September 29-30, 2011	Wind Loads for Buildings and Other Structures	NYC Metro Area

OCTOBER 2011

October 12-14, 2011	GIS for Hydraulic and Hydrologic Modeling Using ArcGIS Desktop	Denver, CO
October 13-14, 2011	Law School for Engineers	Boston, MA
October 13-14, 2011	Pumping Systems Design for Civil Engineers	Charleston, SC
October 13-14, 2011	Structural Condition Assessment of Existing Structures	Las Vegas, NV
October 19-21, 2011	Design of Foundations for Dynamic Loads	Nashville, TN
October 20-21, 2011	Earthquake Induced Ground Motions	NYC Metro Area
October 20-21, 2011	Planning and Design of Service and Systems Interchanges in Urban and Suburban Areas	Las Vegas, NV
October 26-28, 2011	HEC-RAS Computer Workshop	San Diego, CA
October 27-28, 2011	Deep Foundations: Design, Construction and Quality Control	Orlando, FL
October 27-28, 2011	Design and Strengthening of Shallow Foundations for Conventional and Pre-Engineered Buildings	Philadelphia, PA
October 27-28, 2011	Introduction to Detention Pond Design – Parking Lots and Urban Drainage	St. Louis, MO
October 27-28, 2011	Seismic Loads for Buildings and Other Structures	Denver, CO

NOVEMBER 2011

November 2-4, 2011	Streambank Stabilization for Restoration and Flood Control	San Jose, CA
November 3-4, 2011	Aluminum Structural Design with the 2010 Aluminum Design Manual	Nashville, TN
November 3-4, 2011	Construction Administration for Engineers	Las Vegas, NV
November 3-4, 2011	Design of Cold Formed Steel Structures - The New 2007 Specification	Kansas City, MO
November 3-4, 2011	Earth Retaining Structures Selection, Design, Construction and Inspection: Now in an LRFD Design Platform	New York City, NY
November 3-4, 2011	Financial Management for the Professional Engineer	Austin, TX

NOVEMBER 2011 (continued)

November 3-4, 2011	Instrumentation and Monitoring Bootcamp: Planning, Execution and Measurement Uncertainty for Structural and Geotechnical Construction Projects . . . . . Chicago, IL
November 3-4, 2011	Load Rating of Highway Bridges . . . . . Pittsburgh, PA
November 3-4, 2011	Seismic Design of Highway Bridges . . . . . Chicago, IL
November 3-4, 2011	Steel- Framed Buildings: Practical Issues in Design and Renovation . . . . . Boston, MA
November 3-4, 2011	Stormwater BMPs That Work: Effective Analysis, Design and Maintenance . . . . . Atlanta, GA
November 3-4, 2011	Sustainable Land Development- Ensuring Growth in a Green Economy . . . . . Wash. DC Metro Area
November 3-4, 2011	Wind Loads for Buildings and Other Structures . . . . . St. Louis, MO
November 4, 2011	Laws and Rules for Florida Engineers - Plus, Practical Tools for Avoiding Trouble *–NEW!* . . . . . Orlando, FL
November 16-18, 2011	Techniques for Pavement Rehabilitation . . . . . New Orleans, LA
November 16-18, 2011	Design and Construction of Microtunneling Projects . . . . . San Antonio, TX
November 16-18, 2011	HEC-RAS Computer Workshop . . . . . St. Louis, MO
November 16-18, 2011	Structural Design of Buildings and Industrial Facilities for Blast Loads & Accidental Chemical Explosions . . . . . Chicago, IL
November 17-18, 2011	Bridge Rehabilitation . . . . . San Francisco, CA
November 17-18, 2011	Construction Dewatering and Groundwater Control - Design and Application . . . . . Wash. DC Metro Area
November 17-18, 2011	Design of Buildings in Coastal Regions . . . . . Boston, MA
November 17-18, 2011	HEC-HMS Computer Workshop . . . . . Portland, OR
November 17-18, 2011	Leadership Development for the Engineer . . . . . Cincinnati, OH
November 17-18, 2011	Practical Hydrology of Rural and Urban Watersheds . . . . . Atlanta, GA
November 17-18, 2011	Progressive Collapse Mitigation: Practical Analysis Methods and Proven Solutions . . . . . Dallas, TX
November 17-18, 2011	Pumping Systems Design for Civil Engineers . . . . . Syracuse, NY
November 17-18, 2011	Soil and Rock Slope Stability . . . . . Atlanta, GA
November 17-18, 2011	Structural Renovation of Buildings . . . . . Nashville, TN
November 17-18, 2011	Cable-Stayed Bridges: Key Design, Construction and Management Issues . . . . . New York City, NY
November 18, 2011	Seismic Design of Liquid Storage Tanks . . . . . Las Vegas, NV

DECEMBER 2011

December 1-2, 2011	Design, Construction, and Renovation of Masonry Structures . . . . . Phoenix, AZ
December 1-2, 2011	Liability of Engineers: How to Stay out of Trouble . . . . . Los Angeles, CA
December 1-2, 2011	Sustainable Land Development- Ensuring Growth in a Green Economy . . . . . Houston, TX
December 7-9, 2011	Dam Breach Analysis using the Hydrologic Engineering Center's River Analysis System HEC-RAS . . . . . Las Vegas, NV
December 8-9, 2011	Bridge Rehabilitation . . . . . Houston, TX
December 8-9, 2011	Financial Management for the Professional Engineer . . . . . Boston, MA
December 8-9, 2011	Low Impact Development Applications for Water Resource Management . . . . . Portland, ME
December 8-9, 2011	Storm Sewer System Design using SWMM . . . . . Nashville, TN
December 8-9, 2011	Structural Design of Residential Buildings Using the 2009 International Residential Code . . . . Baltimore, MD
December 8-9, 2011	Wind Loads for Buildings and Other Structures . . . . . Charlotte, NC
December 14-16, 2011	Design of Foundations for Dynamic Loads . . . . . Denver, CO
December 14-16, 2011	Structural Vibration Analysis, Design and Troubleshooting . . . . . Scottsdale, AZ
December 15-16, 2011	Design and Renovation of Wood Structures . . . . . San Francisco, CA

JANUARY 2012

January 4-6, 2011	Pumping Systems Design for Civil Engineers . . . . . Las Vegas, NV
January 18-20, 2012	Introduction to Tunnel Design and Construction . . . . . Charlotte, NC
January 18-20, 2012	Structural Design of Buildings and Industrial Facilities for Blast Loads & Accidental Chemical Explosions . . . . . Phoenix, AZ
January 19-20, 2012	Earthquake Induced Ground Motions . . . . . Chicago, IL
January 19-20, 2012	Introduction to Dam and Levee Safety, Evaluation and Rehabilitation . . . . . Atlanta, GA
January 19-20, 2012	Leadership Development for the Engineer . . . . . Las Vegas, NV
January 19-20, 2012	Seismic Design of Highway Bridges . . . . . San Francisco, CA
January 19-20, 2012	Storm Water Treatment using Detention Ponds and Commercial Devices *–NEW!* . . . . . Austin, TX
January 19-20, 2012	Structural Condition Assessment of Existing Structures . . . . . St. Louis, MO
January 19-20, 2012	Structural Design of Residential Buildings Using the 2009 International Residential Code . . . . . Atlanta, GA
January 25-27, 2012	GIS for Hydraulic and Hydrologic Modeling Using ArcGIS Desktop . . . . . Seattle, WA
January 26-27, 2012	Design of Cold Formed Steel Structures - The New 2007 Specification . . . . . Portland, OR
January 26-27, 2012	Design of Waste Containment Liner and Final Closure Systems . . . . . San Diego, CA
January 26-27, 2012	Managing the Design Process – Keeping on Schedule, Within Budget, and Selecting The Right Resources *–NEW!* . . . . . NYC Metro Area
January 26-27, 2012	Financial Management for the Professional Engineer . . . . . Charlotte, NC
January 26-27, 2012	Ownership Transition Planning, Company Valuations and Strategic Planning . . . . . Orlando, FL
January 26-27, 2012	Progressive Collapse Mitigation: Practical Analysis Methods and Proven Solutions . . . . . Baltimore, MD
January 26-27, 2012	Seismic Loads for Buildings and Other Structures . . . . . Austin, TX
January 26-27, 2012	Upgrading Treatment Plants and Pumping Stations . . . . . Pittsburgh, PA

