

# Chemical Engineering

Training – Fall 2011



**1.800.843.2763**

**[www.asme.org/education](http://www.asme.org/education)**



# CONTENTS AND GENERAL INFORMATION

Chemical Engineering Essentials.....	2-5
Design and Materials .....	5
Fluids and Heat Transfer .....	6-7
Food and Pharmaceuticals .....	7
Legal Issues for Engineers.....	8
Licensure .....	9
Course Calendar .....	10-11
Instructor Bios .....	12-13
Managing People.....	14-15
Managing Projects .....	16-17
Piping and Pipelines.....	18-19
Process Safety .....	19-21
Separations .....	21
Solids Handling .....	22
In-Company Training .....	24
eLearning .....	25



AIChE, together with ASME (American Society of Mechanical Engineers), offers professional and technical training courses taught by industry experts at selected sites around the country.

If you are not already an AIChE member, we invite you to join today and immediately save money when registering for a course.

## Course Times

Registration starts at 7:30 a.m. Courses run from 8:30 a.m. to 5:00 p.m. unless noted otherwise. Breakfast is complimentary.

## Airline/Travel

ASME is not responsible for the purchase of non-refundable airline tickets or the cancellation/change fees associated with cancelling a flight.

**Please call to confirm that the course is running before purchasing airline tickets. ASME retains the right to cancel a course until three weeks prior to the scheduled presentation date.**

## Did you Get Your Confirmation Letter?

ASME confirms every course registration in writing. Call Janice Lucas at 212-591-7399, if you have not received your confirmation letter.

## Can't make your scheduled seminar?

If you are unable to attend your course, simply send a substitute or transfer to another course if space allows (contact ASME at 800-843-2763 to transfer). There is no charge unless there is a difference in course fee. However, cancellation on or after the first day of the course forfeits the full course fee. Please see our refund policy for more details.

## ASME Refund Policy

Cancellation made less than 14 business days prior to the course start date is subject to a \$200 administrative charge per course. Cancellation made less than five business days prior to the course start date forfeits the full seminar fee. Substitutions are welcome. Course cancellations must be received in writing via fax ONLY at 212-591-7143, attention Course Cancellation Department. Transferring to a course and then cancelling will be subject to a \$200 administrative charge per course.

## Course Fees/Payment

Confirmation of payment is required for all registrants to attend their respective course. Registrants whose credit cards are declined will be contacted by an ASME representative to confirm alternate payment options.

## Discounts? We have them.

**Team Discount:** Send three people to the SAME course and save 10%. Send two people to the SAME course and save 5%. Teams must register at the same time. Call 800-843-2763.

**Student Discount:** Full-time undergraduate students save 50%.

**Lifetime Member price Discount:** Lifetime members save 50%.

**Early Bird Discount:** Registration must be received one month prior to beginning date of course.

# CHEMICAL ENGINEERING ESSENTIALS

## Spreadsheet Power CH201 AICHe®

2 Days, 1.5 CEUs, 15 PDHs

This course covers problem solving strategies for spreadsheets, including elementary use of macros and Visual Basic (VBA) in Excel, solving methods for engineering equations, applied statistics in Excel, optimization calculations using spreadsheets, table-based operations and solving algebraic and differential equations.

### You Will Learn

- How to solve engineering problems faster and more accurately
- Solving algebraic equations; applied statistics interval estimation and hypothesis testing
- Optimization search techniques; flowsheet optimization
- A number of advanced calculating techniques

### Who Should Attend

Process & project engineers, systems engineers, engineering managers

### Instructors: David Clough and Miles Julian

Member price Early Bird: \$1,025 Standard: \$1,125

List price Early Bird: \$1,125 Standard: \$1,225

**\*\*Laptop is required for this course\*\***

## Excel Programming with VBA CH200 AICHe®

1 Day, 0.8 CEUs, 8 PDHs

This intensive hands-on course introduces the built-in programming capabilities of Microsoft Excel™ & Visual Basic (VBA). It covers macro recording; user-defined functions & Excel add-ins; programming fundamentals; spreadsheet-to-VBA communications; user interfaces; debugging, algorithms, decisions, loops, and modular programming.

### You Will Learn

- How to apply VBA programming to engineering & technical applications
- How to use Visual Basic Editor to examine VBA code
- Data Types in VBA: VBA algorithm structure, decisions, loops, and modular programming
- How to communicate with the spreadsheet and to connect Excel with other applications
- Specific debugging techniques using the Visual Basic Editor

### Who Should Attend

Process and project engineers, systems engineers, engineering managers

### Instructors: David Clough and Miles Julian

Member price Early Bird: \$645 Standard: \$745

List price Early Bird: \$745 Standard: \$845

**\*\*Laptop is required for this course\*\***

## Excel Programming/Spreadsheet Combo CH203

This course is a combination of "Spreadsheet Power" (CH201) and "Excel Programming with VBA" (CH200).

► **Take these courses as a combo and save up to \$445**

## Integrated Process Synthesis: CO<sub>2</sub> Emissions Reduction CH756 AICHe®

3 Days, 2.3 CEUs, 23 PDHs

This course covers analysis of current process for improvement (or synthesis of new process) based on minimal and/or readily available information, highlighting where further information is required. It also covers the development of decision-making criteria for comparative evaluation of different process options.

### You Will Learn

- How to use thermodynamics as a tool for rapid decision-making
- How to select process conditions from fundamentals
- How to use graphical tools for reactor and distillation synthesis
- Flowsheet selection and optimization

### Who Should Attend

Chemical design engineers, processes and manufacturing engineers in chemical and energy industries

### Instructors: Diane Hildebrandt & David Glasser

Member price Early Bird: \$1,425 Standard: \$1,525

List price Early Bird: \$1,525 Standard: \$1,625

## Fuels Blending Technology and Management CH751 AICHe®

3 Days, 2.3 CEUs, 23 PDHs

This course covers all technical, operational, modeling and economical aspects of fuels blending control and optimization systems. It includes an overview of refining, field equipment and operations, actual refinery machinery and analyzers, computer hardware and software, and model based tank quality prediction.

### You Will Learn

- The latest fuel blending technologies and how to manage them
- Process models, basic control and optimization strategy
- Advanced blend control and optimization systems
- Keys to successful & economical blending control project execution

### Who Should Attend

Refinery operators, engineers, operations professionals

### Instructor: Suresh Agrawal

Member price Early Bird: \$1,425 Standard: \$1,525

List price Early Bird: \$1,525 Standard: \$1,625

## Multi-Disciplinary Process Development CH757

AIChE<sup>®</sup>

2 Days, 1.5 CEUs, 15 PDHs

This course we will present a unique industrially proven approach to process development which encompasses decision making across various layers which include; business layer, chemistry layer, reaction/reactor layer, separations layer, heat recovery layer and the utility systems layer.

### You Will Learn

- Process development from the time a process chemistry is invented in the lab to the development of a commercial scale process
- Critical issues at each level on the development workflow
- The available technologies for solving problems and key information required

### Who Should Attend

Chemists, engineers and technology managers involved in the chemistry, design, development, scale-up, or production of new and existing chemical processes

**Instructors: Lionel O'Young and Vaibhar Kelkar**

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225

## Chemical & Bioengineering Fundamentals for Technical and Scientific Professionals CH024

AIChE<sup>®</sup>

3 Days, 2.3 CEUs, 23 PDHs

This course covers nearly all topics and issues practicing engineers, scientists and other technical professionals face in their research, process development & manufacturing careers. The course includes several in-class worksheets that illustrate the various fundamentals without requiring complex calculations.

### You Will Learn

- How heat and mass transfer, stoichiometry, reaction kinetics, process optimization and process economics are used by practicing chemical and bioengineering professionals
- Key principles of biochemical engineering and applied industrial microbiology
- How to quantify the technical and economic performance of individual unit operations for an entire plant

### Who Should Attend

Non-chemical engineers, scientists, and research technicians involved in chemical, food, biotech or pharmaceutical industries

**Instructor: Dale Gyure**

Member price	Early Bird: \$1,425	Standard: \$1,525
List price	Early Bird: \$1,525	Standard: \$1,625

## Introducing...

## ASME Assessment Based Courses

Get the Training You Need to Boost Your Skills:

- Ethics for Engineers
- Energy Choices
- Technical Writing for Engineers
- How to Get an "N" Stamp
- NQA-1—18 Requirements
- Total Quality Management
- Execution: How to Get Results
- Intro to ASME Codes & Standards
- Changing Organizational Culture
- Understanding Non-Linear Stamp Process
- Nanocoatings for Enhanced Thermal Engineering

ASME's new Assessment Based Courses are topical, short-length eLearning training programs covering subjects specifically designed to benefit engineers and technical professionals at all experience levels, and features:

FOR MORE INFORMATION, VISIT  
[go.asme.org/abc](http://go.asme.org/abc)

## Fuel Process for Fuel Cells by Microprocess Technology CH764

AIChE<sup>®</sup>

3 Days, 2.3 CEUs, 23 PDHs

This course deals primarily with fuel processing for fuel cells by microprocessing technology in particular with an emphasis on (a) hydrogen generation and (b) process intensification together with a concluding discussion on fine chemical manufacture. Participants gain insight into the characteristics of microreactors and microprocess engineering.

### Who Should Attend

Non-chemical engineers, scientists, and research technicians involved in chemical, food, biotech or pharmaceutical industries

**Instructor: Jochen Schuerer**

Member price	Early Bird: \$1,425	Standard: \$1,525
List price	Early Bird: \$1,525	Standard: \$1,625

## Essentials of Chemical Engineering for Non-Engineers CH710

AIChE®

3 Days, 2.3 CEUs, 23 PDHs

This course will help operations personnel communicate effectively with the process engineers and technical managers they collaborate with by gaining a basic understanding of the operational factors and design equations that are used by chemical engineers.

