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Q: Why Choose ASME eLearning Training Programs?

A: The ASME Advantage…

1. ASME is a recognized provider of continuing education courses that help prepare you for the demands of today’s increasingly challenging environment.

2. Relevant courses with practical, real-life applications – developed specifically for mechanical engineers and technical professionals – help boost your technical competence and heighten your managerial expertise.

3. High quality training programs are developed and presented by ASME-approved instructors who are recognized experts in their fields.

4. Most code courses are developed and taught by ASME Code Committee members who understand and can communicate code or standard relevance and their impact on safety, quality and integrity.

5. Multiple public training programs ranging from fundamental to advanced levels are accessible from a PC with Internet access anytime, anywhere around the world.

Shift your career into high gear with ASME eLearning Training Programs
go.asme.org/elearning

About ASME

ASME helps the global engineering community develop solutions to real world challenges. Founded in 1880 as the American Society of Mechanical Engineers, ASME is an international not-for-profit professional organization that enables collaboration, knowledge sharing and skill development across all engineering disciplines, while promoting the vital role of the engineer in society. For over 130 years, ASME codes and standards, publications, conferences, continuing education and professional development programs have provided a foundation for advancing technical knowledge and a safer world. For more information visit: www.asme.org.
Welcome

ASME appreciates that a company’s most valuable asset is its workforce.

As a recognized leader in workforce learning solutions for engineers and technical professionals, our goal is to help individuals expand their knowledge and organizations develop their core assets. Our guiding principles are reflected in the depth and breadth of quality, highly accessible courses and training programs, specifically developed to boost technical competence and heighten managerial expertise.

ASME Training & Development is proud to award Continuing Education Units (CEUs) and/or Professional Development Hours (PDHs) for virtually all of its workforce learning programs.

Explore the wide range of learning solutions that meet the demands of today’s increasingly challenging environment, presented in training formats that best fit your business needs and meet your budget and time constraints:

Public Courses
Discover more than 100 courses ranging from fundamental to advanced levels, all led by industry experts

Seminars and Workshops
Explore intensive industry-specific events focusing on short presentations covering the latest technologies and their practical, real-world applications

In-Company
Select from any of our courses to create a customized training program delivered at your company’s site, anywhere around the globe

eLearning Courses
Save time and money to get the training you need to succeed. More than 100 different ASME eLearning courses are available, delivered in a variety of computer and Web-based learning platforms – each accessible from a PC with Internet access anytime, anywhere:

- **Online Instructor-Supported Courses** – Pursue training on your own time at your own pace – 24/7 – while benefitting from instructor-supported learning with subject matter experts readily available through email or in discussion areas for maximum flexibility.

- **Online Self-Study Courses** – Web-based training structured for self-directed learning, offering participants the option of beginning classes at their convenience, with structured training and review exercises to reinforce learning, followed by a comprehensive end-of-course examination. Courses available as Online Self-Study, CD-ROM and DVD-ROM learning formats.

- **Online Assessment Based Courses** ("ABC") – Self-study courses structured as a series of easy-to-take and easy-to-comprehend modules. Participants complete an end of module assessment with a minimum required pass rate of 70%, before advancing through the class.

- **Corporate eLearning** – Need flexible, time-efficient training for your engineering staff that won’t break the budget? Browse the listings on the following pages to learn more about ASME eLearning courses, available for bulk purchase at discount rates.

- **Special Discounts for Bulk Corporate Purchases** – Any ASME eLearning Training Course is eligible for reduced pricing when purchased in bulk for group organization training. For more information, contact Paul Francis, Manager, Corporate Development at +1.973.244.2304 or francisp@asme.org.

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**ASME Training & Development – An Authorized Provider**

ASME has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102; +1.703.506.3275. In obtaining this approval, ASME has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of its Authorized Provider accreditation status, ASME is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.
ASSESSMENT BASED COURSES

Our topical, short-length self-study online Assessment Based Courses are structured as a series of easily digestible training modules. Each self-paced and highly affordable Web-based training course includes end-of-module assessment tests and multi-media files with audio commentary and review questions. Participants complete the end-of-module assessment with a required pass rate of 70% or above before advancing to the next module in the training program. An ASME Certificate and Professional Development Hours are awarded.