FEBRUARY 2012

February 2-3, 2012	Design and Strengthening of Shallow Foundations for Conventional and Pre-Engineered Buildings ..... Las Vegas, NV
February 8-10, 2012	Techniques for Pavement Rehabilitation ..... Las Vegas, NV
February 9-10, 2012	Earth Retaining Structures Selection, Design, Construction and Inspection: Now in an LRFD Design Platform ..... Charleston, SC
February 9-10, 2012	HEC-HMS Computer Workshop ..... Orlando, FL
February 9-10, 2012	Load Rating of Highway Bridges ..... Phoenix, AZ
February 9-10, 2012	Pipe Selection for Municipal Facilities ..... New Orleans, LA
February 9-10, 2012	Pumping Systems Design for Civil Engineers ..... Chicago, IL
February 9-10, 2012	Wind Loads for Buildings and Other Structures ..... Austin, TX
February 15-17, 2012	HEC-RAS Computer Workshop ..... Manchester, NH
February 16-17, 2012	Design and Installation of Buried Pipes ..... New York City, NY
February 16-17, 2012	Low Impact Development Applications for Water Resource Management ..... Seattle, WA
February 16-17, 2012	Risk- Based Seismic Design and Evaluation ..... Boston, MA
February 16-17, 2012	Soil and Rock Slope Stability ..... Phoenix, AZ
February 16-17, 2012	Structural Condition Assessment of Existing Structures ..... Houston, TX
February 16-17, 2012	Structural Renovation of Buildings ..... Baltimore, MD
February 22-24, 2012	Introduction to Tunnel Design and Construction ..... Las Vegas, NV
February 22-24, 2012	Streambank Stabilization for Restoration and Flood Control ..... Atlanta, GA
February 23-24, 2012	Bridge Rehabilitation ..... Atlanta, GA
February 23-24, 2012	Progressive Collapse Mitigation: Practical Analysis Methods and Proven Solutions ..... Minneapolis, MN
February 23-24, 2012	Water Hammer in Transmission and Distribution Systems ..... Scottsdale, AZ

MARCH 2012

March 1-2, 2012	Deep Foundations: Design, Construction and Quality Control ..... San Francisco, CA
March 1-2, 2012	Liability of Engineers: How to Stay out of Trouble ..... NYC Metro Area
March 6-7, 2012	Construction, Plans, Specifications and Ethics for Civil Engineers ..... San Antonio, TX
March 7-9, 2012	HEC-RAS Computer Workshop for Unsteady Flow Applications ..... Chicago, IL
March 7-9, 2012	Structural Vibration Analysis, Design and Troubleshooting ..... Tampa, FL
March 8-9, 2012	Construction Administration for Engineers ..... New Orleans, LA
March 8-9, 2012	Earth Retaining Structures Selection, Design, Construction and Inspection: Now in an LRFD Design Platform ..... Houston, TX
March 8-9, 2012	Financial Management for the Professional Engineer ..... Seattle, WA
March 8-9, 2012	HEC-HMS Computer Workshop ..... Dallas, TX
March 8-9, 2012	NPDES Strom Water Permit Compliance ..... Atlanta, GA
March 8-9, 2012	Pumping Systems Design for Civil Engineers ..... San Antonio, TX
March 8-9, 2012	Seismic Loads for Buildings and Other Structures ..... Baltimore, MD
March 8-9, 2012	Wind Loads for Buildings and Other Structures ..... Portland, ME
March 14-16, 2012	Design of Foundations for Dynamic Loads ..... Philadelphia, PA
March 14-16, 2012	Structural Design of Buildings and Industrial Facilities for Blast Loads & Accidental Chemical Explosions ..... Tampa, FL
March 15-16, 2012	Design of Lateral Force Resisting Systems Using the 2009 International Building Code ..... Denver, CO
March 15-16, 2012	Design, Construction, and Renovation of Masonry Structures ..... Charleston, SC
March 15-16, 2012	Earthquake Induced Ground Motions ..... Portland, OR
March 15-16, 2012	Storm Water Treatment using Detention Ponds and Commercial Devices *–NEW!* ..... Las Vegas, NV
March 15-16, 2012	Testifying and Forensic Report Writing Skills for Civil Engineers ..... Tampa, FL
March 21-23, 2012	HEC-RAS Computer Workshop ..... Charlotte, NC
March 21-23, 2012	Introduction to Tunnel Design and Construction ..... Wash. DC Metro Area
March 21-23, 2012	Techniques for Pavement Rehabilitation ..... St. Louis, MO
March 22-23, 2012	Aluminum Structural Design with the 2010 Aluminum Design Manual ..... Boston, MA
March 22-23, 2012	Design Build Contracting ..... Scottsdale, AZ
March 22-23, 2012	Design of Cold Formed Steel Structures - The New 2007 Specification ..... Atlanta, GA
March 28-30, 2012	Dam Breach Analysis using the Hydrologic Engineering Center's River Analysis System HEC-RAS ..... Pittsburgh, PA
March 29-30, 2012	Design and Installation of Buried Pipes ..... Denver, CO
March 29-30, 2012	Design of Buildings in Coastal Regions ..... New Orleans, LA
March 29-30, 2012	Managing the Design Process – Keeping on Schedule, Within Budget, and Selecting The Right Resources *–NEW!* ..... San Antonio, TX
March 29-30, 2012	Instrumentation and Monitoring Bootcamp: Planning, Execution and Measurement Uncertainty for Structural and Geotechnical Construction Projects ..... Atlanta, GA
March 29-30, 2012	Introduction to Dam and Levee Safety, Evaluation and Rehabilitation ..... Minneapolis, MN
March 29-30, 2012	Leadership Development for the Engineer ..... Manchester, NH
March 29-30, 2012	Project Management ..... Scottsdale, AZ
March 29-30, 2012	Seismic Design and Performance of Building Structures ..... Chicago, IL
March 29-30, 2012	Structural Condition Assessment of Existing Structures ..... San Francisco, CA
March 29-30, 2012	Wetlands and 404 Permitting ..... San Antonio, TX

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Construction/ Development

Concrete: Commercial Slab on Grade

This course examines the construction of high quality commercial slabs on grade from the viewpoints of the contractor, the architect, the owner, and engineer. Using video footage of a large project, the course exams items such as pre-pour meeting, sub-grade preparation, and placing and finishing operations. Various methods of preventing and limiting cracking are examined in depth. 3 hours.

0.3 CEUs. $150/$459.* M14

Concrete: Residential Slab on Grade

This course covers the single most common structural element used in the building industry today. The course examines the construction of high quality residential slabs on grade from the viewpoints of the contractor and engineer. Videotape and computer modeling are used extensively as an elaborate residential driveway is planned, modeled, constructed and finished. Planning is covered in detail. Various methods of preventing and limiting cracking are also examined. 3 hours.

0.3 CEUs. $150/$429.* 7V99P

Construction Administration for Engineers

This course is aimed at not only resident project representatives on construction projects, but also project managers, contract administrators, architects, engineers, owners, and supervisory and field management personnel. The focus is on the resident project representative and the problems they encounter and must resolve. The course analyzes the construction process including project delivery systems, documentation, responsibilities, authorities, specifications, preconstruction operations, scheduling, construction operations, risk allocation, and information technology. You will learn procedures and contract specification language that help minimize disputes and avoid claims. 13 hours.

1.3 CEUs. $699M/$799NM. CA09

Construction Contract Management

It is crucial to a successful project that all team members involved understand the dynamics of the construction contract and how it defines their work and responsibilities. This course provides practical and legal coverage of all aspects of construction contracts from the time of bidding to termination and post-termination. It will benefit resident project representatives, as well as project managers, contract administrators, architects, developers, bankers, engineers, owners, and supervisory and field management personnel. You will walk through a step by step analysis of the contract to better understand your role and obligations in the process and properly coordinate your work as a project team member, and avoid disputes and claims. 11 hours.

1.1 CEUs. $599M/$699NM. CM09

Construction Management Online Course Set

This online course package includes three on-demand online courses on Construction and Management topics at a discounted rate of 25% off! The set includes:

– Construction Administration for Engineers
– Construction Contract Management
– Perfect Your Negotiating Skills: Increase Your Profitability

See individual catalog listings for more Information on each course.

3.4 CEUs. $1,385M/$1,610NM. CM10

NEW PROGRAM

Design-Build Contracting

The Design-Build (DB) method of contracting has been increasing steadily. This online course will help you understand the dynamics of the DB process and will impart the technical and management skills you will need to obtain time and cost savings by properly implementing a DB program. You will learn how to: select projects that will benefit from DB delivery; optimize the balance between performance specified requirements and method specified requirements; avoid costly and time-consuming errors due to poorly written RFPs; develop the skill of proposal evaluation planning; and understand the complex relationships between design and construction on a fast-track project. 10 hours.