### You Will Learn

- Functions of key unit operations within your facility's processes
- Terminology used at your facility
- The chemical, physical principles, and design equations that form the basis for the design of equipment at your site

### Who Should Attend

Plant operators, chemists, and other engineers that work with Chemical Engineers

*Course includes the "Essentials of Chemical Engineering for Non-engineers" CD-ROM, an \$895 value.*

### Instructor: Jack Hipple

Member price	Early Bird: \$1,425	Standard: \$1,525
List price	Early Bird: \$1,525	Standard: \$1,625

## Principles and Practices of Chemical Reactor Design and Operations CH522

AIChE®

3 Days, 2.3 CEUs, 23 PDHs

This course covers the design of unconventional reactor configurations, even when equations for them are not available. Among those are semibatch reactors, reactors with a distributed feed, distillation reactors, and others. Determining optimal profit-based, rather than the typical yieldbased, design and operating conditions is analyzed.

*Appropriate software highlighting solved cases is provided to each attendee.*

### You Will Learn

- To identify the roles of all factors affecting chemical reactor operations
- To formulate design equations
- To combine the effects of heat-transfer on reactor operations

### Who Should Attend

Chemical engineers and other professionals engaged in design, operation & optimization of processes with chemical reactors

### Instructor: Uzi Mann

Member price	Early Bird: \$1,425	Standard: \$1,525
List price	Early Bird: \$1,525	Standard: \$1,625

## Heat Exchanger Design and Operation CH294

AIChE®

2 Days, 1.5 CEUs, 15 PDHs

This course covers recent developments in heat exchanger technology and diagnosis and correction of operating problems. The course details shell-and-tube heat exchanger technology, and how to minimize fouling and improve chances of trouble-free operation. Gasketed plate, spiral plate, and aircooled equipment are also covered.

### You Will Learn

- Thermal design of shell-and-tube heaters, coolers, column reboilers, and condensers.
- How to determine thermal performance and design attributes from a rating data sheet
- How to troubleshoot, diagnose, and correct heat exchanger operating problems

### Who Should Attend

Engineers who design, maintain, operate, or specify exchangers

### Instructor: Tom Lestina

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225

## Bioseparations: Principles, Applications and Scale-up CH401

AIChE®

2 Days, 1.5 CEUs, 15 PDHs

Learn how to make better decisions in selecting analytical methods to quantify bioproducts in bioseparation processes. This course will give you a better understanding of the basic science of each bioseparation unit operation, which will lead to correct decisions during bioseparations process troubleshooting and design.

### You Will Learn

- To correctly interpret data taken from the operations of bioseparations equipment
- Analytical Methods and filtration sedimentation
- Extraction, liquid chromatography and adsorption
- Precipitation, crystallization and drying
- How to select equipment for bioseparation processes that gives the desired results

### Who Should Attend


Chemical, biochemical and mechanical engineers, practitioners of bioseparations in the pharmaceutical, biotechnology and food industries

### Instructor: Roger Harrison

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225

# CHEMICAL ENGINEERING ESSENTIALS

## Essentials of Chemical Engineering for Non-Chemical Engineers

CD-ROM  ZAC006

AIChE®

This nine chapter course will help chemists, civil/mechanical/electrical/ industrial, and construction engineers, technical project managers, and scientists. This course offers a comprehensive overview of the function, principles, requirements, and operation of process equipment. Through-out the course professionals will learn key concepts so they will develop a deeper understanding of how chemical engineering relates to their disciplines. 15pdhs are also available upon successful course completion.

Member price \$895  
List price \$995

## Essentials of Chemical Engineering for Operators

CD-ROM  ZAC007

AIChE®

This course offers a comprehensive overview of the function, principles, requirements, and operation of process equipment. Throughout the course professionals will learn key concepts so they will develop a deeper understanding of how chemical engineering relates to their disciplines. AIChE course completion certificate available.

Member price \$700  
List price \$750

# DESIGN AND MATERIALS



## Continuing Education Units (CEUs)

Upon completion of your course, you will receive a certificate of completion indicating the number of continuing education units. One CEU is awarded for every 10 hours of classroom time. ASME Training & Development has been approved as an Authorized Provider by the International Association for Continuing Education & Training (IACET), 1760 Old Meadows Rd. Ste. 500, McClean, VA 22102. You must be present for the entire length of the course to earn a CEU certificate. Replacement certificates will be assessed an administrative fee of \$25.

## Turbo-Machinery Dynamics: Design and Analysis PD432



4 Days, 3 CEUs, 30 PDHs

This course presents a detailed and comprehensive treatment of operation and maintenance of turbo-machinery. Starting with the fundamentals of thermodynamics and cycle design, the latest trends in development and production of many different types of turbo-machines are covered.

### You Will Learn

- Fuel consumption, power output, and exhaust gas emissions, structural integrity and component life evaluation
- Operating loads, component deflections, rotor-to-stator rub
- Manufacturing and assembly methods, balancing of rotors
- Test verification of design parameters and fault diagnosis
- Failures arising from cyclical loads and thermal distortion and material requirements and selection

### Who Should Attend

Design and development engineers, plant engineers, field service engineers, technical and project managers

### Instructor: Abdulla Rangwala

Member price    Early Bird: \$1,775    Standard: \$1,825  
List price        Early Bird: \$1,875    Standard: \$1,925

## Heat Exchanger Design and Operation CH294

AICHE®

2 Days, 1.5 CEUs, 15 PDHs

This course covers different types and applications of heat exchangers and will give participants a working knowledge of recent developments in heat exchanger technology and in the diagnosis and correction of operating problems.

### You Will Learn

- Examine in detail shell-and-tube heat exchanger technology—with practical tips on how to minimize fouling and improve chances of trouble-free operation
- Gasketed plate, spiral plate, and air-cooled equipment
- Thermal design of shell-and-tube heaters, coolers, column reboilers, and condensers
- How to troubleshoot, diagnose, and correct operating problems, particularly distillation column reboilers and condensers

### Who Should Attend

Engineers engaged in plant operations, technical services, project design; or assignments involving heat exchanger sizing, specification, or operation

### Instructor: Tom Lestina

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225

## Centrifugal Pump Design and Applications PD349

ASME  
SETTING THE STANDARD

3 Days, 2.3 CEUs, 23 PDHs

This course concentrates on the hydraulic principles of centrifugal pumps as well as the mechanical considerations in centrifugal pump designs. Learn hydraulic theory as it applies to centrifugal pumps and criteria for proper selection of pumps.

### You Will Learn

- Centrifugal pump impeller design and how to evaluate various suction configurations and their impact on pump performance
- How to calculate shaft deflection and bearing loads on rotor assembly, shaft and key stresses, casting thickness, flange thickness and bolt requirements
- How to determine optimum speed for pump operation and select the proper pump type for each application
- Approximate head, capacity and efficiency values even before you have made a final pump selection

### Who Should Attend

Design engineers, mechanical engineers, product and project engineers

*Bring a calculator to all sessions.*

### Instructor: William Hayes

Member price	Early Bird: \$1,425	Standard: \$1,525
List price	Early Bird: \$1,525	Standard: \$1,625

## Pump and Valve Selection for Optimum System Performance PD171

ASME  
SETTING THE STANDARD

4 Days, 3 CEUs, 30 PDHs

This course provides an understanding of pumps, valves and how they interact for optimum system performance. Participants will learn how to make cost-effective decisions and get tips to avoid poor system operation.

### You Will Learn

- To select the right pump and valves for your application
- The optimum speed for application and how to determine system head losses
- To reduce equipment costs by proper selection of pumps and valves in the system
- To save energy dollars that are wasted on improperly selected valves and pumps

### Who Should Attend

Engineers, industrial and public works engineers and managers, contractor project managers and estimators; systems designers; operations and maintenance people

### Instructor: William Hayes

Member price	Early Bird: \$1,775	Standard: \$1,875
List price	Early Bird: \$1,875	Standard: \$1,975

## Two-Phase Flow & Heat Transfer PD624

NEW!

Participants in this course will gain a phenomenological understanding of two-phase flow and heat transfer in engineering processes and components, as well as an ability to compute flow and heat transfer for common situations. It approaches two-phase flow and heat transfer in a practical, qualitative way rather than as a graduate level treatment with complex calculations and esoteric situations. *Participants receive a copy of the textbook, Heat Transfer, (2nd Edition), by Anthony F. Mills.*

### You Will Learn

- Fundamentals of boiling • Boiling on external & internal surfaces
- Two-phase flow patterns & pressure loss • Two-phase flow with heat transfer • Critical heat flux and burnout
- Flow instability in two-phase systems • Cavitation
- Measurements in two-phase flows

### Who Should Attend

Engineers working in an industrial environment with two-phase systems

### Instructor: Dyer Harris

2 Days, 1.5 CEUs, 15 PDHs

Member price	Early Bird: \$1,075	Standard: \$1,175
List price	Early Bird: \$1,175	Standard: \$1,275

*Also available online Z1140 Member price \$595/List price \$695*

# FLUIDS AND HEAT TRANSFER

## Industrial Fluid Mixing CH090

2 Days, 1.5 CEUs, 15 PDHs

This course provides a broad survey of the most recent developments, newest equipment, and emerging design concepts in the field of fluid mixing.

### You Will Learn

- To compare performance characteristics of the new fluid foil impellers with models of traditional design
- How to appropriately apply Laser Doppler Velocity (LDV) data and Computational Fluid Dynamics (CFD)
- Analyze a variety of key geometric variables, including tank shape, impeller spacing, and baffles
- Scale up and scale down by using practical proven techniques of meeting geometrical similarity

### Who Should Attend

Directors of engineering, research, process engineers mechanical equipment specialists, technicians, development and design project engineers

**Instructor: W. Roy Penney, Ph.D.**

Member price    Early Bird: \$1,025    Standard: \$1,125  
List price        Early Bird: \$1,125    Standard: \$1,225

## Fluid Mixing Technology for Operators CD-ROM ZAC005



Operators will gain an excellent understanding of mixing theories and how they work in today's mixing technology without getting too product specific. At the end of each chapter is a quiz to test retention. AIChE course completion certificate available.

Member price \$700

List price \$750

## Industrial Fluid Mixing for Engineers CD-ROM ZAC004



This course covers fundamentals in mixing theory including a section on scale-up, practical applications to mixing technology and advanced topics such as solid-liquid process. Engineers gain an excellent understanding of the fundamentals of mixing and how to apply the right technology to the mixing process. 9 pdhs are available upon successful course completion.