Engineering Topics of Interest

- Energy Choices: The Facts, Challenges and Limitations of Energy Sources ZABC1
  Provides basic information on sources of energy and the complexities of the evolving energy world. 2 PDHs $50

- Technical Writing for Engineers: Giving Readers What They Need ZABC2
  Learn how to create documents – from organizing, writing and illustrating to final layout and design – that will improve your communication skills. 4 PDHs $100

- Ethics for Engineers: Doing the Right Thing When No One is Looking ZABC3
  Explore forces that shape engineering ethics and learn how to identify your ethical concerns on the job, in your role and outside the workplace, as well as solve ethical issues. 3 PDHs $75

- How to Get an “N” Stamp ZABC4
  Outlines, defines and explains ASME conformity assessment programs, code requirements, plus all of the steps involved in the “N” Stamp application process. 3 PDHs $295

- Total Quality Management ZABC6
  Presents basic concepts and practices of total quality management so you can apply these tools to your work and generate improved processes and results. 3 PDHs $145

- Execution: How to Get Results ZABC7
  Learn how to define the results you wish to achieve, plan your efforts, motivate others, address problems, create and sustain momentum, celebrate results and learn from the experience. 1.5 PDHs $95

- Changing Organizational Culture ZABC8
  Learn how to mobilize an organization by implementing change in ways that minimize employee uncertainty, discomfort and turnover and maximize employee productivity. 1.5 PDHs $95

- ASME Boiler & Pressure Vessel Certification Process ZABC9
  Get the information you need to receive a Code Certification Stamp for Non-Nuclear Boilers and Pressure Vessels. Specifically designed for first time code stamp applicants. 3 PDHs $295

- Introduction to ASME Standards and Certification ZABC1
  This course provides an introduction to ASME, its standards and the certification process, as well as the various organizations that create, test and coordinate standards around the world. 2 PDHs FREE-SEE WEBSITE
  Also available in Portuguese ZABC60

- Nanocomposites Technology and Its Impact on Engineering ZABC22
  Discover current practices to create nanocomposites, nanocomposite properties and experimental aspects of nanocomposite behavior. 5 PDHs $195

- Nanosystems for Applications in Water, Energy, Chemical and Biological Separations ZABC23
  Covers theory, fabrication and applications of microscale and nanoscale systems. Discusses specific application areas – energy, water, plus chemical and biological separations. 5 PDHs $195

- NQA-1 Practical Application ZABC29
  Discusses the practical application of NQA-1, focusing on five of the principal requirements: control of design, procurement documents, purchased items and services, tests, as well as measuring and test equipment. 4 PDHs $295

- Financial Resource Management for Engineers ZABC40
  Describes terminology, processes and strategies of business finance and accounting and covers business plan fundamentals, funding sources, engineering economic analysis techniques. 3 PDHs $195

- Marketing, Sales and Communications for Engineers ZABC41
  Introduces the skills, knowledge and techniques of marketing and its interaction with an organization’s operations and technical arenas. It covers market research; forecasting; risk analysis; advertising and branding. 2 PDHs $195

- Introduction to the Selection of Pumps ZABC42
  An introduction to pumps – the way they work, different types and basic applications – where participants learn about the flow of fluids through pipes, as well as the variables that affect the flow, along with centrifugal and positive displacement pumps. 2 PDHs $195

- Introduction to the Selection of Valves ZABC43
  Introduces different types of valves – the way they work and some basic applications – and provides an overview of considerations involved when choosing appropriate valves for a system. 2PDHs $195

- Basic Gas Turbine Engine Technology ZABC49
  Introduces the gas turbine engine, including manufacture, operation and maintenance, as well as how the technology works and the factors that affect performance. 3PDHs $195

- ASME/ANS RA-S Standard for Level 1/Large Early Release Frequency PRA for NPP Applications ZABC5
  Introduces the ASME/ANS PRA Standard to support risk-informed decisions for commercial nuclear power plants, and prescribes a method for applying these requirements for specific applications. 2 PDHs $195
  Also available in Spanish ZABC56

Mechanical Engineering Essentials

- Essentials: NQA-1, Part I: 18 QA Requirements ZABC5
  Covers the 18 QA requirements in Part 1 of the ASME NQA-1 Standard along with scope of the requirements. Invaluable for those involved in nuclear facility construction and operation. 4 PDHs $295

- Essentials: BPV Code, Section XII: Rules for the Construction and Continued Service of Transport Tanks ZABC10
  Explore the origins and development of Section XII, its organization and general layout, the classes of tanks covered by Section XII and design specifics. 2 PDHs $195

- Essentials: BPV Code, Section VIII, Division 3 ZABC11
  Introduces the requirements of Section VIII, Division 3: Alternative Rules for Construction of High Pressure Vessels, and looks at the differences between Division 2 and 3, and how requirements are applied. 2 PDHs $195
Mechanical Engineering Essentials (continued)

Essentials: B31.8 Gas Transmission and Distribution Piping Systems ZABC12
The course introduces the requirements and scope of B31.8, including its history, requirements for pipeline materials and equipment, welding, and design, installation and testing. 2 PDHs $195
Also available in Portuguese ZABC52