1.0 CEUs. $549M/$649NM. DBC11

Excavation Safety

This video on OSHA's Construction Standards for Excavations includes roles and responsibilities of the "competent person," developing a comprehensive safety plan, sloping, shoring, and shielding, design of hydraulic and timber shoring, and soil classification. The program includes a videotape and workbook. 7 hours.
0.7 CEUs. $395M/$495NM. 90VID

Legal Issues for Construction

The law makes its way into nearly every aspect of construction. Those involved in construction must learn to live with the applicable laws to avoid complex and expensive construction disputes. Planning, management and documentation can best avoid these disputes. This course will instruct you in the law's realistic application to your construction operations for public and private projects. It shows you, in practical terms, the factors that must be considered at every stage of the construction process. 3 hours.
0.3 CEUs. $150/$369.* W10

Parametric Estimating for Transportation Design and Construction Projects

This seminar-on-CD will introduce you to the theory and application of parametric estimating as applied to transportation design and construction projects. The seminar will cover the development of parametric estimating databases, the application of statistical measures of central tendency in developing parametric quantity and cost estimating factors, and methods to associate a level of confidence with each estimate to better communicate level of accuracy to those not closely associated with the project. This seminar is designed for civil engineers and estimators who must develop project-level estimates throughout the life cycle of a transportation project.
8 hours.
0.8 CEUs. $395M/$455NM. A19

Stories from the Field: What Engineers Need to Know About Construction

This is an actual case study done by a panel of professional project engineers, owners and construction engineers with Brasfield Gorrie, Uzun & Case, and Collins Project Management. This course deals with the practical matters of practicing engineers. The panel addresses every day problems of contractors, owners, and field engineers.
3 hours.
0.3 CEUs. $150/$459.* W08

Environmental

We offer On-Demand, Online Archived Webinars on many Environmental Topics. By taking and passing a post-test, you will receive CEUs based on the course length.

Archived webinars on Environmental topics include:

- Construction Stormwater BMPs
- Design of Erosion Control Measures Using Riprap
- Innovative Water Supply Strategies for Sustaining Environmental Health

NEW TITLES ADDED MONTHLY!

For a complete listing and additional information, go to ***www.asce.org/archived-webinars***

Wetlands and 404 Permitting

This online course provides an overview of wetlands, including a definition of what wetlands are, the regulation of wetlands, the 404 permitting process, wetlands mitigation and future directions. 6 hours.
6.0 PDHs. $329M/$429NM. W15

Geomatics

ALTA/ACSM Land Title Surveys

All surveyors at one time or another are requested to provide an ALTA/ACSM Land Title Survey. The ALTA Standards are a very important part of surveying. This course covers the history of the ALTA Standards, general review of the standards, understanding the uncertainties in boundary surveying as they apply to the 1999 standards, complete review of the new 1989 standards, understanding certifications, understanding the accuracy standards, and the surveyors report. This course will help those in the surveying and engineering profession deal with complex legal issues addressed in the standards.
3 hours.
0.3 CEUs. $150/$477.* W05

Construction Surveying

Construction surveying has always been very different from land surveying. Technology has only widened the gap. Today many construction projects use all the latest in technology to complete the work faster and to the highest level of accuracy. You will learn about many different technologies being used such as; data collector used for radial stakeout, the robotic total station and GPS. Information will also be presented on machine control equipment being used on construction sites and the affect this equipment has on the work of the surveyor and engineer. This course will cover many of the traditional methods of construction layout, including pitfalls encountered on the construction site. Also included will be the latest information on site safety, contracting and governmental regulations. 3.5 hours.
0.4 CEUs. $175/$556.* P15

Geodesy for Engineers and Surveyors

This course is the logical follow-up to GPS and is of increasing importance to land surveyors. Reviews the history of geodesy, the earth and its motions, precession and nutation, polar motion, gravity and the geoid, and gravity anomalies. Computations of the ellipsoid, datums and how they evolved, geometry of the ellipsoid, reduction of surface measurements onto the ellipsoid. Positioning: coordinate systems, astronomic, geodetic, relationship between astonomic and geodetic coordinates and azimuth. Time: coordinated universal time (UTC), and UTI. Leveling: vertical datums. State plane coordinates, UTM coordinates, transforming coordinates from one datum to another. 6 hours.
0.6 CEUs. $300/$918.* P11

Professional Ethics for Land Surveyors

This course covers not only the history of ethics but gives guidance on all professional issues dealing with responsibility and standard of care. It provides answers to everyday problems that arise in the day-to-day functioning of all land surveyors. The course includes extensive coverage of field and real-life examples. In addition, the course also reviews actual court cases to show the law's realistic application of ethical behavior. 3 hours.
0.3 CEUs. $150/$459.* V02D

Role of Engineers and Surveyors in Geographic Information Systems

This course looks at the terminology and definitions of a Geographic Information System (GIS). The process of how to design a system and how to capture information from both existing records and new spatial data is covered. The course contains a short overview of the most popular software and hardware. Additionally, the course deals with the planning, design, implementation and uses of a GIS. The map projection and coordinate systems used to design a system will be identified. Topics addressed include data capture for the base mapping, aerial mapping, digital orthophotos, remote sensing, and GPS equipment. All the latest photo capture equipment such as Light Detection and Ranging (LIDAR) and digital aerial cameras will be described. The course wraps up with information on the National Spatial Reference Sys-tem/Readjustment of North American Datum (NAD) 83. 6 hours.
0.6 CEUs. $300/$954.* V06G

State Plane Coordinates

Review of the background: Development of the system, the State Plane Coordinate System of 1927, design, units of length, the Clarke 1866 Ellipsoid, the GRS 80 Ellipsoid, NAD 83 coordinates, state plane coordinate system of 1983. Map Projections: fundamentals, conformality, Lambert Conformal projection, Transverse Mercator projection, Oblique Mercator projection, scale factor, elevation factor, combined factor, convergence of the meridian, grid azimuth "t," projected geodetic azimuth "T." Conversion from latitude and longitude to state plane coordinates, and the reverse, state zones, software. Traversing in state plane coordinates numerical examples. Surface coordinates. Universal transverse mercator projection (UTM). Definition, scale factors, zone dimensions and definitions. 6 hours.
0.6 CEUs. $300/$899.* V05

Surveying with GPS

This course will describe the technology of state High Accuracy Reference Networks (HARNs) and Continuous Operations Reference Stations (CORS). The method of establishing 'GPS Derived Orthometric Heights' will be covered in detail. The course will conclude with a description of the Russian GLONASS system and the new European GALILEO system. 5 hours.
0.5 CEUs. $250/$795.* L05

Vertical Datums and Leveling

You will learn why General Procedures must be followed, gain an understanding of the sources of errors and how they occur, learn the equipment used and how to keep it in good working condition, understand why the Collimation Check is critical, how to use the Compensation Check, and understand the observing routine that is used when leveling a line of the National Geodetic Vertical Control Network. 6 hours.
0.6 CEUs. $300/$899.* V04A

Geotechnical

We offer On-Demand, Online Archived Webinars on many Geotechnical Topics. By taking and passing a post-test, you will receive CEUs based on the course length.

Archived webinars on Geotechnical topics include:

- An Overview of Geosynthetics and Their Major Applications
- Engineering Practice for Wetting-Induced Collapse of Soils
- Integrity Assessment of Deep Foundations: Principles and Limitations
- Seismic Assessment and Design of Pipelines
- Seismic Assessment and Design of Sewers
- Use of Geosynthetics for Waterproofing Critical Hydraulic Structures

NEW TITLES ADDED MONTHLY!

For a complete listing and additional information, go to ***www.asce.org/archived-webinars***

Dam Safety and Rehabilitation

The objectives of this seminar are to identify the current status of existing dams in the United States, to learn the basic fundamentals of performing a dam safety inspection, to learn how to perform a dam safety analysis, and to identify various rehabilitation practices. This seminar will include a history of dams, an overview of dam safety criteria in the United States, identifying the consequences of failure, determining the safety of existing dams, and developing techniques for rehabilitating aging dam structures. 7 hours.

0.7 CEUs. $295M/$345NM. X12

Design of Waste Containment Liner and Final Closure Systems

This seminar-on-CD will benefit those who work with MSW landfills, hazardous waste landfills, superfund sites, industrial landfills, mine tailing closures, or mine heap leachpads. It provides comprehensive coverage of the latest technology available. You will learn how to design waste containment liner systems and final closure systems. Design and failure examples are presented throughout. 14 hours.

1.4 CEUs. $695M/$795NM. A20

Erosion Control Using Geosynthetics

Learn how to reduce surface water pollution from soil runoff by using geosynthetics. This course will introduce you to the history and applications of geosynthetics. You will also be exposed to factors influencing erosion such as rainfall, soil type and vegetation. Surface stream bank and coastal erosion control measures using geosynthetics will also be covered. 3 hours.

0.3 CEUs. $150/$369.* P18

Fundamentals of Slope Stability

This online course presents geotechnical concepts that form the foundation of slope stability, as well as the basics of analyzing slopes. Through graphics, animations, and problems you will learn the necessary concepts for understanding and analyzing slopes. Course modules include: introduction to landslides; shear stress; water and effective stress; exploration; stability analysis' stabilization methods. After completing this course, participants will be able to: identify landslide parts and types of landslides; construct and interpret Mohr-Coulomb failure envelopes; define and calculate total and effective stress; define various methods of site exploration and identify appropriate uses for them; conduct simple stability analyses of slopes; and define various methods of slope stabilization and identify appropriate uses for them. 8 hours.