Member price \$895

List price \$995

# FOOD AND PHARMACEUTICAL

## Crystallization Operations CH110

2 Days, 1.5 CEUs, 15 PDHs

This course provides an overview of basic principles of crystallization and precipitation and covers how to apply the fundamentals of crystal growth and nucleation to industrial processes.

### You Will Learn

- How to apply the fundamentals of crystal growth and nucleation to industrial processes
- To develop methods for manipulating crystal size distribution, morphology, and purity
- How to use case studies to examine special operating problems

### Who Should Attend

Process engineers, development and research engineers, engineering managers

**Instructor: Wayne Genck**

Member price    Early Bird: \$1,025    Standard: \$1,125  
List price        Early Bird: \$1,125    Standard: \$1,225

## Bioseparations: Principles, Applications and Scale-up CH401

2 Days, 1.5 CEUs, 15 PDHs

The course covers methods of bioseparation including filtration, sedimentation, extraction liquid chromatography and adsorption precipitation, crystallization, and drying. It also covers data interpretation, proper equipment selection, and successful scale-up bioseparation processes.

### You Will Learn

- The basic science of each bioseparation unit operation
- How to make better decisions during bioseparations process troubleshooting and design
- Analytical methods, filtration sedimentation, extraction and liquid chromatography and adsorption
- Precipitation, crystallization and drying

### Who Should Attend

Process engineers, scientists, business development professionals

**Instructor: Roger Harrison**

Member price    Early Bird: \$1,025    Standard: \$1,125  
List price        Early Bird: \$1,125    Standard: \$1,225

# Introducing...

## ASME Assessment Based Courses

### Get the Training You Need to Boost Your Skills:

- Ethics for Engineers
- Energy Choices
- Technical Writing for Engineers
- How to Get an "N" Stamp
- NQA-1 – 18 Requirements
- Total Quality Management
- Execution: How to Get Results
- Intro to ASME Codes & Standards
- Changing Organizational Culture
- Understanding Non-Linear Stamp Process
- Nanocoatings for Enhanced Thermal Engineering

ASME's new Assessment Based Courses are topical, short-length eLearning training programs covering subjects specifically designed to benefit engineers and technical professionals at all experience levels.

Each self-paced and highly affordable web-based training course features:

- A series of convenient self-study modules
- End-of-module assessment tests
- Flash files with audio commentary and review questions
- ASME Certificate and Professional Development Hours (PDHs) awarded for successful completion of all modules and exams

For more information go to: [www.asme.org/education/courses/abc](http://www.asme.org/education/courses/abc)

Check back to our Web site often. We are constantly adding to our course listings.



## LEGAL ISSUES FOR ENGINEERS

### Professional Responsibility Ethics & Legal Issues PD532 2 Days, 1.5 CEUs, 15 PDHs



This course covers domain 8 of the EMCI BOK and is directed at engineering managers who have a responsibility to ensure adherence to professional standards and regulatory requirements

#### You Will Learn

- Regulatory requirements, codes, and standards
- Business contract, patent, copyright, and trademark laws (intellectual property)
- U.S. and international codes, standards, and regulations
- Professional codes of ethics; professional liability
- Company-specific policies and procedures

#### Instructor: Terry Trimper-Jones

Member price	Early Bird: \$1,075	Standard: \$1,175
List price	Early Bird: \$1,175	Standard: \$1,275

Also Available online Z84PR1



Member price \$595 List price \$695

### ASME Books of Interest

#### Unwritten Laws of Engineering- Revised and Updated Edition Package of Ten

Packed with contemporary examples, this new volume is a must for those entering the engineering field or those interested in improving their professional effectiveness.

by James G. Skakoon and W.J. King

Order No. 80162S Price: \$77.00

#### Technical Writing A-Z: A Common- sense Guide to Engineering Reports and Theses (US ED) Package of Ten

Order No. 80236S Price: \$205.00

## **Fundamentals of Engineering (FE) FE Exam Prep Lecture CD-ROM and Online Review Questions ZFELCD**

### **CD-ROM and online review questions**

Recorded live lectures on all FE (EIT) subjects. The lectures are indexed so you can either review from start to finish or browse the fundamentals of engineering content for areas you need to brush up on. More than ten hours of audio material on all relevant subject areas.

In addition to the prep lectures you also have access to the FE Exam Review Online course for 6 months. This course contains lecture slides and more than 230 practice questions in a convenient online format.



**Member price \$250 List price \$250**

## **FE Review Online Self-Study ZFENSS**



### **Online Self-Study Course**

Topics covered include:

Thermodynamics, Computer, Dynamics, Electric Circuits, Engineering Economics, Ethics, Fluid Mechanics, Material Science, Mathematics, Mechanics of Materials, Statics, Chemistry.



**Member price \$195 List price \$295**

## **Principles and Practice of Engineering (PE) Professional Engineer License (PE) Exam Prep on DVD - Review Course ZVD994**



### **16 DVDs**

ASME PE Exam Review Course on 16 DVDs covers all the topics you are expected to know on the most recent PE License exam. Covers: Engineering Principles, Economics, Project Management, Ethics, and Codes & Standards, Principles of Machine Design and Materials, Hydraulics and Fluids, Energy Conservation/Power Systems: Vapor and Gas Power Cycles, HVAC and refrigeration: principles, HVAC and Examination, Machine Design, Vibration Analysis, Machine Design Components, Thermodynamics, Hydraulics/ Pneumatics, Heat Transfer and Power Plants



**Member price \$545 List price \$645**



## **ASME In-Company Training**

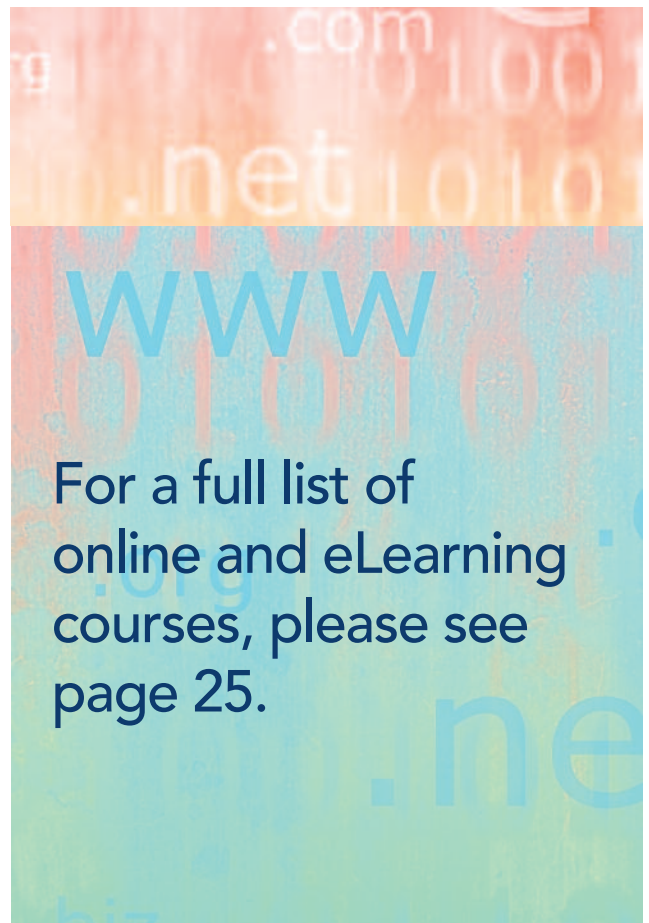
Select from any of our courses to create a customized training program delivered to your company's site, anywhere in the world.

- Save on travel expenses
- Customize subject to your specific needs
- Meet your challenges head-on with hands-on workshops
- Gain expertise from real-world situations that bridge theory with practical applications

GET MORE INFORMATION: call Olga Lisica  
at 1.212.591.7843 or [lisicao@asme.org](mailto:lisicao@asme.org).  
or visit [go.asme.org/corporate3](http://go.asme.org/corporate3)

### **ASME Training and Development**

Setting the Standard for Sharing Engineering Knowledge



# FALL 2011 COURSE CALENDAR

CHEMICAL ENGINEERING ESSENTIALS	September	October	November	December
CH522 Principles & Practices of Chemical Reactor Design & Operations	26-28 Las Vegas			
CH751 Fuels Blending Technology and Management	26-28 Las Vegas			
CH756 Integrated Process Synthesis: CO2 Emissions Reductions		10-12 Denver		
CH764 Fuel Process for Fuel Cells by Microprocess Technology				
CH200 Excel Programming with VBA			30 San Diego	
CH201 Spreadsheet Power			28-29 San Diego	
CH203 Excel Programming/Spreadsheet Combo			28-30 San Diego	
CH757 Multi-Disciplinary Process Development: From Lab to Plant				5-6 Atlanta

DESIGN AND MATERIALS	September	October	November	December
PD432 Turbo Machinery Dynamics: Design and Analysis		10-13 Denver		

FLUIDS AND HEAT TRANSFER	September	October	November	December
CH090 Industrial Fluid Mixing		13-14 Denver		
CH294 Heat Exchanger Design and Operation		13-14 Denver		

FOOD AND PHARMACEUTICAL	September	October	November	December
CH024 Chemical & Bioengineering Fundamentals for Technical and Scientific Professionals		10-12 Denver		
CH110 Crystallization Operations			14-15 Orlando	

GAS TURBINES	September	October	November	December
PD115 The Gas Turbine: Principles and Applications		27-28 Houston		

LEGAL ISSUES FOR ENGINEERS	September	October	November	December
PD532 Professional Responsibility, Ethics and Legal Issues	29-30 Las Vegas			

MANAGING PEOPLE	September	October	November	December
PD531 Leadership and Organizational Management	26-27 Las Vegas			
PD575 Negotiation Techniques for Engineers	29-30 Las Vegas			
PD475 The New Engineering Manager: Moving from Technical Professional to Manager		10-11 Denver		
PD512 Engineer as Coach		12-13 Denver		
PD506 Research and Development Management			14-16 Orlando	
PD591 Developing Conflict Resolution Best Practices	29-30 Las Vegas			