Essentials: Bioprocessing Equipment (BPE) ZABC13
Learn how the ASME BPE Standard has improved manufacturing practices of bioprocessing and pharmaceutical industries. 2 PDHs $195

Essentials: B31.1 Power Piping Code ZABC14
Introduces the B31.1 Power Piping Code and discusses its relationship with BPV Code, Section I: Rules for Construction of Power Boilers. 2 PDHs $195

Essentials: B31.3 Process Piping Code ZABC15
Explains the code requirements for various types of piping installations, including selection and application of materials and components; fabrication, assembly and erection; and examination, inspection and testing. 2 PDHs $195
Also available in Portuguese ZABC61

Essentials: PVHO-1 Standard ZABC16
Explore the scope and history of the PVHO-1 Standard, its design requirements for viewports, QA and piping systems, as well as those used for specific PVHO systems. 2 PDHs $195

Essentials: BPV Code, Section V: Nondestructive Examination ZABC17
Provides an introduction to the ASME Boiler & Pressure Vessel Code, Section V: Nondestructive Examination (NDE), including the various applications of NDE as well as the various techniques. 3 PDHs $195

Essentials: BPV Code, Section IX: Welding and Brazing Qualifications ZABC18
Introduces Section IX: Welding & Brazing Qualifications of the ASME Boiler & Pressure Vessel Code, covering the section's scope, organization and requirements. 2 PDHs $195

Essentials: BPV Code, Section III, Division 1: Rules for Construction of Nuclear Facility Components ZABC20
Introduces the requirements of the BPV Code Section III, Division 1 and covers its scope, and the responsibilities and duties of personnel involved in the construction of a nuclear power plant. 2 PDHs $195

Essentials: B30 Safety Standard ZABC27
Covers information included in the ASME B30 Standard, and describes the Charter of the B30 Committee and the types of load handling equipment to which it applies. 2 PDHs $195

Essentials: A17.6 Standard for Elevator Suspension, Compensation and Governor Systems ZABC28
Introduces the A17.6 Standard, covering three specific types of suspension technology for elevators, Stranded Carbon Steel Wire Ropes, Aramid Fiber Ropes and Noncircular Elastomeric Coated Steel Suspension Members. 2 PDHs $195

Essentials: Basic Concepts of PTC-19.1 Test Uncertainty ZABC31
This course introduces the PTC 19.1-2005 Test Uncertainty defines the measurement process and discusses the foundations of the mathematical treatment of uncertainty. 2 PDHs $195

Essentials: Y14.8-2009 Castings, Forgings and Molded Parts ZABC32
This course describes the practices for the preparation of drawings related to castings, forgings and molded parts, and covers drawing preparation, requirements, datum referencing, and notes and items. 2 PDHs $195

Essentials: BPV Code, Section IV: Rules for Construction of Heating Boilers ZABC35
Provides an introduction to the ASME BPV Code, Section IV, and discusses requirements for boilers constructed of wrought materials, cast iron and cast aluminum. 3 PDHs $195

Essentials: PTC 25 Pressure Relief Devices ZABC36
This course covers the fundamentals of the ASME PTC 25 Code for pressure relief devices, and describes the types of pressure relief devices (PRDs), their characteristics and testing and measurement methods. 2 PDHs $195

Essentials: PTC 6 – Testing Steam Turbines ZABC37
This course covers PTC 6, which provides procedures for the accurate testing of steam turbines used in conducting acceptance tests of steam turbines. 2 PDHs $195

Essentials: Rules for Construction of Single-Failure-Proof Cranes and Cranes in ASME NOG-1 and ASME NUM-1 ZABC38
Introduces the rules for the design and construction of single-failure-proof (SFP) cranes and the cranes covered in ASME NOG-1 and ASME NUM-1 Standards. It covers the application of these standards to Type I, Type II and Type III single-failure-proof cranes. 2 PDHs $195

Essentials: B133.8 Gas Turbine Installation Sound Emissions ZABC44
Provides essential information for the procurement of gas turbine power plants involving acoustical requirements for industrial, pipeline and utility applications. 2 PDHs $195

Essentials: ASME Nuclear Air and Gas Treatment (CONAGT) ZABC46
Introduces ASME's Committee on Nuclear Air and Gas Treatment, and its role in nuclear air and gas cleaning, processing and treatment at nuclear facilities, and it publications such as the AG-1 and N511 standards. 2 PDHs $195

Essentials: CSD-1 Controls and Safety Devices for Automatically Fired Boilers ZABC48
The major hazards in operating automatically fired boilers are loss of water (low water), furnace explosions, over-pressure and over-temperature. This course introduces the different parts of the ASME CSD-1 Standard. 3 PDHs $195