8.0 PDHs. $439M/$539NM. Q88

Geotechnical Field Exploration Using Test Borings

This DVD has been developed to bring geotechnical field exploration using test borings to your office or classroom. It is an excellent tool to train civil engineering undergraduate and graduate students, and civil engineers, geologists, technicians, and drilling crews ready to start their practice in the area of geotechnical engineering. The DVD presents a detailed discussion on drilling test borings using hollow stem augers and mud rotary techniques including, how to observe drilling operations, obtain soil samples, perform field tests, store and transport soil samples, and record the information on the field boring log. Discussion on purpose and objectives of a geotechnical field investigation and various methods of drilling test borings is also presented in an easy to understand format. 50 minutes.

0.1 CEUs. $99M/$149NM. 40833

Landfill: Basics of Design and Operation

The Civil Engineering profession is heavily involved in environmental issues, including solid waste disposal in municipal solid waste (MSW) landfills. MSW accounts for about 50% of the billable hours in geotechnical engineering consulting practice. This course covers the technical issues of siting, designing, operating and closing municipal solid waste landfills. Elements of geosynthetics design for landfill lining systems, drainage systems, and covers are reviewed along with the environmental regulations that dictate much of this practice. 6 hours.

0.6 CEUs. $300/$918.* 7V04L

Pipe and Pipeline Renewal

This online course will review the methods for replacing and renovating the existing water and wastewater infrastructure with minimum disruption to the community. Beginning with condition assessment and prioritization it will take you through the design and technology selection procedures drawing on best practice and emerging codes reflecting the U.S. and international experience of the presenter. It will present installation procedures, reinstatement, quality control and troubleshooting measures with a strong emphasis on the practical aspects and round off with project examples. 12 hours.

1.2 CEUs. $659M/$759NM. PR98

NEW PROGRAM

Risk Assessment in Geotechnical Engineering

Soils and rocks are among the most variable of all engineering materials and are, therefore, highly amenable to a probabilistic treatment. The application of statistical and probabilistic concepts to geotechnical analysis is a rapidly growing area of interest for engineers as indicated by recent new books, journals and dedicated sessions at practice-oriented conferences. The course content and delivery will assume no more than an introductory understanding of probability and statistics on the part of the participants; however, the goal is to present "user friendly" training on modern probabilistic techniques applied to classical geotechnical engineering problems such as seepage, settlement, bearing capacity and slope stability. 9 hours.

0.9 CEUs. $495M/$595NM. RA11

Rock Coring for Geotechnical Analysis and Design

This DVD has been developed to bring rock coring to your office or classroom. It is an excellent tool to train civil engineering undergraduate and graduate students, and civil engineers, geologists, technicians, and drilling crews ready to start their practice in the area of geotechnical engineering. The DVD presents a detailed discussion on rock coring for geotechnical analysis and design including, equipment needed for recovering rock samples, how to observe rock coring operations, obtain rock core samples, perform field tests on rock cores, identify common types of rocks, determine relative quality designation, store and transport the rock cores, perform common laboratory tests, and record the information on the rock coring log. 1 hour.

0.1 CEUs. $99M/$149NM. 40849

Shallow Foundation Designs - Part I Geotechnical Aspects of Design

Most structures are on shallow foundations. The foundations must withstand the structure's weight without moving. This course explains in straightforward terms the soils aspects of shallow design. Site investigation, soil properties, strength of soils, bearing capacity, and compressibility of soils are examined with the particular points of interest to shallow foundations. This course covers the elements of each so the user gains understanding of the importance of each and how to perform each step. 3 hours.

0.3 CEUs. $150/$459.* Y87

Shallow Foundation Designs - Part II Structural Design of Spread Footings

Design of reinforced concrete spread footings is the focus of this course. Fundamental assumptions for determining the soil pressure distribution under footings are presented along with commonly used formulas. Structural design of footings to comply with building code requirements for structural concrete (ACI 318-02) is addressed. Individual topics include: loads, load factors, load combinations, resistance factors, materials, flexure, shear, rein-forcement details, development length, and embedment reinforcement. Brief comparisons are made to illustrate the primary differences between footing design by ACI 318-02 and the previous version ACI 318-99. 3 hours.

0.3 CEUs. $150/$459.* Y88

Soil Basics for Engineers

This course acquaints you with the basics on how soil behaves and how it is used in design and construction. It is intended for engineers who must interface with soil engineers, but may not be doing the engineering. The course will teach how soils are identified, classified and tested and how to read soils reports and talk to soils engineers by covering the basic terms and practices of soils engineering. Application is emphasized over theory. 6 hours.

0.6 CEUs. $300/$879.* P17A

Hydraulics/ Water Resources

We offer On-Demand, Online Archived Webinars on many Hydraulics and Water Resources topics. By taking and passing a post-test, you will receive CEUs based on the course length.

Archived webinars on Hydraulics/Water Resources topics include:

- Advanced Bridge Hydraulics with HEC-RAS
- Advanced Culvert Hydraulics with HEC-RAS
- An Overview of Unsteady Flow Applications Using HEC-RAS
- Bridge Scour Computations with HEC-RAS
- Culvert Design for Fish Passages: Concepts and Fundamentals
- Culvert Design for Fish Passages: Design Steps and Examples
- Design of Erosion Control Measures Using Riprap
- Geometry Pre-Processing in HEC-RAS
- HEC-RAS Bridge Hydraulics
- An Introduction to HEC-HMS
- An Introduction to HEC-RAS Culvert Hydraulics
- Runoff Analysis Using WinTR 55 (The SCS Method)
- Storm Water Management Alternatives for Small Commercial Sites
- **U**nderstanding HEC-RAS Errors, Warnings, and Not**es**
- Understanding the Use of Ineffective Flow Areas in HEC-RAS

NEW TITLES ADDED MONTHLY!

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Advanced Detention Routing

This seminar-on-CD will increase your expertise in detention routing and address the essential concepts of detention routing using "real-world" examples and case studies. This course will help you minimize risk and improve the operation and effectiveness of your clients' detention facilities, including ensuring that the facility is designed to operate effectively and avoid impacts to adjacent or downstream properties. Additionally, you will learn to improve detention routing project performance through effective project planning and strategy development. 6 hours.

0.6 CEUs. $295M/$345NM. ADR49

Environmental and Water Resources Online Course Set

This online course package includes three on-demand online courses on Environmental and Water Resources topics at a discounted rate of 25% off! The set includes:
- GIS Applications in Water, Wastewater,and Stormwater Systems
- Introduction to Detention Pond Design
- Treatment Plant Hydraulics for Civil Engineers

See individual catalog listings for more Information on each course.

3.0 CEUs. $1,195M/$1,420NM. ES10

GIS in Water Resources

GIS has been used for many years to develop solutions to water resource problems. This ASCE seminar-on-CD is geared toward those wanting to learn about the basics of GIS and how it can be used as a vital tool in the field of water resources. Assessing water resources, determining water availability, preventing flooding, understanding the natural environment, and managing water resources on a local or regional scale are just some of the tools discussed. Course materials include slide handouts that can be printed and used for taking notes. 6 hours.

0.6 CEUs. $295M/$345NM. Y06

GIS Applications in Water, Wastewater, and Storm Water Systems

This online course will enable you to use GIS technology in solving water-related problems. You will be able to decide whether a given situation or problem has a GIS application and you will learn what kind of effort and resources are required in GIS applications. The four GIS applications that are of particular importance to water, wastewater, and storm water system managers will be discussed: mapping; monitoring; modeling; and maintenance. 11 hours.

1.1 CEUs. $549M/$649NM. L67

Hands-On HEC-1 Seminar

This seminar-on-CD is a comprehensive introduction to watershed modeling using HEC-1 and also includes introductions to HEC-HMS, HERC-GeoHMS and LIDAR Data. HEC-1 computes hydrographs for both simple and complex stream systems. It can be used for designing storm water detention basins, analyzing large reservoirs, performing dam-breach analyses, and computing urban runoff using kinematic wave methods. It provides several methods for computing precipitation distributions, infiltration losses, unit hydrographs, channel routing, and other basic hydrologic computations. 4 hours.
0.4 CEUs. $195M/$245NM. W47

NEW PROGRAM

Hands-On HEC-HMS

HEC-HMS by the US Army Corps of Engineers Hydrologic Engineering Center is designed to simulate the precipitation-runoff processes of dendritic watershed systems. The main goal of this course is to provide an understanding of the basic functions of the HEC-HMS program and how to use it efficiently. This is accomplished through a combination of slideshow lecture sessions and workshops. Lectures will cover the basic concepts, program options, user interface, data requirements, output review, and case studies. Workshops provide a hands-on experience for the user. 4 hours.
0.4 CEUs. $195M/$245NM. HMS49

Hands-On HEC-RAS

The purpose of this seminar-on-CD is to walk you through the process of creating and executing a detailed model in HEC-RAS. Several of the seminar models are "unfinished" and the guide recreates the steps to give you a good hands-on introduction to the program. Although the course deals with models of very small stream systems, the steps used are exactly the same as when dealing with very large complex systems. 4 hours.
0.4 CEUs. $195M/$245NM. HEC49

Hydraulics and Water Resources –Seminars-on-CD

Special offer: Buy the Complete Seminars-on-CD Series and Save!