# FALL 2011 COURSE CALENDAR

MANAGING PROJECTS	September	October	November	December
CH139 Conceptual Development and Capital Cost Estimating	26-27 Las Vegas		28-29 San Diego	
CH140 Project Evaluation: Operating Cost Estimating and Financial Analysis	28-29 Las Vegas		30-1 San Diego	
CH758 Project Evaluation and Cost Estimating <i>Combo Course</i>	26-29 Las Vegas		28-1 San Diego	
CH138 Project Management for Chemical Engineers			17-18 Orlando	
PD513 TRIZ The Theory of Inventive Problem Solving	26-28 Las Vegas			

PIPING AND PIPELINES	September	October	November	December
PD013 B31.1 Power Piping Design and Fabrication	26-30 Las Vegas	28-2 San Diego		
PD391 ASME B31.4 Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids	28-29 Las Vegas			
PD401 The Layout of Piping Systems and Process Equipment		10-12 Denver		
PD014 B31.3 Process Piping Design		24-27 Houston		
PD410 Detail Engineering of Piping Systems			14-16 Orlando	

PROCESS SAFETY	September	October	November	December
CH034 Combustible Dust Hazards: Dust Explosions	29-30 Las Vegas	8-9 Atlanta		
CH762 Control System Techniques in Equipment Design and Operations	29-30 Las Vegas			
CH157 HAZOP Studies and other PHA Techniques for Process Safety and Risk Management			14-16 Orlando	
CH500 Fundamentals of Process Safety			17-18 Orlando	
CH754 Advanced Concepts for Process Hazard Analysis			17-18 Orlando	
CH759 HAZOP Studies, Other Hazard Evaluation Procedures and Advanced Concepts for Process Hazard Analysis <i>Combo Course</i>			14-18 Orlando	
CH173 Emergency Relief Systems (ERS) Design Using DIERS Technology			30-2 San Diego	
CH501 PSM: Requirements and the Development of Management Systems			28-30 San Diego	

SEPARATIONS	September	October	November	December
CH004 Distillation in Practice			14-16 Orlando	

SOLIDS and HANDLING	September	October	November	December
CH032 Flow of Solids in Bins, Hoppers, Chutes and Feeders		11-12 Denver		6-7 Atlanta
CH033 Pneumatic Conveying of Bulk Solids		13 Denver		6-8 Atlanta
CH761 Producing Quality Powder Products			28-29 San Diego	
CH763 Particle and Bulk Solids Characterization Technology				5-6 Atlanta

# INSTRUCTOR BIOS

**Suresh S. Agrawal, Ph.D.**, is a veteran of more than 25 years in senior positions with leading chemical, oil and gas companies, Agrawal is founder and president of Offsite Management Systems LLC. He has developed and installed innovative and technologically advanced automation software products, as well as integrated solutions for the automation of offsite operations.

**Gwenn C. Carr** is a professional educator. She has been a project manager for several Fortune 100 companies. She has also been a global projects leader for Price-Waterhouse-Coopers and The Pegasus Organization. The author of numerous articles on project management, Carr is a frequent presenter at national project management seminars and professional development days.

**David E. Clough, Ph.D.**, has successfully taught chemical engineers how to apply and use spreadsheets for more than 20 years. He is currently Professor of Chemical Engineering at the University of Colorado, Boulder, where his special areas of expertise are applied computing in chemical engineering, process control, and applied statistics.

**Robert N. D'Alessandro** has been director of the Technology and Process Department at Evonik Degussa Corporation since 1991. He is a registered professional engineer in the State of Alabama. D'Alessandro has been an active member of the DIERS Users Group since its inception in 1986. He is chairman of the multi-company committee for preparing the 2nd Edition of the CCPS Guidelines for Pressure Relief and Effluent Handling Systems and on the editorial board of Process Safety Progress, a peer reviewed journal published by the AIChE. He is the author of many publications on emergency relief systems and an active member of AIChE.

**Gary Englehardt** has spent more than 30 years as a project engineer, project manager, manager of project managers, and consultant. He has helped companies in the process, manufacturing, and consulting industries create project management programs from scratch or function more efficiently.

**John P. Farone** is a Distillation Consultant with over 40 years of industry experience in process separations, process simulation, and equipment design. He specializes in the practical design and operation of trayed and packed distillation towers and their internals. Farone is an independent consultant to Fractionation Research Inc. (FRI) and the Separations Research Program (SRP) at The University of Texas at Austin. He also currently serves as a consultant providing expertise to the chemical and other industrial processes. He teaches a Distillation in Practice Course and has taught many courses throughout the years to many young as well as experienced engineers over his engineering career. He retired in 2004 from The Dow Chemical Company after 36 years of process engineering specializing in the areas of distillation and stripping. Farone holds a BSChE and MSChE in Chemical Engineering from the University of Florida.

**Harold G. Fisher** retired as a principal engineer from the Process Safety Technology Group of Union Carbide corporation after over 40 years, during which time he worked in production engineering and safety engineering/emergency relief system design.

**Wayne J. Genck, Ph.D.**, is a recognized expert in crystallization and precipitation. He is president of Genck International, where he consults on additives, caking, design, impurities, mixing, polymorphism, centrifugation/ filtration, drying, and scale-up. Genck is the author of the crystallization chapter of McGraw-Hill's Handbook of Separation Techniques for Chemical Engineers.

**Dale Gyure, Ph.D.**, is currently a consultant to the pharmaceutical and specialty chemical industries. Gyure's most recent assignments involved bioprocessing, engineering design and construction of sanitary and pharmaceutical facilities, inspection and audits of pharmaceutical and specialty chemical manufacturing facilities.

**Dyer Harris, Ph.D., P.E.**, is currently a Senior Consulting Engineer with The Warren Group and manager of the Wilmington office. He has over thirty years of experience in industrial thermal systems analysis, heat exchangers, process equipment, two-phase flow, and HVAC. As a research engineer for Dupont at the Savannah River Site (SRS), Dr. Harris specialized in heat transfer at high thermal

flux in reactors and heat transfer related to nuclear waste processing. As a consulting engineer he analyzes, designs and troubleshoots heat treatment processes for various industries. Dr. Harris has been an adjunct instructor in thermodynamics and heat transfer for the University of South Carolina-Aiken, Villanova University and currently the University of Delaware

**Roger G. Harrison** has worked on bioseparations at both Upjohn and Phillips Petroleum. Currently on the faculty of the University of Oklahoma, he is the primary author of the widely-used textbook, Bioseparations Science and Engineering.

**John J. Hauser** is the principal engineer and president of PROSAF Inc. He has successfully helped clients for over 19 years in the fields of emergency relief system design, process safety and safety instrumented systems. He earned his BSChE degree from Carnegie-Mellon University. Hauser is a registered professional engineer in Pennsylvania, Texas and Illinois. He has been involved with DIERS since 1986 and serves as the ERS Design for Fire Committee chair. He is currently on the book writing committee for the CCPS: Guidelines for Pressure Relief and Effluent Handling, 2nd Edition. He is a life member of AIChE.

**Jack Hipple** is a principal of Innovation-TRIZ and trains clients in state-of-the-art problem-solving, innovation, and creativity methods. A veteran of 35 years in the chemical and materials industries. At Dow Chemical he was responsible for global chemical engineering research and the company's Discovery Research program.

**James E. Huff, Ph.D.**, is principal, Huff Consulting Services. A Fellow of AIChE and a retired Dow Chemical Company Associate Process Consultant, Huff has been active in the DIERS program since its inception, serving as Chairman of the DIERS Relief System Hydrodynamics and Safety Valve Stability/Capacity Technical Advisory Committee, and the Users Group Technology Committee.

**Karl Jacob** is fellow/technical leader for solids processing in engineering sciences at The Dow Chemical Company. He is a chemical engineering graduate of Case Western Reserve University. Jacob is founder of the Solids Processing Lab at Dow and for the last two decades has worked on a vast array of particle technology problems, with particular expertise in silo/hopper design, powder mechanics, pneumatic conveying, particle engineering and drying. He is member of AIChE and past chair of the Particle Technology Forum.

**Kerry Johanson** began his career in powder flow and materials handling as a summer lab technician with Jenike & Johanson in Billerica, Massachusetts during his high school and undergraduate years. After receiving his bachelor's degree, he spent 14 years with JR Johanson, Inc., in San Luis Obispo, California, eventually serving as chief technical officer. He later received his Ph.D. in chemical engineering from Brigham Young University. In 2000, he moved to Florida and divides his time researching at the University of Florida PERC and serving as the chief operations officer for Material Flow Solutions, Inc. He has authored more than 30 technical papers that have been published worldwide. Johanson holds P.E. licenses in Florida and Utah and is an active member of AAPS, AIChE and ASTM.

**Robert W. Johnson** is a chemical engineer who has conducted hazard analysis since 1978 and has taught process safety continuing education courses since 1986. He was primary author of CCPS' *Guidelines for Hazard Evaluation Procedures, Third Edition*. Mr. Johnson is a Fellow of AIChE, a past chair of the AIChE Safety & Health Division, and president of the Unwin Company consultancy. He has held senior engineering positions at Hercules, Du Pont, and Battelle.

**Miles Julian** spent 41 years with DuPont. Today, he is a widely known consultant throughout the United States and Europe in the areas of engineering evaluations and methanol technology.

**Vaibhav Kelkar** is a principal engineer at ClearWaterBay Technology. He has several years of process development experience, with special emphasis on reactor synthesis and development. Kelkar holds a PhD in Chemical Engineering from the University of Massachusetts Amherst, Amherst, MA, USA.

# INSTRUCTOR BIOS

**Brian D. Kelly, P.E.**, is principal of Bririsk Consulting, Canada. He has 31 years of technical and management experience in the oil industry, having held positions responsible for engineering, project development, plant operations, and loss prevention.