Essentials: BPV Code, Section XI, Division 1: Rules for Inservice Inspection of Nuclear Plant Components – A Detailed Overview ZABC51
Introduces inservice inspection requirements for Class 1, 2 and 3 components, metal containments and liners, supports and concrete containments. 3 PDHs $195

Essentials: Performance Test Codes: PTC 4 – Fired Steam Generators ZABC52
Introduces the Performance Test Code - PTC 4 for Fired Steam Generators and discusses the importance of conducting a performance test of steam generators as well as the types of performance tests covered by this code. 2 PDHs $195

Essentials: BPV Code, Section III: Subsection NCA ZABC57
Highlights selected requirements – or excerpts of requirements – of significant interest within Section III’s Subsection NCA. 3 PDHs $195

NEW! Assessment Based Courses Now Available in Portuguese!
See page 7 for details.

SPECIAL DISCOUNTS FOR BULK CORPORATE PURCHASES
Contact: Paul Francis, Manager, Corporate Development Phone: +1.973.244.2304 • email: francisp@asme.org
Boilers and Pressure Vessels

BPV Code, Section VIII, Division 1: Design and Fabrication of Pressure Vessels

Online Instructor-Supported Course EL501

Based on the rules for pressure vessel design and construction, this course is a comprehensive introduction to the requirements of Section VIII, Division 1 including background, organization, design, materials, fabrication, inspection, testing and documentation of pressure vessels. It covers the more commonly applied subsections and paragraphs, and includes a practical discussion of individual problems and situations. Designed primarily for beginners, it will also benefit experienced vessel designers who would like to update their knowledge of the Code.

Special features include: an overview of code organization, code updates and addenda, as well as expert instruction on how to prepare and submit an inquiry to the Code Committee for Code Interpretation, Code Cases or Code Revision.

You Will Learn

• The background of the Code
• How to apply the code rules to more common design and fabrication situations
• Calculations for some of the loadings and situations not addressed by the code
• Preparation of design specifications, design reports, data reports, and other documentation

Who Should Attend

Those involved with the purchase, design, fabrication or inspection of pressure vessels. Some technical background will be helpful, but attendees are not required to have an engineering degree or previous work experience in the subject matter.

CEUs: 2.3 PDHs: 23

Member Price: $595 List Price: $695

Also available as a 3-day, Public Course: PD442, “BPV Code, Section VIII, Division 1: Design and Fabrication of Pressure Vessels”

Inspection, Repairs and Alterations of Pressure Equipment

Online Instructor-Supported Course EL503

An introduction to the requirements of various codes and standards regarding inspection, repairs and alterations of pressure equipment, and in particular, pressure vessels, this course covers the requirements of the National Board Inspection Code and the API-510. A brief introduction to API-579, Fitness-for-Service, is included, and simple flaw evaluation procedures are evaluated. The activities of ASME’s Post Construction Committee (PCC) are explained and documents published by this committee are discussed.

You Will Learn

• Definitions used in repairs and alterations
• Roles and responsibilities of the user, repair concern and regulatory body/authorized inspector
• How to obtain and use the National Board “R” Stamp
• NBIC, Parts RA, RB, RC, and RD; API 510, Sections 4, 5, 6, and 7
• Jurisdictional requirements and selection of contractor
• Planning for scheduled and unscheduled outages

Who Should Attend

Users, manufacturers, repair organizations, inspection agencies and others involved with maintenance and repair of pressure equipment. This course is intended for beginners, as well as experienced personnel wishing to update their knowledge.

CEUs: 1.5 PDHs: 15

Member Price: $395 List Price: $495

Also available as a 2-day, Public Course: PD441, “Inspection, Repairs and Alterations of Pressure Equipment”

ASME Boiler and Pressure Vessel Certification Process

Online Assessment Based Course ZABC9

This course provides the information you need to know in order to receive a code certification mark stamp for use on non-nuclear boilers and pressure vessels. Covering the process for ASME certification and the requirements for obtaining non-nuclear code stamps, this course outlines the application process, the joint review, demonstration requirements and common deficiencies.

PDHs: 3

Price: $295

FREE Trial Offer! Visit go.asme.org/ABC for details.

“We are thankful to ASME for providing excellent customer service that addressed our corporate training needs. We had the need for ready-to-use course materials to develop our engineering/R&D Web-based training. The material provided by ASME was both high quality and valuable.”

– Engineering Training & Development Department
The Procter & Gamble Company
BPV Code, Section VIII, Division 2: Alternative Rules for Design and Fabrication of Pressure Vessels

Online Instructor-Supported Course EL502

A practical comparison of the new rules with the old of Division 2 and some other international codes, including a discussion of why the new requirements were instituted, this course explains the design margins and their effect on required thickness. While emphasizing design and analysis rules, it covers all aspects of construction.