1. Dam Safety and Rehabilitation
2. GIS in Water Resources
3. Hands-On-HEC-1
4. Hands-On HEC-HMS
5. Hands-On HEC-RAS
6. NPDES Storm Water Permit Compliance:Construction
7. NPDES Storm Water Permit Compliance: Industrial

3.9 CEUs. $1,495M/$1,795NM – complete set W54

Introduction to Detention Pond Design

Detention ponds are designed to provide numerous functions, including reducing peak discharges and improving water quality. Improperly designed, they can be a hazard to the public. This online course will provide you with the information needed to design an appropriately sized detention pond that will provide numerous benefits and limit liabilities. Topics covered include: rainfall data sources, rainfall runoff modeling, inlet grate capacity analysis, outlet capacity design and analysis, detention pond sizing and underground ponds, routing a hydrograph through a detention pond, impacts of ponds on water quality and hazards of detention ponds and when not to use them. 10 hours.
1.0 CEUs. $549M/$649NM. DP08

NEW PROGRAM

Introduction to Floodplain Mapping

The practice of hydrology and dealing with floods is a science that dates back to the Egyptians. This course is intended to be an introduction to practical hydrology and basic floodplain management at a level that can be easily understood. An overview of the National Flood Insurance Program (NFIP) is also included. 3 hours.
0.3 CEUs. $155M/$195NM. FP11

NPDES Storm Water Permit Compliance: Construction, General, and Municipal Topics

This seminar-on-CD provides practical and useful information for complying with the EPA's most recent requirements for storm water discharge permits issued for construction, industrial and municipal activities. This CD focuses on construction topics. 6 hours.
0.6 CEUs. $245M/$295NM. V85

NPDES Storm Water Permit Compliance: Industrial, General, and Municipal Topics

This seminar-on-CD focuses on industrial topics but also discusses general and municipal topics. Includes the same course materials provided at the live seminar. 6 hours.
0.6 CEUs. $295M/$345NM. W48

Storm Water Drainage System Design

Methods for calculating storm water runoff are discussed. The Rational Method is used for the class examples and the basics of storm water pipe design are covered. Rules of thumb needed to properly design storm water pipe are presented. The Manning equation is presented for determining the Q vs. diameter relationship for the full flow condition and partial flow diagrams are utilized for conditions of flow other than full. 3 hours.
0.3 CEUs. $150/$477.* P19

Storm Water Management

This online course provides an understanding of storm water management. You will learn program organizational issues, urban storm water management, NPDES Phase II, financing issues (including the use of storm water utilities), and how to construct a comprehensive storm water management program. 7.5 hours.

7.5 PDHs. $379M/$479NM. W16

Treatment Plant Hydraulics for Civil Engineers

This online course presents the basics of pressure pipe and open channel flow hydraulics as applied in the design and operation of water and wastewater treatment plants. Topics include basics of pipe and open channel flow, hydraulic head losses, pipe and channel layout and design, flow-meter selection, flow control and flow distribution, design of hydraulics elements, and design of water and wastewater treatment plant unit processes. This course will provide engineers with the hydraulic engineering design tools needed to successful layout and design the flow elements of both water and wastewater treatment plants. Numerous design examples are incorporated in the course and both theoretical examples and practical design solutions from existing treatment plants will be covered. 9 hours.

0.9 CEUs. $495M/$595NM. PH09

Understanding Hydrology & Hydraulics – Applied Stormwater Management

This seminar-on-CD series provides an overview of storm water management topics. It includes theory, fundamental concepts, and practical applications. This six (6) disc set contains the same class materials provided at the live seminar. Class materials can be viewed online or printed out.

2.2 CEUs. $925M/$1,165NM. – complete set. A31

Management and Leadership

We offer On-Demand, Online Archived Webinars on many Management and Leadership topics. By taking and passing a post-test, you will receive CEUs based on the course length.

Archived webinars on Management and Leadership topics include:

- Critical Path Method: Introduction to the Method and Software
- Engineering Through Ethical Challenges
- Ethics: The Road Engineers Must Follow
- Holding Productive Meetings to Increase the "Bottom Line"
- If You Haven't Planned It - You Can't Control It
- Improved Project Communication: Within and Outside of the Project Team
- Marketing 101
- Mentoring: Guidance for Mentors, Proteges, and Organizations
- Monitoring Project Budgets and Schedules: Introduction to the Earned Value Method
- Quality: What Is It and How Do We Achieve It?
- Retaining and Recruiting "A" Personnel
- Scope Creep: Preventing and Resolving
- The Five Habits of Highly Effective Marketers
- Writing: Producing Action-Oriented Documents

NEW TITLES ADDED MONTHLY!

For a complete listing and additional information, go to ***www.asce.org/archived-webinars***

60 Minutes to Become a Successful Engineer

While engineering technical skills can be taught, personal development skills are widely ignored by professional engineers who are continually challenged to find ways to effectively manage the demands on their time. Skills needed to organize time, prioritize, and reach goals are critical for success and are more important than technical skills in advancing your career. No matter how technically skilled you are, if you cannot reach your goals, you will have limited career success. This audio-only program will explain how applying tools focused on governing values will help you prioritize the most important things in your life and achieve professional and personal success through growth. 1 hour.

0.1 CEUs. $75M/$125NM. 7BSE

Accounting for the Non-Accountant

This online course is intended for engineers, project managers, firm managers and other staff that have minimal accounting experience yet need to understand basic accounting principles for their present position and/or to advance in their career. The course will provide you with the tools and background that you will need to better assess the quality of accounting numbers and to minimize accounting risk. The course introduces financial accounting and analysis, and then focuses on Generally Accepted Accounting Principles and how they impact financial statement analysis. It covers areas that will provide you with a general understanding of accounting principles and knowledge that you can apply on the job. 12 hours.

12.0 PDHs. $390M/$490NM. AC10

Buying or Selling an Engineering or Land Surveying Firm

If you are the owner of a business, or the potential buyer of a business, this seminar will give you the answers you need for questions such as when is the right time to sell? When should I buy? How do I get the company ready to sell? What is a company worth? How do I attract buyers? How do I limit the amount of taxes I have to pay? How do I as a new owner become successful after the sale? How do I preserve my good name after the sale? Most professionals only buy or sell a company once in their lifetime. Make sure you understand how the game is played before you make a costly mistake. The cost of this seminar on DVD may be one of the best investments you as a professional can make. Included is a special interview about buying and selling between Milton Denny, PLS, and Van Clindlescales, P.E., PLS, Ph.D. 3 hours.

0.3 CEUs. $150/$459.* W06

Contract Administration: Change Order Basics

This course covers the basics of this challenging aspect of administering construction contracts: the change order. It is designed to show a balanced approach to the change order process and, as such, can benefit you whether you are an owner's representative, designer, or contractor. The focus will be on an unbiased presentation of the process and presentation of generally accepted techniques to use in arriving at a fair and reasonable settlement of time and costs. The development of the material assumes no prior in-depth knowledge in this area. 5 hours.

0.5 CEUs. $250/$765.* V03H

Contracts for Engineers and Surveyors *– Newly Updated*

This course will provide the technical professional with a working knowledge of contract law and lay the groundwork for preparing a draft contract for review by a licensed attorney. Model contracts provided by the National Society of Professional Engineers, Associated General Contractors and the American Institute of Architects are discussed as are a variety of real world contract situations encountered by practicing professionals. 3 hours.

0.3 CEUs. $150/$477.* V97G

Effective Marketing of Professional Services for Engineers and Surveyors *– Newly Updated*

This course will show you how to improve your marketing and public relations efforts to increase your technical practice business. Included is information on how to find and win the jobs that will keep your company growing profitably. It will offer practical "how to" suggestions on organizing the marketing function, writing a marketing plan and how to keep the marketing effort on track. 3 hours.

0.3 CEUs. $150/$477.* P23

Engineering Economic Analysis

You will learn how to make decisions about when to purchase equipment, how to amortize investments and quantify the effect of depreciation, when to lease, and how to compute the present worth and future worth of capital investments. Benefit/cost and incremental analysis are covered, as well as rate of return analysis. 3 hours.

0.3 CEUs. $150/$477.* L06

Establishing Your Engineering or Surveying Firm *– Newly Updated*

This course provides the information you need to get a new or newly established technical practice up and running on a sound business footing. This DVD is a must for engineers, surveyors or other professionals who wish to establish themselves as independent consultants and service providers or who wish to improve the operation of an existing small practice. 3 hours.

0.3 CEUs. $150/$477.* P22

Ethics and Professionalism *– Newly Updated*

This course covers ethics in the practice and concept of a profession. "Ethics" is defined and moral/ethical statements vs. etiquette and law are examined. Codes of ethical standards are listed. The ways ethical questions arise in professional practice and actual example cases are examined. Included are real-life examples of ethical issues with approaches for analyzing and resolving the issues. 3 hours.