**Carolyn Kolovich** began her career at Kiefner & Associates 10 years ago after graduating from Ohio State University with a degree in Mechanical Engineering. During her time at Kiefner and Associates, she has been involved in many aspects of pipeline integrity including in-line inspection analysis, integrity management planning and defect assessment. She has been a member of the ASME B31.4 committee for the past

**Thomas G. Lestina, P.E.**, is a 20-year veteran of fluid system analysis and troubleshooting projects, Lestina is currently responsible for all technical support, contract heat transfer evaluations and training offered by Heat Transfer Research Inc. He is chair of the technical committee for the ASME Performance Test Code for Single Phase Heat Exchangers.

**Uzi Mann, Ph.D.**, is the creator of a unifying and dimensionless methodology to design chemical reactors, Mann is currently professor of chemical engineering at Texas Tech University. He was recently invited to write the chapter on chemical reactor technology for the 7th edition of the renowned Kirk-Othmer's Encyclopedia of Chemical Technology (published in 2007).

**Eric Maynard** has successfully designed handling systems for hundreds of bulk solids. His efforts have been used in the coal, chemical powders, food products, and pharmaceuticals industries. Currently a senior project engineer and the education coordinator for Jenike & Johanson, Inc., Maynard lectures frequently on bulk solids handling.

**Lionel O'Young** is president and co-founder of ClearWaterBay Technology, the Process Development Company. He has over 15 years of experience in process synthesis and development with special emphasis on conceptual process design. Before founding CWB Tech, O'Young worked with Mitsubishi Chemical Corp., Union Carbide Corp., and Linhoff March, in a variety of engineering and management positions. He has several process patents to his credit, and is the recipient of AIChE's Computing Practice Award (2007). O'Young holds a PhD in Chemical Engineering from the University of Manchester (formerly UMIST), Manchester, UK.

**W. Roy Penney, Ph.D.**, worked for more than 25 years with leading industrial companies such as Phillips Petroleum, Monsanto, AE Slaty Co., and Henkel Corporation. The author of more than 40 technical publications and the creator of numerous computerized mixing equipment design programs, he is currently professor of chemical engineering at the University of Arkansas.

**Herman Purutyan** is the Chief Executive Officer at Jenike & Johanson. Herman has designed reliable handling systems for a wide range of materials for food, pharmaceutical and chemical industries. He lectures frequently on the subject at ASME/AIChE's continued education series, as well as at in-house courses to companies. He is a member of ASME Structures for Bulk Solids committee. He has published numerous articles on the field of bulk solids handling. He is the holder of two patents. Herman received his Bachelors and Masters of Science degrees in Mechanical Engineering from Worcester Polytechnic Institute in Worcester, Massachusetts, and his MBA from Babson College in Wellesley, Massachusetts.

**A.S. (Abdulla) Rangwala, P.E.**, is a 30-year veteran in mechanical design and structural dynamics of compressors and gas turbines for aircraft engines, and steam and gas turbines for power plant applications. Currently technical director of the Machinery Dynamics Group of the Center for Engineering Technology, Rangwala is the author of the book, Turbo Machinery Dynamic, Design and Operation. He was also adjunct professor at Cincinnati State Technical College.

**Jochen Schuerer, Dipl.-Ing.**, received his degree in process chemical engineering from the Institute of Technology Leuna-Merseburg. He was employed as a research engineer in the potash industry (Kombinat KALI in the former Eastern Germany), involved in the development of solution mining technologies and

fabrication plants for salt solution processing. Schuerer also worked as a process engineer involved with the development of new methods to prevent salt pollution of ground and surface water for K-UTEC Salt Engineering Company in Germany. He worked at IMM in Mainz, in the Department of Chemical Process Engineering under the direction of one of the leading experts in microprocessing technologies. Currently he is a senior scientist at IMM in the Department of Energy Technology and Catalysis Department and is primarily responsible for leading the fuel processing evaluation group together with a secondary function in the area of process safety. Schuerer has presented talks at many worldwide conferences and has 10 scientific publications.

**Adrian L. Sepeda, P.E.**, is the former director of health, environmental, and safety risk management for Occidental Chemical Corporation, Sepeda now manages his own process safety and risk management consulting firm.

**D. Arthur Shaw, Ph.D., P.E.**, is a principal engineer and partner at ioMosaic Corporation. Before joining ioMosaic, he worked at Monsanto Corporation for 28 years. He has been involved with the Design Institute for Emergency Relief Systems (DIERS) having served as chairman of the Mathematical Modeling of ERS Committee of the DIERS Users Group.

**Remi Trottier, Ph.D.**, is a research scientist in the solids processing discipline of engineering sciences at The Dow Chemical Company. He has over 20 years of industrial experience in particle characterization, aerosol science, air filtration and solids processing technology. Trottier has authored some 20 papers and has served as an instructor for several short courses on particle characterization. He received his Ph.D. in chemical engineering from Loughborough University of Technology, UK, and his master's and bachelor's degrees in applied physics from Laurentian University, Sudbury, Ontario, Canada.

**Thomas Troxel** is a Vice President at Jenike & Johanson. Tom has been intimately involved in many aspects of consulting & research activities on a wide range of projects including flow properties testing, modeling, blending, pneumatic conveying and fluidization. He has been a major force behind the expansion of services in the areas of mechanical design engineering and supply of custom built equipment. Mr. Troxel has published numerous articles & papers in the field of bulk solids handling, and lectures frequently on the subject both through professional organizations, such as ASME/AIChE, as well as to companies. Thomas received a B.S. in Engineering Science from California Polytechnic State University (Cal Poly) in 1981, graduating as the Outstanding Senior in the Engineering Science program.

**Erdem Ural, Ph.D.**, is a well known combustible dust expert with over 25 years of experience. He has worked on research, litigation, insurance, protection, testing and regulation aspects of combustible dust problems.

Dr. Ural published numerous papers in his field, and is an author of the Explosion Prevention and Protection chapter of the NFPA Handbook of Fire Protection. He is the chairperson of the ASTM committee for Flammability and Ignitability of Chemicals, and serves on a number of Combustible Dust Safety committees including those responsible for NFPA 68, NFPA 69, NFPA 85, NFPA 91, NFPA 484, NFPA 654 and NFPA 664.

Dr. Ural is twice the recipient of the Bill Doyle Award for the best paper presentation at the Loss Prevention Symposium. He also received an outstanding achievement award from FM Global.

**John Williams, Ph.D., P.E.**, has spent more than 20 years in the process industry. A veteran of Monsanto, Babcock & Wilcox, and major pharmaceutical manufacturers, he has worked extensively in project conceptualization and analysis, plant design, process expansions, and plant retrofits.

## Research and Development Management PD506



3 Days, 2.3 CEUs, 23 PDHs

Managing an R&D organization is largely the art of integrating the efforts of diverse, creative, intelligent, and independent individuals. The ideas presented in this course consist of the condensed works of a multitude of experts focusing on ways to improve the productivity of R&D and foster excellence and innovation in organizations.

### You Will Learn

- The innovation process in an effective R&D organization
- Ingredients of a successful technology transfer process in an R&D atmosphere
- To effectively contribute to the management and leadership layers in their corporation

### Who Should Attend

Managers, supervisors, and team/group leaders engineers, project managers, and other technical personnel

### Instructor: Bruce Chehroudi

Member price    Early Bird: \$1,425    Standard: \$1,525  
List price        Early Bird: \$1,525    Standard: \$1,625

## Negotiation Techniques for Engineers PD575



2 Days, 1.5 CEUs, 15 PDHs

This course goes a step beyond tactical interaction to help you begin to build truly win-win, long-term relationships through the art of influence, persuasion, and rapport.

### You Will Learn

- Reasons negotiators fail and the purpose of competition
- To overcome any objection and get results through effective closing techniques
- To establish style versus substance for greater results
- The use of engineering and technical skills for more effective management and negotiation outcomes

### Who Should Attend

Engineers, technical professionals, project managers, business development professionals

### Instructor: Derrick Chevalier

Member price    Early Bird: \$1,075    Standard: \$1,175  
List price        Early Bird: \$1,175    Standard: \$1,275

## The New Engineering Manager: Moving from Technical Professional to Manager PD475



2 Days, 1.5 CEUs, 15 PDHs

This program focuses on the movement from technical professional and/or engineer to supervisor or team leader.

### You Will Learn

- How to improve team performance and commitment
- Encourage employee initiative and avoid grievances, complaints and legal problems
- Increase your communication and leadership skills
- Motivate the underachiever and get outstanding team performance
- Mediate disputes between employees
- Develop a personal plan for success

### Who Should Attend

Current and aspiring supervisors, managers, team leaders and technical professionals who seek a solid foundation in management skills and techniques

### Instructor: Gary Dichtenberg

Member price    Early Bird: \$1,075    Standard: \$1,175  
List price        Early Bird: \$1,175    Standard: \$1,275

## Engineer as Coach PD512



2 Days, 1.5 CEUs, 15 PDHs

Successful coaches need to empower others to develop goals and achieve their personal and organizational objectives. Learn to identify coaching opportunities and uncover potential barriers.

### You Will Learn

- To evaluate your coaching style and tactics for motivating others
- To use questioning techniques to promote independent thinking
- How to “coach” one’s peers
- How to recognize and improve skill deficiencies in others
- How to counsel employees about personal issues that affect job performance

### Who Should Attend

Managers and project leaders at all levels

### Instructor: Gary Dichtenberg

Member price    Early Bird: \$1,075    Standard: \$1,175  
List price        Early Bird: \$1,175    Standard: \$1,275

## Developing Conflict Resolution Best Practices PD591



2 Days, 1.5 CEUs, 15 PDHs

This course teaches how to minimize and resolve conflicts with co-workers, partners and business counterparts by providing simple, effective tools and techniques for handling conflict and improving interpersonal relationships.

### You Will Learn

- The nature of conflict and recognize positive versus negative conflict
- Elements of effective communication
- To recognize vicious cycles
- How to assert yourself respectfully
- Methods for reducing tensions and resolving conflicts

### Who Should Attend

This course is for anyone who works in a group setting, regardless of level

### Instructor: Marcus Goncalves

Member price    Early Bird: \$1,075    Standard: \$1,175  
List price        Early Bird: \$1,175    Standard: \$1,275

## Leading Individuals and Engineering Project Teams PD531



2 Days, 1.5 CEUs, 15 PDHs

This course covers all the 'soft skills' required to run a successful engineering project team including working with cross functional teams, managing expectations and performance, conflict resolution, and strategies for changing scope.