You Will Learn

• How the requirements of Divisions 1 and 2 of Section VIII compare
• Theories of failure and design margins of various codes
• General requirements of the new Division 2
• Design rules and stress analysis methods
• Fatigue analysis
• Materials and fabrication requirements
• Non-Destructive Examination (NDE) requirements, pressure testing and pressure relief requirements

Who Should Attend

Both beginners and experienced personnel involved with design, analysis, fabrication, purchasing, repair and inspection of pressure vessels, as well as supervisory and regulatory personnel

CEUs: 2.3  PDHs: 23
Member Price: $595  List Price: $695

Also available as a 4-day, Public Course: PD448, “BPV Code, Section VIII, Division 2: Pressure Vessels”

Essentials: BPV Code, Section IV: Rules for Construction of Heating Boilers

Online Assessment Based Course ZABC35

Provides an introduction to the ASME BPV Code, Section IV: Rules for Construction of Heating Boilers and discusses requirements for boilers constructed of wrought materials, cast iron and cast aluminum as well as those for potable water heaters.
PDHs: 3
Price: $195

“...It was a great eLearning course and the online way of administering it was very easy, understandable and accessible. Thanks a lot for your input when requested...”
– Hennie Swart
Nuclear Piping Design
Westinghouse Electric South Africa (Pty) Ltd.

Cursos Virtuales Disponible en Español
(Ver página 25)

ZI511 Código ASME Sección VIII Div. 1 Diseño, Construcción e Inspección de Tanques y Recipientes de Presión
ZI512 Gestión de Integridad de Recipientes, Calderas y Tuberías a Presión
ZI513 Introducción a Normas y Códigos Para el Mantenimiento de Recipientes, Calderas y Tuberías
ZI514 Inspección Basada en Riesgo I - Un Sistema Integrado de Análisis de Riesgo, Aptitud para el Servicio y Análisis de Fallas
ZI520 Código ASME B31.1 Tuberías de Vapor y Sistemas de Potencia
ZI570 Código ASME B31.3 Tuberías de Proceso de Refinerías y Plantas Químicas
ZI580 Código ASME B31.8 Tuberías de Transporte y Distribución de Gas
ZI590 Código ASME B31.4 Tuberías de Transporte de Hidrocarburos Líquidos y Otros Líquidos
ZI621 Inspección Basada en Riesgo II
Customized Training Delivered to Your Company Anywhere in the World

ASME Corporate Training Programs

ASME Corporate Training Programs delivers training in a variety of learning formats, specifically designed to meet corporate training and development needs.

From In-Company group training held on-site at a company’s location, to eLearning programs that can be accessed online to suit individual employees’ schedules, ASME workforce learning solutions conveniently and cost-effectively address your company’s training issues and challenges.

The ASME Advantage

Comprehensive Course Offerings in Multiple Learning Formats

- Expansive selection offers best practices in mechanical engineering and engineering management
- In-Company Live Training and eLearning formats accommodate budgets, schedules and business requirements – each offering CEUs and PDHs

Professional Instruction by Industry Experts

- ASME-approved, eminently qualified faculty
- Most code courses taught by ASME Code Committee members who understand and communicate code or standard relevance and their impact on safety, quality and integrity
- Leadership and management courses delivered by industry-experienced professionals

Unsurpassed Leadership in Curricula Development

- All ASME courses subjected to rigorous peer review to ensure accuracy, comprehensiveness and relevance
- More than 50 years’ experience creating, producing and delivering training programs
- ASME recognized as an Authorized Provider of Continuing Education and Training by IACET, complying with the ANSI/IACET Standard

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go.asme.org/corporate1
Bolting

The Bolted Joint
Online Instructor-Supported Course EL512

Although bolted joints comprise a large percentage of all industrial fasteners, their role in the installation and assembly process is poorly understood. This course provides an overview of bolted joint fundamentals, whether gasketed or not, including behavior and troubleshooting. It takes a detailed look at the latest developments in gasketed joint assembly, torque factors, bolting patterns, and gasket behavior, tightness, selection and specification.

You Will Learn
• How to calculate forces in bolted joints and establish specific torque
• How to increase functional life of a joint and analyze joints and failure mechanisms
• How to achieve better control of bolt tension and applied torque in assembly
• Effective utilization of torque application machines
• How to reduce fastener-related warranty and rework costs

Who Should Attend
Practicing design and manufacturing professionals involved in assembly of electro-mechanical hardware components and engineers and technicians in design and assembly operations. Two years of engineering experience would be beneficial, but is not necessary

Required Reading

CEUs: 2.3 PDHs: 23
Member Price: $595 List Price: $695

Also available as a 2-day Public Course: PD539, "Bolted Joints and Gasket Behavior"

Special Discounts for Bulk Corporate Purchases
Any ASME eLearning Training Course is eligible for reduced pricing when purchased in bulk for group organization training.