0.3 CEUs. $150/$477.* V98E

Ethics for Engineers

This online course discusses the importance of, and issues inherent in, ethics for engineers. It is important for the engineer to develop ethics early in his or her career and apply ethical considerations as constantly as technical considerations. It will emphasize the importance of developing a code of ethics, give the engineer a framework for developing such a code, and analyze the difficult ethical/technical issues that often accompany major engineering projects, particularly those that involve other cultures or political systems. 3 hours.

3.0 PDHs. $169M/$269NM. X98

Finance and Accounting for Non-Financial Managers

Whether you're a brand-new supervisor or a senior executive, you don't go far without having a command of key financial concepts. Think of this broad-based course as your personal, one-on-one tutor. Written expressly for non-specialists like you, this AMA program clearly explains how to understand financial and operational measures, prepare, and utilize budgets, respond to inquiries about the dollars-and-cents consequences of actions taken by you or your department, and speak the jargon of the finance with fluency and ease. Step-by-step exercises and interactive examples will show you how to put the standard techniques of financial analysis to work immediately. (Sherman, Eliot; 240 pages, spiral bound)

2.0 CEUs. $145M/$159NM. V65

Financial Management for the Professional Engineer

Learning to evaluate financial performance through interpretation of income statements, balance sheets, cash flow statements, and project reports is critical to your personal success as well as the success of a business. This online course teaches the design professional how to read and interpret the income statement, including such components as gross revenue, net revenue, direct and reimbursable expenses, indirect expenses, net profit before taxes, depreciation, gross profit and net profit after taxes. It examines the primary benchmarks of performance: multiplier, utilization rate, direct personal expense ratio, and overhead. In addition, the seminar examines the balance sheet components of assets (current, fixed and other), liabilities (current and long-term loans), and stakeholder equity. 10 hours.

1.0 CEUs. $549M/$649NM. FM09

How to Write a Business Plan

This book not only puts all the facts and planning formats you need right at your fingertips, but also gives you the latest thinking on effective business planning. It shows you how to organize and implement the planning process from beginning to end and translate your plan into action while analyzing the strengths, weaknesses, and opportunities in your organization. It also includes crucial information on diagnosing and measuring customer satisfaction. (Crego, Jr., Edwin T., Schiffrin, Peter D., and Krauss, James C.; 258 pages, spiral bound)

2.0 CEUs. $145M/$159NM. V69B

Information Security

Information security is one of the most important topics today, both for business and individuals. Unfortunately, information security is typically viewed as a technical topic, suitable only for computer professionals. Nothing could be further from the truth. Information security is far more of a managerial and personal topic, than a technical topic. As a result, this course addresses information security from a non-technical, managerial perspective. The course's in-depth coverage includes risk management, threats to your organization's information, and defenses against those threats. On an individual level, the course concludes with guidelines to follow in securing your personal information at home, helping to prevent loss of private, sensitive information and/or identity theft.

4 hours.

0.4 CEUs. $200/$980.* V06F

Leadership Development

This course will help you develop or expand your leadership skills. You will learn how to: successfully lead an organization or department; understand yourself and your staff, including generational differences; apply a leadership style which is appropriate to the situation; apply systematic decision-making processes while considering the critical role of intuition; lead change while maintaining motivation; apply the "art" of leadership or the "discipline" of management; effectively communicate and provide feedback considering the differences in the way men and women communicative; and form and lead effective teams. The course also includes one hour of ethics training. 9 hours.

0.9 CEUs. $495M/$595NM. B44

Management and Leadership Online Course Set

This online course package includes three on-demand online courses on Management and Leadership topics at a discounted rate of 25% off! The set includes:

- Financial Management for the Professional Engineer
- Leadership Development
- Perfect Your Negotiating Skills: Increase Your Profitability

See individual catalog listings for more Information on each course.

2.9 CEUs. $1,195M/$1,420NM. ML10

Marketing Model for Success: RAMPS

Focusing on services marketing, this training provides a step-by-step program for planning and implementing marketing for the engineering firm. It explains how effective and efficient marketing requires targeting specific segments of the population, identifying behavior patterns and changing them for improved profitability. Specific examples are provided. The RAMPS plan to marketing success is a proven technique, developed for and used in the construction industry for over 20 years.

4 hours.

0.4 CEUs. $200/$636.* 7V05K

Perfect Your Negotiating Skills: Increase Your Profitability

Most of the skills, techniques, and strategies needed to be an effective negotiator depend heavily on an understanding of the behavior sciences, in which engineers typically have little or no education or training. This online course is designed to assist consulting engineers and those who hire consulting engineers to understand and practice the key elements of an effective negotiating process. This approach will evolve from the basics of conflict management, to appropriate planning steps, developing the necessary strategies and tactics, defending against trick plays and traps by the other part, learning and role playing, and communicate during a negotiation. 10 hours.

1.0 CEUs. $549M/$649NM. NS08

Presentation Skills for Engineers and Technical Professionals

This is a unique skill-building course to help you prepare and deliver clearer, more persuasive presentations to clients, sales prospects, and internal audiences. This course will help you become a stronger, more confident presenter and teach you how to present technical content to non-technical audiences in a compelling way. It will show you how to overcome your fear of presenting and public speaking, become a better communicator, and develop a strong and interesting speaking voice. The course involves a three-step process for handling questions from the audience and how to differentiate between effective and ineffective use of presentation visuals. 4 hours.

0.4 CEUs. $200/$636.* 7V05N

Project Management

Developed by engineers for engineers this online course covers all aspects of project management including: client relations; contracts and procurement, planning; scheduling; budgeting; accounting and finance; quality and monitoring; and administration. This course can be used by individuals or deployed across an entire firm or agency at a discounted group rate. 35 hours.

35.0 PDHs. $979M/$1,079NM. W56

Successful Marketing of Engineering Services – From Finding Prospects to Generating Repeat Business

In today's competitive climate, acquiring new clients and retaining old ones seems harder than ever. It needn't be. This course will teach you the two most crucial elements to marketing success; how to determine the attractiveness and potential of any market; the Mandeville Techniques – ten steps to turn any prospect into a client; how to ask the right questions to get your firm considered for specific projects; what you should (and should not) do in a formal presentation; and much more. The course also contains series of forms that you will use over and over in applying these concepts to your real projects. (Stuart W. Rose, Ph.D.; 150 pages, loose-leaf binder)

2.0 CEUs. $245M/$295NM. A28

Tort Liability and Ethics for Public Agencies

This course treats a central question that always remains before us as we make choices on both a personal and professional level – "What good thing must I do?" From a legal perspective, this question is styled as a negative, advising us to "Do no wrong." The legal term "tort" means "wrongful act." Guided by this perspective, lawyers advise us to "do no wrong" by describing what past juries have found to be wrong. In this course, you will be taught how two seemingly divergent perspectives are really part of the same system, a layered system. At one level, this system deals with shared, common values central to answering the question "What good thing must I do?" At a different level, this system deals with the law, which is the mechanism to deal with those choosing to disregard these values. 5 hours.

0.5 CEUs. $250/$765.* V03G

Structural

We offer On-Demand, Online Archived Webinars on many Structural topics. By taking and passing a post-test, you will receive CEUs based on the course length.

Archived webinars on Structural topics include:

- ASCE 7-10 Snow Load Provisions
- Avoiding Problems in Specifying Metal Roofing
- Deflection Calculation of Concrete Floors - Immediate; Long-Term; Cracking
- Design and Rehabilitation of Foundations on Expansive Soils
- Design of Buildings for Coastal Flooding
- Design of High-Rise Steel Structures: The Basics
- Design of Masonry Shear Walls
- Design of Steel Lintels in Masonry Walls
- Design of Wood Beams and Joists
- Design of Wood Connections
- Design of Wood Diaphragms and Shear Walls
- Designing Buildings with Overhead Cranes
- Deterioration and Repair of Concrete
- Greening Your Building With Wood: Sustainable Design for Non-Residential Wood Structures
- High-Performance Buildings: Why We Need Them and How to Get Them
- Investigation and Repair of Fire-Damaged Framing
- Learning from Failures of Wood-Framed Structures
- Mitigating Effects of Corrosion and Deterioration in Construction
- Practical Design of Bolted and Welded Steel Connections
- Reinforced Masonry: Design and Construction
- Renovation of Pre-Engineered Buildings
- Renovation of Slabs on Grade
- Renovation of Wood Trusses
- Strengthening Concrete Buildings
- Strengthening Structural Steel Beams
- Structural Considerations for Building Additions
- Structural Design of Steel Stairs and Rails
- Underpinning and Strengthening of Foundations
- Verification of Computer Calculations by Approximate Methods

NEW TITLES ADDED MONTHLY!

For a complete listing and additional information, go to ***www.asce.org/archived-webinars***.