### You Will Learn

- Supervisory skills and recruitment, selection and compensation practices
- Performance management, coaching and motivation and team processes
- Conflict resolution techniques and negotiation strategies
- Managing a diverse workforce and representing management to direct reports

### Who Should Attend

Engineers and technical professionals working or soon to be working in teams in a supervisory capacity

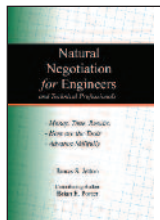
### Instructor: Rita Rizzo

Member price    Early Bird: \$1,075    Standard: \$1,175  
List price        Early Bird: \$1,175    Standard: \$1,275

## ASME Books of Interest

### Natural Negotiation for Engineers and Other Technical Professionals

by James S. Jetton, Contributing Author: Brian E. Porter



This is the latest volume in the popular Technical Manager's Survival Guides book series. Follow these instructions, and you will find that negotiations are won and lost before any discussion (negotiation) is attempted.

2010    130 pp.  
ISBN: 917-0-7918-5965-0  
Order No. 859650  
Member price \$31  
List price \$39

### Patent Project Management

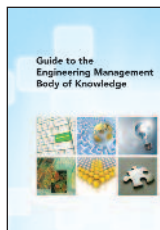
by Kirk Teska



This is a popular topic of critical importance to anyone planning to bring a new technical product to market. For all engineers and their managers concerned with product development, patent law and the patent process, but particularly early career engineers who need a basic introduction to the topic.

2010    130 pp.    Softcover  
ISBN: 978-0-7918-5964-3    Order No. 859643  
Member price \$23  
List price \$29

### Guide to the Engineering Management Body of Knowledge (BOK)

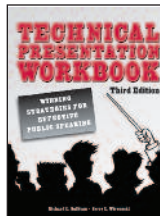


This guide covers a wide range of management topics and practices, including market research, product development, organizational leadership and the management of engineering projects and processes.

2010    400 pp.    Hardcover  
ISBN: 978-0-7918-0299-1    Order No. 802991  
Member price \$56  
List price \$70

### Technical Presentation Workbook, Third Edition

by Richard L. Sullivan and Jerry L. Wircenski



This fully revised third edition includes an entirely new chapter devoted to online presentations. It also includes updated material on interactive training and questioning, as well as extensive coverage of electronic presentations.

2010    316 pp.    Softcover  
ISBN: 978-0-7918-5957-5    Order No. 859575  
Member price \$40  
List price \$50

## Project Management for Engineers and Technical Professionals PD467



**3 Days, 2.3 CEUs, 23 PDHs**

This course provides an overview of project management fundamentals and techniques. Participants work in teams to plan a real-world project in the area of mechanical engineering

### You Will Learn

- Modern project management and its alignment with organization strategies
- Defining a project, estimating project time and costs, developing plan and scheduling resources
- Reducing project duration
- Leadership, managing project teams
- Progress and performance measurements and evaluation
- International and eProjects

### Who Should Attend

Engineers who have or will be assigned project management responsibilities; project managers, project leaders

### Instructor: Marcus Goncalves

Member price	Early Bird: \$1,425	Standard: \$1,525
List price	Early Bird: \$1,525	Standard: \$1,625

## Preparing for the Project Management Professional Certification Exam PD496



**2 Days, 1.5 CEUs, 15 PDHs**

This course is totally focused on Project Management Institute's (PMI®) PMBOK grid. It covers all of the materials that PMI considers important to be included in the exam, starts with a pre-test and closes with another practice test.

### You Will Learn

- Scope management and time management review
- Cost management and HR Review
- Contract and procurement, communications and professional responsibility review
- How the PMP works, types of questions, and probabilities

### Who Should Attend

Engineers and technical professionals who have project management knowledge and are preparing to take the PMP certification exam

### Instructor: Marcus Goncalves

Member price	Early Bird: \$1,075	Standard: \$1,175
List price	Early Bird: \$1,175	Standard: \$1,275

## Project Management Combo Course PD629



This course is a combination of "Project Management for Engineers and Technical Professionals" (PD467) & "Preparing for the Project Management for Professional Certification Exam" (PD496) ▶ **Take these courses as a combo and save up to \$525.00**

## Project Management for Chemical Engineers CH138



**2 Days, 1.5 CEUs, 15 PDHs**

This course will will arm you with time tested and proven templates enabling you to get your team up and running quickly and keeping them on track.

### You Will Learn

- To create a work breakdown structure
- To establish and maintain project sponsorship and individual team member accountability
- To identify and mitigate project risks
- How to use probabilistic risk assessment methods to calculate project cost and schedule variances
- Control scope changes
- To ensure that project benefits identified at the beginning of the project are realized

### Who Should Attend

Chemical engineers involved in a project as either team leader or member

### Instructors: Gwenn Carr and Gary Englehardt

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225

## Project Management for Engineers ZI090



**Online course 2.25 CEUs, 22.5 PDHs**

Learn how project management will improve your project outcomes on all fronts and allow you to manage your many other responsibilities at the same time.

### You Will Learn

- The project life cycle, project parameters - quality, quantity, time, and cost
- How to get and keep the resources you need
- To delegate and control work processes
- To provide feedback, listening, and helping people who aren't meeting their obligations
- Contingency planning now to save time later
- Project completion and evaluation

### Who Should Attend

All engineers currently managing projects (either on your own and/or ones that involve other people)

### Instructor: David Kazel



Member price \$595 List price \$695

## Conceptual Development and Capital Cost Estimating CH139



2 Days, 1.5 CEUs, 15 PDHs

This course teaches how to conceptualize projects and methods to develop timely cost estimates for engineering projects in the process industries.

### You Will Learn

- How to effectively conceptualize engineering projects
- To optimize estimating techniques based on project type, size, and location
- Skills relating to the use of cost-estimating techniques
- To rationally assign uncertainties and risks associated with cost estimating

### Who Should Attend

Plant and project engineers, project managers, plan maintenance personnel, and engineering management

### Instructor: John Williams

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225

## Project Evaluation: Operating Cost Estimating and Financial Analysis CH140



2 Days, 1.5 CEUs, 15 PDHs

This course helps you improve your ability to make economic evaluations of projects, designs, and alternatives. Topics include accounting, equipment costs, raw materials, labor costs, marketing studies and cash flow.

### You Will Learn

- Skills in estimating operating expenses for technical and engineering projects
- Return on investment (ROI) measures
- Cash flow analysis including CFA, DCF, NPV, and IRR

### Who Should Attend

Plant and project engineers, project managers, plan maintenance personnel, and engineering management

### Instructor: John Williams

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225

## Project Evaluation and Cost Estimating Combo Course CH758

This course is a combination of “Conceptual Development & Capital Cost Estimating” (CH139) and “Project Evaluation: Operating Cost Estimating and Financial Analysis” (CH140) ► **Take these courses as a combo and save up to \$475.00**

## TRIZ The Theory of Inventive Problem Solving PD513



3 Days, 2.3 CEUs, 23 PDHs

This workshop & problem solving course will train participants in the unique problem solving process known as TRIZ (Theory of Inventive Problem Solving).

### You Will Learn

- To confront design/ operational contradictions head on rather than compromising
- Formulate problems for optimum solvability
- Recognize and use patterns of invention from other fields and disciplines
- To pro-actively analyze product and system designs for potential failure routes
- How to combine TRIZ with Six Sigma and QFD

### Who Should Attend

Experienced engineers within design and manufacturing companies

### Instructor: Jack Hipple

Member price	Early Bird: \$1,425	Standard: \$1,525
List price	Early Bird: \$1,525	Standard: \$1,625

## Preparing for the Project Management Professional Certification Exam PD496



2 Days, 1.5 CEUs, 15 PDHs

This course is totally focused on Project Management Institute's (PMI®) PMBOK grid. It covers all of the materials that PMI considers important to be included in the exam, starts with a pre-test and closes with another practice test.

### You Will Learn

- Scope management and time management review
- Cost management and HR Review
- Contract and procurement, communications and professional responsibility review
- How the PMP works, types of questions, and probabilities

### Who Should Attend

Engineers and technical professionals who have project management knowledge and are preparing to take the PMP certification exam

### Instructor: Marcus Goncalves

Member price	Early Bird: \$1,075	Standard: \$1,175
List price	Early Bird: \$1,175	Standard: \$1,275

## B31.3 Process Piping Design PD014

4 Days, 3 CEUs, 30 PDHs

This course covers the application of the B31.3 Code and explains how piping systems fail and what the Code requires the designer, manufacturer, fabricator, supplier, erector, examiner, inspector and owner to do to prevent such failures.

### You Will Learn

- Considerations of design, pressure design of piping & piping components
- Piping flexibility analysis
- Limitations of piping and piping components
- Pipe supports, leak testing, piping failures and their causes

### Who Should Attend

Piping engineers, project managers and engineers, facilities engineers, reliability specialists, design engineers, plant engineers

**Instructors: Glynn E. Woods and Ronald W. Haupt**

Member price Early Bird: \$2,095 Standard: \$2,195

List price Early Bird: \$2,195 Standard: \$2,295



## B31.3 Process Piping Materials, Fabrication, Examination and Testing PD457

1 Day, 0.8 CEUs, 8 PDHs

This course for those who have already taken or are taking PD014: ASME B31.3 Process Piping. The focus of this course is to assist those personnel to understand the relationship of the fabrication and examination rules of the B31.3 Code to the Design and Materials rules.

### You Will Learn

- Materials selection and limitations
- Fabrication rules and their bases
- Relationship between B31.3 design and the fabrication and examination requirements
- Welding qualification requirements
- Inspection, examination, and testing requirements

### Who Should Attend

Piping engineers and designers, fabricators, Q/A Q/C and maintenance personnel

**Instructor: Philip D. Flenner**

Member price Early Bird: \$545 Standard: \$645

List price Early Bird: \$645 Standard: \$745



## B31.3 Process Piping Design, Materials, Fabrication, Examination and Testing Combo Course PD581

This course is a combination of "Process Piping Design" (PD014) and "Process Piping Materials, Fabrication, Examination and Testing" (PD457) **▶ Take these courses as a combo and save up to \$345**

## B31.3 Process Piping Computer-Based Training CD-ROM with Online Assessment ZCD429

CD-ROM with Online Assessment  
3 CEUs, 30 PDHs

This CD presents a clear understanding of how piping systems fail and what the code requires the designer, manufacturer, fabricator, supplier, erector, examiner, inspector and owner to do to prevent such failures.