For more information about our Bulk Purchase Corporate Discount Program, contact:
Paul Francis
Manager, Corporate Development
Telephone: +1.973.244.2304
e-mail: francisp@asme.org

go.asme.org/eLearning
Design and Materials

Introduction to Finite Element Analysis
Online Instructor-Supported Course EL507
Originally developed for aerospace structural analysis, finite element analysis (FEA) is now a convenient and speedy tool for approximation of the solution to a variety of complicated engineering problems across a wide range of industries. This course explains how FEA can produce accurate, reliable approximate solutions, at a small fraction of the cost of more rigorous, closed-form analyses. It also provides the level of knowledge required to successfully use the FEA software packages that are currently available.

You Will Learn
• Examples of all the steps necessary to conduct a successful finite element analysis from start to finish
• Concepts underlying the creation of elements which are used to make accurate approximations
• Use of finite element software for more advanced structural, thermal analysis and basic modal analysis

Who Should Attend
Design, project, mechanical and R&D engineers, and R&D managers

CEUs: 2.3    PDHs: 23
Member Price: $595    List Price: $695

Lean Manufacturing
Online Instructor-Supported Course EL525
This course explains how lean manufacturing techniques eliminate waste from typical production processes, and in turn improve product quality.

You Will Learn
• Concepts that are critical to successful lean manufacturing
• Current-state value stream map
• Correct identification of waste to be eliminated
• Processes used to create a lean manufacturing system
• Continuous improvement

Who Should Attend
Engineers who either work in environments where lean principles are used or are being introduced

CEUs: 1.5    PDHs: 15
Member Price: $395    List Price: $495

Introduction to Computational Fluid Dynamics
Online Instructor-Supported Course EL513
This course has six modules and provides a detailed explanation of how to set up, run and interpret the results of CFD models for eight different case studies and it covers all the necessary theoretical background for industrial applications of computational fluid dynamics.

You Will Learn
• How to set up the most appropriate CFD model for the problem in hand
• How to set up the most appropriate turbulence model for their particular applications
• To conduct both steady state and transient (time dependent) fluid flow simulations
• To solve isothermal and non-isothermal thermo-fluid applications
• To solve incompressible and compressible fluid flow applications
• To solve fluid flow through porous media and rotating machinery

Who Should Attend
Engineers, scientists, designers and managers who would like to gain an insight into this technology and some of its vast range of capabilities

CEUs: 2.3    PDHs: 23
Member Price: $595    List Price: $695

FE Review
Online Self-Study Module EL537
The FE Exam Review was developed by a team of mechanical engineers who have been teaching a university-based FE Exam Review for several years. That program has an FE pass rate which exceeds 89%.

You Will Learn
Thermodynamics, computer dynamics, electric circuits, engineering economics, ethics, fluid mechanics, material science, mathematics, mechanics of materials, statics, chemistry

Member Price: $195    List Price: $295

1.800.843.2763
Basic Geometric Dimensioning and Tolerancing (GD&T) Y14.5

Online Instructor-Supported Course EL505

This course covers most of the geometric dimensioning controls used on mechanical engineering drawings. Theoretical and practical concepts of each of the geometric controls are explained relative to design, tooling, production and inspection. Parts of a directional-change gear box are used as platforms for the geometric controls, including shafts, gears, bearings, keys, lip seals, castings and threaded fasteners.

You Will Learn

• Symbols and feature control frame
• Terms, rules, & measurement devices
• Characteristics of straightness, flatness, circularity & cylindricity
• How to work with datums, parallelism, perpendicularity & angularity
• Runout, profile and position tolerance

Who Should Attend

Beginning designers, drafters, quality, procurement, tooling, production, manufacturing and shop personnel; designers, and others involved with tooling, production, inspection, routing in the shop; those involved with purchasing, costing and management; vendors and suppliers

Special Requirement: You must have a copy of the ASME Y14.5 Dimensioning and Tolerancing standard.

CEUs: 2.3 PDHs: 23
Member Price: $595 List Price: $695

Advanced Geometric Dimensioning and Tolerancing (GD&T) Y14.5

Online Instructor-Supported Course EL506

This course explains the basic applications of position, including fixed and floating fastener, zero tolerance, size feature datums and composite vs. two single segments. How to control the size and location of non-size features are also explained, as are coaxial relationships and control of rectangular features.