NEW PROGRAM

Aluminum Structural Design with the 2010 Aluminum Design Manual

The biggest change in aluminum structural design in 43 years has just occurred - the Specification for Aluminum Structures, the bible of aluminum structural design, has undergone its first reorganization since its original edition in 1967. Included in the many changes are major revisions regarding safety and resistance factors, new alloys, and changes to welded member design. This online course is intended to bring you up to speed in the new aluminum specification so you can design with it as confidently as you would in steel or concrete. Since many engineers aren't sure what aluminum alloys and products are available, how they're specified, or what their properties are, this course begins by familiarizing you with aluminum. Then, we address how to design aluminum structural members and connections. The course covers the types of structures aluminum is best suited for, aluminum products forms, the Aluminum Association's alloy and temper designation systems, the mechanical properties of aluminum, protecting against corrosion, tension members, compression members, local buckling, flexural members, fatigue, welded, bolted, and screwed connections, and the effect of welding on member strength. Sample design problems are worked using the Specification for Aluminum Structures published by the Aluminum Association. 10 hours.

1.0 CEUs. $549M/$649NM. AD11

The Basics of Designing with Wood

This course covers the basics and reviews examples of different wood structures. Special topics include specifying and using metal-plate connected trusses, timber bridges, and post-frame buildings. 3 hours.

0.3 CEUs. $150/$429.* L01

Corrosion Prevention and Control

Following an introduction to the scientific principles used to understand and describe corrosion, the course uses these principles to demonstrate examples of various types of corrosion and present practical methods for minimizing or preventing corrosion. It is especially useful to engineers of all types involved with the design, repair and maintenance of structures and equipment. 3 hours.

0.3 CEUs. $150/$369.* V97C

Design, Construction, and Renovation of Masonry Structures

This online course covers the basics of design and construction of various masonry structures. Special emphasis is given to concrete masonry walls, the most common type of structural masonry used today. The selected masonry provisions of ACI 530/ASCE 5/TMS 402 Building Code Requirements for Masonry Structures and those of the International Building Code are examined and augmented with commentary and must-have practical suggestions. The instructor illustrates and discusses the design details and construction techniques commonly used for load-bearing, shear-wall, and curtain-wall applications. Step-by-step design examples and reference materials are included. 12 hours.

1.2 CEUs. $659M/$759NM. M98

Design and Construction of a Concrete Frame Building

This program explores the interaction between engineering design and the techniques of modern construction for a four-story continuous concrete frame hospital. Specific emphasis is placed on the viewpoint of the constructor, along with a pictorial history of the construction of structural components. Among the topics covered are retaining walls, drilled piers and footings, columns, beams, walls, and slabs. In addition to construction issues, an approximate engineering analysis in conjunction with a conceptual review of the structural behavior of each component is presented. Presenters make generous use of physical and digital models to enhance visualization. 6 hours.

0.6 CEUs. $300/$899.* V07A

Design of Composite Beams Using LRFD

Fundamentals of cross section analysis and design of composite steel and concrete beams using the American Institute of Steel Construction (AISC) Load and Resistance factor Design (LRFD) Specification for Structural Steel Buildings are covered. The course emphasizes specification requirements and fundamental calculations of moment capacity and cross section rigidity at various levels of composite action. 6 hours.

0.6 CEUs. $300/$899.* W07

Design of Structural Steel Members Using LRFD

Fundamentals of design of structural steel members using the American Institute of Steel Construction's Load and Resistance Factor Design (LRFD) Specification for Structural Steel Buildings (1999) are covered. The course emphasizes a limit states view of the design process. An explanation of the common failure modes, or limit states, for which members must be designed and how the LRFD Specification addresses these limit states is the focus of the course. Analysis and design examples are used to illustrate the concepts. A fundamental background in structural analysis and design is assumed. This course is excellent for engineers seeking a review of the basic principles of steel design and for experienced structural designers who have not started using the LRFD Specification in daily practice. Specific topics covered include the design of tension members, compression members, and beams. 6 hours.

0.6 CEUs. $300/$918.* L04

Designing Modern Timber Bridges

This course examines the different types of timber bridge superstructures in use today, the basics of wood as an engineering material, and the different types of structural wood products, wood mechanical connections, and preservative treatments. Design procedures for wood construction are also reviewed. The course focuses on the design of two main types of timber bridge superstructures: 1) those composed of longitudinal girders with transverse decks, and 2) those composed of longitudinal decks and covers the use of sawn lumber and glued-laminated timbers in both of these main superstructure types. The course concludes with a discussion of issues related to timber bridge inspection, maintenance, and rehabilitation. 6 hours.

0.6 CEUs. $300/$899.* V06

Designing with Wood – Load and Resistance Factors

This course is an overview of 1996 Edition of LRFD Manual for Engineered Wood Construction and its Supplements. This course covers design procedures for components and for connections, and includes examples. 3 hours.

0.3 CEUs. $150/$429.* L03

Fundamentals of Earthquake Engineering

This online course is closely tied to the ASCE 7-05 and 2006 IBC seismic load requirements, and will benefit all structural engineers who would like to improve their earthquake engineering skills through mastery of the fundamental principles. It will be of value to engineers at all levels of experience. The course focuses on fundamental concepts, and is designed for practicing structural and architectural engineers, contractors, building officials, facilities managers, and educators. You will learn the cause and effect of earthquake ground motions; develop a feel for the dynamic behavior of structures; understand the principles of dynamic analysis of structures; understand why inelastic behavior and associated damage may be unavoidable; learn how to control damage through special detailing procedures, and develop a clear under-standing of the theory behind the complex building code provisions for earthquake resistant design. 10 hours.

1.0 CEUs. $549M/$649NM. EQ98

Reinforced Concrete Design – Part I Flexural Members

Fundamentals of design of reinforced concrete flexural members are covered. Focus is on design by the American Concrete Institute's Building Code Requirements for Structural Concrete 318-02 (ACI 318-02). Fundamental behavior of flexural members and the necessary design checks are presented. Examples of analysis and design of beams, one-way slabs, and retaining walls are used to illustrate the concepts. A fundamental background in structural analysis and design is assumed. 6 hours.

0.6 CEUs. $300/$918.* V01

Reinforced Concrete Design – Part II Columns

Focus is on design of reinforced concrete columns using the American Concrete Institute's Building Code Requirements for Structural Concrete 318-05 (ACI 318-05). Fundamentals necessary for understanding and verifying the output of typical design software and design aids are emphasized. Topics include: an introduction to strength design, behavior of tied and spirally reinforced columns, construction of axial load and moment interaction diagrams, strength reduction factors, use of interaction diagrams in design, shear resistance, biaxial bending, and an introduction to slenderness effects. 3 hours.

0.3 CEUs. $150/$459.* P21

Steel Framed Buildings: Practical Issues in Design and Renovation

This online course provides answers to a multitude of practical questions related to design and renovation of steel framed buildings. The main emphasis is on low- and mid-rise buildings framed with structural steel, but discussion includes related materials, such as open-web joists and lintels. The course will cover new construction, including design for lateral loads. Some recent changes in the 2005 AISC Specifications for Structural Steel Buildings and other authoritative publications are explained and illustrated with design examples. Topics of building renovation and retrofit for wind and seismic loads are also explored. The course covers the problems, evaluation methods, and various renovation techniques for beams, girders, columns, and connections, illustrated with design examples and case studies. 12 hours.

1.2 CEUs. $659M/$759NM. ST98

Structural Engineering Online Course Set

This online course package includes three on-demand online courses on Structural Engineering topics at a discounted rate of 25% off! The set includes:

- Design, Construction and Renovation of Masonry Structures
- Fundamentals of Earthquake Engineering
- Steel Framed Buildings: Practical Issues in Design and Renovation

See individual catalog listings for more Information on each course.

3.4 CEUs. $1,395M/$1,625NM. SC10

Structural Renovation of Buildings: Methods, Details, and Design Examples

This seminar-on-CD covers practical methods for upgrading all major types of building materials and structural systems – steel, concrete, masonry, wood, and pre-engineered buildings. It examines typical renovation provisions of building codes and the issue of renovation versus rebuilding. The must-have details for upgrading buildings for lateral loads and rehabilitation of the building envelope are included. Much of the seminar examines problems likely to be experienced by building structures and specific renovation techniques to remedy these problems. Structural and civil engineers, architects, facility managers, building officials, and contractors will benefit from this CD. Includes a copy of the text book with the same title. (Textbook; Newman, Alexander; 866 pages; hardcover). 14 hours.

1.4 CEUs. $695M/$795NM. X92

Sustainability

NEW PROGRAM

Fundamentals of Sustainable Engineering

This course will give you a framework for strategic design and implementation of sustainability. It will cover critical issues associated with the Triple Bottom Line approach to sustainable infrastructure development, which calls for the support of economic growth, social progress and environmental stewardship on all projects. Through photographs, diagrams, videos and discussions you will gain the body of knowledge required to design and deliver sustainable infrastructure projects. The course will also cover problems and issues associated with sustainable development, as well as the misperceptions. You will learn techniques for life cycle cost and benefit assessments, probabilistic and sensitivity analyses, benefit-to-cost ratios and comparing incommensurate benefits and costs. Case studies and examples are used throughout the course to highlight the concepts and incorporation of the Triple Bottom Line in real-world projects. 15 Hours.