### You Will Learn

- Wall thickness determination of straight pipe under internal, external and vacuum pressure
- Piping component design, pressure limitation for miter bends
- Extruded outlet headers, allowable and displacement stress range
- Occasional loads by wind or earthquake, wind force; safety relief valve discharge, and leak and pneumatic testing

Member price \$650

List price \$750



## Detail Engineering of Piping Systems PD410

3 Days, 2.3 CEUs, 23 PDHs

Detail engineering in piping projects consists of the engineering, design, detail and layout of process and utility equipment, piping and instrumentation. This course will provide attendees the background required to design, engineer & complete piping assignments.

### You Will Learn

- Procedures in the development of piping and instrumentation diagrams (P&IDs)
- Equipment plot plans, piping arrangements & fabrication drawing
- Accounting for exchangers, vessels and compressors
- Calculations concerning line and pump sizing and selection

### Who Should Attend

Engineers, designers, CAD operators and draftspersons, piping fabricators, contractors and suppliers

**Instructor: Bob Wilson**

Member price Early Bird: \$1,425 Standard: \$1,525

List price Early Bird: \$1,525 Standard: \$1,625



## The Layout of Piping Systems and Process Equipment PD401



**3 Days, 2.3 CEUs, 23 PDHs**

This course teaches members of the process, power plant, refinery and petrochemical industries how to correctly interpret piping and instrumentation diagrams for their respective fields as well as interpreting piping arrangement drawings.

### You Will Learn

- Procedures involved in the layout and piping up of pumps, exchangers, horizontal drums, and vertical towers
- Maintenance and accessibility requirements of piping and related disciplines
- Thermal expansion, piping layout and pipe support requirements
- The latest CAD techniques used in piping layout

### Who Should Attend

Engineers, designers, piping fabricators, contractors and suppliers

### Instructor: Bob Wilson

Member price	Early Bird: \$1,425	Standard: \$1,525
List price	Early Bird: \$1,525	Standard: \$1,625



## B31.4 Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids PD391



**2 Days, 1.5 CEUs, 15 PDHs**

Pipeline reliability and safety start with the ASME B31.4 Code. This course covers in a practical manner the technical bases of the ASME B31.4 rules for hydrocarbon pipelines, including pipeline materials, design, construction, operation, corrosion, in-line inspection, defect analysis, maintenance, causes and modes of failure, integrity and repair techniques.

### You Will Learn

- The basic elements of pipeline design, construction & maintenance
- How to apply principles of safe pipeline design and operation

### Who Should Attend

Design, construction, maintenance, quality, operations and regulatory personnel responsible for the reliable and safe operation of liquid transportation pipelines

*Special Requirements:* Attendees will receive the ASME B31.4 Code

### Instructor: Carolyn Kolovich

Member price	Early Bird: \$1,075	Standard: \$1,175
List price	Early Bird: \$1,175	Standard: \$1,275

## Practical Welding Technology PD359



**3 Days, 2.3 CEUs, 23 PDHs**

This course provides an overall understanding of the basic principles and applications of the major non-destructive examination (NDE) methods as they relate to ASME Code Sections V, VIII, and XI.

### You Will Learn

- The principles, procedures, evaluation, reporting, and ASME code requirements of NDE procedures
- Hands-on demonstrations of the use of basic NDE equipment and materials
- Weld discontinuities and defects

### Who Should Attend

Management, supervisors, engineers, maintenance personnel and others who desire a general knowledge of NDE

### Instructor: Albert J. Moore Jr

Member price	Early Bird: \$1,695	Standard: \$1,795
List price	Early Bird: \$1,795	Standard: \$1,895

# PROCESS SAFETY

## Combustible Dust Hazards: Dust Explosions Overview CH034



**2 Days, 1.5 CEUs, 15 PDHs**

This course covers the knowledge and tools necessary to examine your workplace for the hazards, assess protection needs, and to respond efficiently to additional changes in the regulatory climate.

### You Will Learn

- To establish the existence, severity and consequences of hazards
- To control or eliminate hazards
- To assess adverse effects from protection and prevention systems
- The technical reasoning behind modern industrial standards and regulations

### Who Should Attend

Chemical engineers, mechanical engineers, process engineers/scientists, fire protection professionals, plant/process safety/risk managers, facility managers

### Instructor: Erdem Ural

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225

## HAZOP Studies and Other PHA Techniques for Process Safety and Risk Management CH157

AICHE®

3 Days, 2.3 CEUs, 23 PDHs

This course covers the fundamental concepts of process hazard analysis, and analyzes different methods for completing PHA's.

### You Will Learn

- How a PHA can be structured to meet OSHA and EPA
- How to effectively lead any of the PHA methods
- Tools and techniques for analyzing scenario risks and determining the adequacy of safeguards, including safety instrumented systems

### Who Should Attend

Process engineers, PHA professionals, hazardous materials specialists, environmental engineers

### Instructor: Robert W. Johnson

Member price	Early Bird: \$1,425	Standard: \$1,525
List price	Early Bird: \$1,525	Standard: \$1,625

## Advanced Concepts For Process Hazard Analysis CH754

AICHE®

2 Days, 1.5 CEUs, 15 PDHs

This advanced course expands the knowledge and application of process hazard analysis beyond those presented in CH157 to show how order-of-magnitude scenario risk calculations can be extended to other uses.

### You Will Learn

- How to prepare PHAs
- To ensure compliance with current U.S. regulations
- To conduct and report PHAs and to structure a PHA to meet federal regulations


### Who Should Attend

Process engineers, PHA professionals, hazardous materials specialists, environmental engineers

### Instructor: Robert W. Johnson

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225

## Process Hazard Analysis Combo Course CH759

This course is a combination of "HAZOP Studies and Other PHA Techniques for Process Safety and Risk Management" (CH157) and "Advanced Concepts for Process Hazard Analysis" (CH754)  **Take these courses as a combo and save up to \$475.00**

## Emergency Relief System (ERS) Design Using DIERS Technology Overview CH173

AICHE®

3 Days, 2.3 CEUs, 23 PDHs

This course covers Design Institute for Emergency Relief Systems (DIERS) techniques to provide adequate pressure relief for runaway reactions and other pressure-producing events.

### You Will Learn

- Impact of two-phase flow; codes, devices, rules; vessel disengagement dynamics
- Coupling equation, vapor/liquid disengagement; vent flow dynamics
- Experimental verification; recommended design methods; simplified ERS design methods and data acquisition and effluent handling strategies and design

### Who Should Attend

Process engineers, safety managers, operators, designers or managers of chemical process industry facilities

*Two per course from the following team:*

**Instructors: James Huff, John Hauser, Harold Fisher, D. Arthur Shaw, & Robert D'Alessandro**

Member price	Early Bird: \$1,425	Standard: \$1,525
List price	Early Bird: \$1,525	Standard: \$1,625

## Control System Techniques in Equipment and Operations CH762

AICHE®

2 Days, 1.5 CEUs, 15 PDHs

The focus of this course is on the design aspects of automatic control systems for chemical processes and associated plant equipment. A high level of automation and sophistication is required to control process parameters and detect equipment faults in modern petro-chemical plants.

### You Will Learn

- To identify, compare and explain benefits of automatic control systems for individual equipment and overall system
- To examine sensors, manipulators, valves and actuators for response characteristics, sensitivity, and stability
- To avoid or mitigate unwelcome failures due to pressure surge, temperature spike, oscillating parameter values and other rapid energy transfer mechanisms

### Who Should Attend

Individuals in chemical design and development engineering, process control, and the purchase, sales, manufacture, field repair and/or inspection of chemical process equipment

### Instructor: A.S. (Abdulla) Rangwala

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225



# PROCESS SAFETY

## PSM: Requirements and the Development of Management Systems CH501

AIChE®

**3 Days, 2.3 CEUs, 23 PDHs**

This course covers the OSHA PSM standard and EPA Prevention Program process safety regulatory requirements, PSM principles and the evaluation/audit procedures for compliance with process safety regulatory requirements.

### You Will Learn

- OSHA PSM standard 29CFR 1910.119, EPA prevention program safety regulatory requirements
- To apply PSM principles to comply with OSHA's PSM Standard and EPA's Risk Management Plan Prevention Program
- To implement or evaluate/audit an OSHA or EPA PSM program in your company

### Who Should Attend

Plant coordinators, production, maintenance, operating and engineering managers

### Instructor: Adrian Sepeda

Member price    Early Bird: \$1,425    Standard: \$1,525  
List price        Early Bird: \$1,525    Standard: \$1,625

## Fundamentals of Process Safety CH500

AIChE®

**2 Days, 1.5 CEUs, 15 PDHs**

This course covers the fundamentals necessary to keep hazardous materials contained including consequence modeling, best practices for layout and spacing, system isolation, grading and drainage, relief and blow-down, electrical area classification and fire protection.

### You Will Learn

- To accurately identify, classify, and evaluate process hazards
- To rank hazards by likelihood of occurrence
- To analyze risk and reliability

### Who Should Attend

Process Specialists, safety engineers, HSE personnel, facilities engineers

### Instructor: Brian D. Kelly

Member price    Early Bird: \$1,025    Standard: \$1,125  
List price        Early Bird: \$1,125    Standard: \$1,225

# SEPARATIONS

## Distillation in Practice CH004

AIChE®

**3 Days, 2.3 CEUs, 23 PDHs**

This course covers all essential distillation concepts likely to be faced by process support, operations, and design engineering personnel. It covers vapor liquid equilibrium, process design, column operation, and simulation issues, along with specification and selection of hardware.