You Will Learn

• An in-depth understanding of GD&T
• Basic applications of position and size concepts
• Practical tools that you can apply on the job

Who Should Attend

Professionals who use the ASME Y14.5 Dimensioning and Tolerancing standard and who work in design, drafting, quality, procurement, tooling, production and manufacturing

Special Requirement: You must have a copy of the ASME Y14.5 Dimensioning and Tolerancing standard.

CEUs: 2.3 PDHs: 23
Member Price: $595 List Price: $695
Fluids and Heat Transfer

Two-Phase Flow and Heat Transfer
Online Instructor-Supported Course EL510
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. Two-phase flow and heat transfer is approached in a practical, qualitative way rather than as a graduate level treatment with complex calculations and esoteric situations. Basic quantitative calculations, including making sense of the myriad correlations that are given in texts and papers, are also covered.

You Will Learn
• Fundamentals of boiling
• Boiling on external and internal surfaces
• Two-phase flow patterns and 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
CEUs: 2.3       PDHs: 23
Member Price: $595       List Price: $695
Also available as a 2-day Public Course: PD624, “Two-Phase Flow and Heat Transfer”

Introduction to Computational Fluid Dynamics
Online Instructor-Supported Course EL513
This course has six modules and provides a detailed explanation of how to set up, run and interpret the results of CFD models for eight different case studies. It covers all the necessary theoretical background for industrial applications of computational fluid dynamics.

You Will Learn
• How to set up the most appropriate CFD model for the problem in hand
• How to set up the most appropriate turbulence model for their particular applications
• To conduct both steady state and transient (time dependent) fluid flow simulations
• To solve isothermal and non-isothermal thermo-fluid applications
• To solve incompressible and compressible fluid flow applications
• To solve fluid flow through porous media and rotating machinery

Who Should Attend
Engineers, scientists, designers and managers who would like to gain an insight into this technology and some of its vast range of capabilities
CEUs: 2.3       PDHs: 23
Member Price: $595       List Price: $695

Hydraulic Design of Liquid or Water Piping Systems
Online Self-Study Course EL539
This course covers the basic fundamentals and flow equations used for sizing flow lines or solving the line pressure drop of steady-state simple hydraulic systems flowing non-flashing incompressible Newtonian liquids or water. Industry’s generally accepted fundamental Darcy’s equation and the empirical Hazen-Williams formula for water flows are introduced as the models of calculating the frictional pressure drop. Explicit equations between pipe pressure drop and parameters such as pipe inside diameter, fluid’s flowing velocity or flow rate and pipe run length are also provided in order for the participants to gain insight of their direct relationship. Working equations provided in this course allow participants to effectively perform hydraulic analysis and evaluate design options of de-bottlenecking their piping or flow line infrastructure for future service requirement.

You Will Learn
• Basic principles that govern the fluid flow in pipes
• How to describe and calculate specific gravity, pressure heads, velocity heads, head losses and pressure losses
• The dependence of frictional pressure drop on pipe flowing velocity, pipe mass flow rate, pipe inside diameter
• The trade-off between the pipe inside diameter and run length at constant pressure drop
• The considerations of consulting experts and considering guidelines involved in selecting optimal pipe sizes for piping line sizing

Who Should Attend
New practicing engineers or experienced engineers entering a new area of practice or seeking a refresher course in fluid flow or pipe hydraulics
PDHs: 10
Member Price: $295       List Price: $395
**Gas Turbines**

**Basic Gas Turbine Engine Technology**

Online Self-Study Course *EL540*

This course provides a good, general understanding of gas turbines in a user-friendly format that allows you to proceed at your own pace and schedule. It is a non-mathematical approach to understanding the fundamental nature of gas turbine engines and the processes that affect their performance. The course is organized into ten chapters. Following each chapter, when you are ready, take a test on the material. Take your time in answering the questions and feel free to double-check by referring to the text material. Corrected exams serve to identify areas that may need closer study of the materials. You may submit exams one at a time, a few at a time, or all at once. Those completing exams for all ten chapters and with an average grade of 75% or better will receive a certificate of completion from ASME.