1.5 CEUs. $695M/$795NM. FSE11

For general information on ASCE Continuing Education, call 1-800-548-2723

Transportation/ Highways

We offer On-Demand, Online Archived Webinars on many Transportation topics. By taking and passing a post-test, you will receive CEUs based on the course length.

Archived webinars on Transportation/ Highways topics include:

- Culvert Design for Fish Passages: Concepts and Fundamentals
- Culvert Design for Fish Passages: Design Steps and Examples
- Designing Bicycle Facilities
- Designing Streets for Residential Subdivisions
- High Capacity Transit Alternatives Analysis Process and Considerations
- Highway Safety Data Systems
- Improving Pedestrian Crossing Safety at Uncontrolled Locations
- Improving Safety at Railroad Highway Grade Crossings
- Innovative Designs for Improving Intersection Capacity
- Modular Pavement Technology and Current Directions
- Route Planning and Street Operations of Light Rail Systems
- Safety Aspects of Timing Traffic Signals

NEW TITLES ADDED MONTHLY!

For a complete listing and additional information, go to ***www.asce.org/archived-webinars***

NEW PROGRAM

Asphalt Binder Tests and Specifications

As a result of a considerable, nation-wide research effort to improve Hot Mix Asphalt (HMA) pavement performance, a Superior Performing Asphalt Pavement (Superpave) system was developed. A major component of the Superpave ideology was to improve asphalt binder performance so that both resistance to rutting during hot temperatures as well as resistance to cracking in cold temperatures would be improved. Binder tests were also elevated beyond the empirical tests used in the past to more appropriate performance-based tests. Climate data from weather stations across the continent were used to determine needed binder performance grades that would perform well under a wide range of temperature conditions. Pavements throughout the nation were selected and evaluated to develop a Long-Term Pavement Performance (LTPP) database that could be used by owner/agencies to determine the most appropriate binder for specific geographical locations. This training session will review previous binder tests, and explain the basis for the Superpave binder performance grading system. 2 hours.

0.2 CEUs. $150/$318.* V10K

Asphalt Pavement Preservation and Rehabilitation

This course will assist an engineer in the development of the most reliable and cost-effective rehabilitation alternatives for asphalt pavements. The course is broken into two units: pavement management concepts and pavement rehabilitation procedures. The first unit will address pavement management concepts at the project level, which will include an overview of pavement management, pavement structural and condition assessment, distress mechanisms for Hot Mix Asphalt and project evaluation. The second unit provides information on pavement rehabilitation through pavement maintenance techniques, surface rehabilitation procedures, recycling of asphalt pavements and asphalt overlays. 5 hours.

0.5 CEUs. $250/$725.* P20

NEW PROGRAM

Hot Mix Asphalt Compaction

Compacting Hot Mix Asphalt (HMA) mixtures to a satisfactory level of density is probably the most important criteria used by owner/agencies for extending the performance life of asphalt pavements. This course uses both lecture and problem-solving case studies to involve participants in discovering the importance of HMA compaction. Construction "Best Practices" will be discussed so participants will gain a working knowledge of how rollers should be operated in order to optimize the efficiency of the roadway compaction operation. 1 hour.

0.1 CEUs. $75/$159.* V10J

***Individual Price/Organization Price**

If purchased at the individual price, the course may be used solely by the individual for educational purposes. It may not be duplicated, sold, or rented to others. One certificate is included if purchased at the individual price. If purchased at the organization price, courses are under a limited duration agreement that allows for unlimited use for employees and/or members for one year. Certificates can be purchased through ASCE's Distance Learning Partner, Auburn University, for an additional charge if purchased at the organizational price.

NEW PROGRAM

Hot Mix Asphalt Delivery and Placement

In order to obtain a durable, smooth, long-lasting Hot Mix Asphalt (HMA) pavement, it is essential that the mix delivery and placement operations be performed according to "Best Construction Practices". Attention to detail is a recurring theme during the course lecture as participants discover the challenges involved in obtaining quality HMA pavements. Course materials cover all aspects of the HMA placement operation from the type of delivery trucks used to the various components of the paver and how they operate. An exam is offered that will review key elements in proper delivery and placement of HMA mixtures. 1 hour.

0.1 CEUs. $75/$159.* V10H

Roadside Design

This online course covers the gamut of roadside design engineering and includes a variety of charts, graphics, personal stories, photos, and text. The course will teach you how to select the right roadside device for various design conditions, as well as proper roadside construction and maintenance techniques. Also covered are the basics of roadside design, the clear zone, economics, roadside barriers, end treatments, crash cushions, bridge rails, median barriers, and work zones. 7 hours.

7.0 PDHs. $389M/$489NM. V58

Soils for Pavements

This practical course describes each important element of the soils aspects of road engineering for paved and unpaved roads. Topics include: What causes problems, the soil inputs to pavement designs, soil exploration for roads, soil stabilization, construction with soils, including QC/QA fixes for soil-related pavement problems and more. This course will give you a working knowledge of soil behavior, and the basics of geotechnical engineering for design of roads and pavements. What types of soils work best, which to avoid, and how to read soil reports are covered. The course prepares you to continue your own study of soil characteristics and parameters necessary for design in accordance with AASHTO and NCHRP guidelines. 6 hours.

0.6 CEUs. $300/$954.* V06H

Unpaved Low Volume Road Design: Construction and Maintenance

This course gives training in all aspects of unpaved roads. Construction procedures, maintenance, erosion control, choice of soils, stream crossings, surface treatments, and more. Emphasis is on cost-effective design and construction. The course is best suited for State DOTs, County Engineers, U.S./State Forest Service, U.S./State Parks departments, timber/mining industry engineers, professional engineers, consultants, and contractors. 9 hours.

0.9 CEUs. $450/$1,377.* 7V04K

P.E. Exam Review Online/CD Course

Provides Online/CD-ROM access for 1 year from date of initial purchase **$625M/$725NM**

In cooperation with the Boston Society of Civil Engineers Section (BSCES), ASCE and SmartPros have created this multimedia electronic learning course to help you prepare for the P.E. Exam. The course features seven of the nation's top civil engineering instructors. This is not a teaching course, it's a review course, a refresher, and this is reflected in its design. The topics are divided into modules, each presenting a series of problems in the format you will encounter them on the P.E. Exam. The course materials conform to the current P.E. Exam format and content, and now include the printed Construction Supplement, which covers theory and practice problems with step-by-step solutions for the practice problems.

The course starts with a demonstration exam problem. You can call on as much or as little help as you need to solve this problem, including getting the instructor (in video or audio) to walk you through the problem step-by-step. You will progress to a practice problem with minimal help available. Finally, you'll take a post-test, where you'll be on your own. Of course, the beauty of this type of electronic learning is that should you fail the post-test, you can simply go back and review the module again, and then re-take the post-test.

Course Topics: Construction Engineering; Geotechnical Engineering; Hydraulics & Hydrology; Sanitary and Environmental Engineering; Structures; and Transportation. Additional resources are included to help you prepare for Economics and Surveying questions. **P03**

*Please note, the P.E. Construction Supplement (CE08) is included when you order this product.

This product is not compatible with Windows Vista

P.E. Civil Engineering Construction Supplement: Theory, Problems and Solutions

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This printed supplement is a review course for the Construction portion of the Civil Engineering P.E. Exam. It includes theory and practice problems with step-by-step solutions for the practice problems. Module topics include: Site Design, Piles, Concrete Formwork, Concrete Mix Design, Construction Control and Safety, Stability of Temporary Cuts, Network Scheduling, Project Controls, Engineering Economics, Management of Construction Projects, Construction Contracts, and Construction Estimating. **CE08**

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ASCE's F.E. Exam Review Course contains multimedia presentations on twelve sections using interactive quizzes, audio, and animated slides. The material is presented in an interesting storyline, aimed specifically at the topics most likely to be tested on the F.E. Exam. Each section contains multiple-choice problems and answers and includes over 10 hours of course content. Students can hone their skills by timing themselves on dynamically generated practice tests, which can be taken over and over again to sharpen test-taking skills right up to the exam. The practice tests are immediately scored so students can monitor their progress and measure their improvement.

Course modules: Precalculus Math and Calculus; Chemistry: Stoichiometry, Reactions, Organic; Material Science: Crystals, Phase Diagrams, Heat Treatment; Ethics and Economics; Thermodynamics: Process, Cycles, Applications; Fluid Mechanics: Hydrostatics, Dynamics, Friction; Statics: Force Diagrams, Structures, Centroids, Beams, Machines; Dynamic: Kinematics, Angular Momentum; Strength of Materials: Stress/Strain, Beam Deflection; Electric Circuits; Automatic Control Theory. **Y27**

* This course is not compatible with Windows Vista

Through a partnership with Kaplan AEC Education, ASCE members receive 10% off printed engineering exam prep materials. To order these products, visit www.kaplanaecengineering.com and enter the promotional code ASCE05 at checkout.

Fundamentals of Engineering: F.E. Exam Preparation, 18th Ed. ~New Edition
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