### You Will Learn

- Thermodynamics, vapor liquid equilibrium, process design, column operation, and simulation issues
- To specify and select hardware best suited to various distillation problems and objectives
- How to analyze today's most effective problem-solving and troubleshooting methods
- The latest modeling techniques for predicting efficiency

### Who Should Attend

Chemists, process support, operations, and design engineers

### Instructor: John Farone

Member price    Early Bird: \$1,425    Standard: \$1,525  
List price        Early Bird: \$1,525    Standard: \$1,625

## Distillation in Practice for Engineer ZAC001

AIChE®

**CD-ROM**

The course fully explains all essential distillation concepts and includes equations. Your engineers will gain an excellent understanding of the fundamentals of distillation including vapor liquid equilibrium; and the practice of distillation including types of column design, and advanced topics like trouble-shooting.



Member price \$895    List price \$995

## Distillation Technology for Operators ZAC002

AIChE®

**CD-ROM**

Operators will gain an excellent understanding of the theory of distillation and how it works in a column and a solid foundation on the principles of operations without getting too product specific. At the end of each chapter is a quiz to test retention. AIChE course completion certificate available.



Member price \$700    List price \$750

## Flow of Solids in Bins, Hoppers, Chutes and Feeders Level 1 CH032 AIChE®

**2 Days, 1.5 CEUs, 15 PDHs**

This course covers how to keep all types of bulk solids flowing smoothly through your plant, with minimum downtime and maximum reliability and quality control. It includes powders and powder flow; mass and funnel flow; material handling; bridging, rat-holing, and segregation; blending and mixing.

### You Will Learn

- To measure the relevant flow properties of various bulk solids
- To specify & select the most appropriate hardware for each solid
- To retrofit existing equipment
- To correct flow problems
- To solve problems associated with solids handling

### Who Should Attend

Design, project, and research engineers, as well as plant operation personnel

### Instructor: Eric Maynard

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225



AIChE®

## Producing Quality Powder Products CH761

**2 Days, 1.5 CEUs, 15 PDHs**

Segregation occurs due to a variety of mechanisms. The solution to a general segregation problem often requires knowledge of the cause. This is especially true when approaching the problem from a product design point of view. This course covers basic flow properties that influence segregation and the role they play.

### You Will Learn

- The relationship between segregation flow properties and blender selection or operation
- To identify key segregation mechanisms with their products
- To use flow property and segregation mechanism information to review process designs, to design powder mixtures, and to select the right blender

### Who Should Attend

Practicing engineers, quality control personnel, plant managers, and formulators

### Instructor: Kerry Johanson

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225

## Pneumatic Conveying of Bulk Solids CH033 AIChE®

**1 Day, 0.8 CEUs, 8 PDHs**

This course covers common pneumatic conveying problems and solutions, the advantages and limitations of pneumatic conveying; compressible gas flow, gas velocity, state diagrams, modes of conveying; pressure, vacuum, combination, closed loop, and dense phase systems; components and operating considerations.

### You Will Learn

- To evaluate in-plant systems and determine effectiveness
- To troubleshoot conveying problems and apply various solutions
- To choose a conveying system layout and system components

### Who Should Attend

Design, project, and research engineers & plant operation personnel

### Instructor: Eric Maynard

Member price	Early Bird: \$645	Standard: \$745
List price	Early Bird: \$745	Standard: \$845



## Particle and Bulk Solids Characterization Technology CH763 AIChE®

**2 Days, 1.5 CEUs, 15 PDHs**

This course will be of interest to scientists and engineers who want to improve their characterization and data interpretation skills for better control of particulates, particulate formulation, suspensions, and dispersions. Given the wide range of technologies available for powder/ particle characterization, selection of the best technology for a particular application is not a trivial task. You cover the basics of particle and bulk solids (from nanoscale to millimeters) characterization along with the latest commercially available technologies. Participants acquire the knowledge necessary for proper instrument selection, data validation and interpretation.

### You Will Learn

- Instrument evaluation and proper selection
- Method development and validation
- Particle size and bulk powder data interpretation

### Who Should Attend

Scientists, engineers and technologists involved in the characterization and control of particulates in powder processing, particulate formulation, suspensions, emulsions, and dispersions. Particle technology is of particular importance to the pharmaceutical, food, cosmetic and chemical industries

### Instructors: Remi Trottier, and Karl Jacob

Member price	Early Bird: \$1,025	Standard: \$1,125
List price	Early Bird: \$1,125	Standard: \$1,225



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No other continuing education organization delivers greater depth, breadth, quality and professionalism of engineering workforce learning solutions, because only ASME Training & Development offers *The ASME Advantage*, including:

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or contact:

Jackie Oppenheim, Director, ASME Training & Development, at +1-212-591-7526.

# IN-COMPANY TRAINING

## ► Top 5 benefits of In-Company Training

### Get tailored instruction specifically for your company

We will work with you to customize courses and address particular issues and challenges relating to the daily work of your employees. Workshops can be arranged to provide problem solving activities to address these specific issues. Tailoring can also add opportunities for hands-on learning, group activities and Q&A sessions.

### Learn directly from industry experts

ASME courses provide the opportunity to receive training from industry leaders who share their real world experiences. Our Code courses are mostly taught by committee members with knowledge of the history and application of the Code and insight into the current issues being discussed.

### Affordable and convenient training

We work with you and the expert instructor to determine a mutually convenient time for the course. The In-company option minimizes travel costs and staff downtime. It's more cost-effective on a per-person basis to train your employees in this group setting.

### Diverse inventory of courses

Any one of the extensive number of courses in this catalog can be brought to your company for your employees. Courses can be "off the shelf" or tailored to your specific needs.

### Receive Continuing Education Units

ASME Training & Development is an approved authorized provider of continuing education and training under the IACET Standard. All attendees successfully completing our training courses receive a certificate with Continuing Education Units (CEUs) which are required in certain states for maintenance of the PE license.

## ► Frequently Asked In-Company Questions

### Which courses can be brought In-Company?

Any one of the extensive number of courses in this catalog can be brought to your company for your employees.

### Can the course material be revised to meet our specific needs?

Courses can be modified to provide new topics or additional content on a given subject. Courses can also be condensed to spend less time on topics that are not required.

### How many people do I need to bring a course to our company?

We can work with as few as 8 to as many as 35 participants. The larger the class size, the more cost effective the training becomes, on a per-person basis.

### How much lead time is necessary to schedule an In-Company course?

Generally 5-6 weeks are needed to work with your company and the instructors to tailor the course, set up logistics and order the materials. We work with you & the expert instructor to determine a mutually convenient time to deliver course.

### How can our company boost attendance and reduce per person fees?

By collaborating with neighboring companies who have similar training needs, your organization can host an ASME course at a shared cost.

### Who should I contact to get more information or to receive a detailed quote for In-Company Training?

A proposal will be arranged specifically for your company requirements. For more information please contact:

**Olga Lisica, Manager, In-Company Training**  
212-591-7843 or [LisicaO@asme.org](mailto:LisicaO@asme.org)

## ► Some of our Client Testimonials

*"This course has been pretty intense but equally enjoyable. Both Ron and Philip are experts in the topics we covered on ASME B31.1. This course has been a real eye opener to me."* (ASME B31.1 Power Piping) **Caltex Refineries**

*"Good overview of content, requirements, history, interrelationships, etc. of ASME Code system and its workings. An ASME Code overview is an immense task and somehow Marcus has succeeded."* (Section III Requirements for Design & Manufacture of Nuclear Power Plant Components) **Pebble Bed Modular Reactor Ltd (PBMR)**

*"This course is as comprehensive as could be possible without actually leaving the facility and performing hands-on training."* (FRP Installation) **American Electric Power (AEP)**

*"Course provides good overview of Section VIII by a man who knows the code very well!"* (Section VIII, Division 1, Design & Fabrication of Pressure Vessels) **Great Northern Engineering**

*"The course was very informative. The teacher brought excitement to the topics. The examples shown on video were helpful."*  
*"Well presented and excellent subject matter for practical use by piping system engineers."* (Failure Prevention, Repair & Life Extension of Piping, Vessels & Tanks) **Northrop Grumman Newport News**

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2.25 CEUs, 22.5 PDHs

Member price \$595 List price \$695

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 Lean Manufacturing ZI204  
 Design for Product Success ZI190  
 The Fundamentals of ASME Section III ZI180  
 Intro to Finite Element Analysis ZI160  
 Two-Phase Flow & Heat Transfer ZI140  
 Mechatronics Level 2 ZI120  
 Mechatronics Level 1 ZI110  
 Advanced Geometric Dimensioning & Tolerancing ZI100  
 Project Management for Engineers ZI090  
 Section VIII, Division 2, Alternate Rules ZI080  
 Repair and Alteration of Pressure Vessels ZI040  
 ASME Section VIII Division 1, Design and Fabrication of Pressure Vessels ZI030  
 Bolted Joint ZI020  
 Basic Geometric Dimensioning & Tolerancing ZI010  
 Professional Responsibility Instructor Led: Online Course Z84PR  
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 ASME 100 Questions on Theory of Elasticity for Engineers ZON008  
 ASME 100 Questions on Finite Element Analysis ZON009  
 ASME 100 Questions on Design of Machine Elements ZON010  
 ASME 100 Questions on Circuit Theory & Electronics ZON011  
 ASME 100 Questions on Materials Science ZON012  
 ASME 100 Questions on Fluid Mechanics ZON013

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 Member price \$100 / List price \$125  
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 Member price \$195 / List price \$245  
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 Member price \$305 / List price \$355  
 Design for Manufacture: Right from the Start (Pal Video - ASME Satellite Broadcast and Notes February) 990295  
 Member price \$200 / List price \$230  
 Solving Wear and Lubrication Pal Format (ASME Satellite Broadcast and Notes) 990195  
 Member price \$305 / List price \$355  
 Smart Structures and Materials Video(ASME Satellite Broadcast and Program Notes) 160994  
 Member price \$295 / List price \$325  
 Pollution Prevention Benchmarking:Lessons Learned and What's Next(ASME Satellite Broadcast and Program Notes) 100193  
 Member price \$295 / List price \$325  
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 Member price \$295 / List price \$325

## Online Self Study Courses

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