**Who Should Attend**

Technicians and management personnel, as well as engineers starting a career in the fields of gas turbine engines and auxiliary equipment operation, maintenance or service, specification, sales and manufacture

PDHs: 10  
Member Price: $295  
List Price: $395

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**ASME Books of Interest**

*by Mehrwan P. Boyce*  
This is an extensive treatise with 145 figures and photographs illustrating the many problems associated with Combined Cycle Power Plants and some of the solutions that have enabled plants to achieved higher efficiencies and reliability.  
Order No. 859537  
$175.00 (list) / $140.00 (member)

- **Closed-Cycle Gas Turbines: Operating Experience and Future Potential**  
*by Hans Ulrich Frutschi*  
This book is a valuable addition to the power generation literature. The author has decades of experience in the gas turbine industry, and trained under the father of closed-cycle gas turbines, Dr. Curt Keller of Escher-Wyss in Zurich.  
Order No. 802264  
$102.00 (list)/$81.00 (member)

- **Gas Turbine Performance, Second Edition**  
*by Philip Patrick Walsh and Paul Fletcher*  
Order No. 802116  
$155.00 (list)/$124.00 (member)

Get more information at [www.asme.org/kb/books](http://www.asme.org/kb/books)

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Geometric Dimensioning and Tolerancing

**Basic Geometric Dimensioning and Tolerancing (GD&T) Y14.5**

**Online Instructor-Supported Course EL505**

Designed for those who use the ASME Y14.5 Dimensioning and Tolerancing standard, this course covers most of the geometric dimensioning controls used on mechanical engineering drawings. Theoretical and practical concepts of each of the geometric controls are explained relative to design, tooling, production, and inspection. Parts of a directional-change gear box are used as platforms for the geometric controls, including shafts, gears, bearings, keys, lip seals, castings and threaded fasteners.

The course is comprised of ten modules with quizzes, and most modules have drawing assignments and supplementary information.

**You Will Learn**

- Symbols and feature control frame
- Terms, rules, & measurement devices
- Characteristics of straightness, flatness, circularity and cylindricity
- How to work with datums, parallelism, perpendicularity & angularity
- Runout, profile and position tolerance

**Who Should Attend**

Beginning designers, drafters, quality, procurement, tooling, production, manufacturing and shop personnel; designers and others involved with tooling, production, inspection, routing in the shop; those involved with purchasing, costing and management; vendors and suppliers

**Special Requirement:** You must have a copy of the ASME Y14.5 Dimensioning and Tolerancing standard.

CEUs: 2.3  
PDHs: 23

Member Price: $595  
List Price: $695

**Advanced Geometric Dimensioning and Tolerancing (GD&T) Y14.5**

**Online Instructor-Supported Course EL506**

This course thoroughly covers some of the geometric dimensioning controls most commonly used on mechanical engineering drawings. The basic applications of position are explained in greater detail including fixed and floating fastener, zero tolerance, size feature datums, and composite vs. two single segments. The instructor also discusses the control of the size and location of non-size features, coaxial relationships and the control of rectangular features.

**You Will Learn**

- An in-depth understanding of GD&T
- Basic applications of position and size concepts
- Practical tools that you can apply on the job

**Who Should Attend**

Professionals who use the ASME Y14.5 Dimensioning and Tolerancing standard in design, drafting, quality, procurement, tooling, production and manufacturing

**Special Requirement:** You must have a copy of the ASME Y14.5 Dimensioning and Tolerancing standard.

CEUs: 2.3  
PDHs: 23

Member Price: $595  
List Price: $695

**Drawing Interpretation**

**Online Instructor-Supported Course EL504**

This course covers the majority of information required to understand basic mechanical two-dimensional engineering drawings. Topics covered include: basic drawing elements (formats, title block, parts list, revision block, etc.), part views (multiview, auxiliary and isometric), section views, general dimensions, tolerances and finish and welding symbols. The course consists of nine modules, each with a quiz; most also include drawing assignments and supplementary information. As reference material, a drawing packet is included that shows five detailed drawings and an assembly drawing for the parts of a trolley wheel. The package includes flat and round parts and a casting.

**You Will Learn**

- Fundamentals of drawing interpretation
- Drawing elements, including part views and sections
- General dimensions and tolerances
- How to present surface texture, fasteners and welding

**Who Should Attend**

Beginning designers, drafters, quality, procurement, tooling, production, manufacturing and shop personnel; more advanced designers, and those involved with tooling, production, inspection, routing in the shop; others involved with purchasing, costing and management; vendors and suppliers

A copy of the ASME Y14.5 Dimensioning and Tolerancing standard is recommended.

CEUs: 2.3  
PDHs: 23

Member Price: $595  
List Price: $695

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“I was pleased to find an ASME online course in just the area in which I am seeking to develop: finite element analysis. The online learning context offers the flexibility I need to set my own schedule in working from week to week. With all of the time management benefits of online learning, there’s no sacrifice in terms of the instruction quality. I extend my thanks to ASME for providing this service.”

– Judy Romine  
Project Technical Administrator  
AREVA NP Inc.
Managing People

Leadership and Organizational Management
Online Instructor-Supported Course EL532
Learn how to lead project teams successfully to deliver on time and on budget, from selection of appropriate project team members through management of team dynamics and communication, especially in remote teams. Investigate tools for saving teams in trouble, look at problem solving and team focus. Instead of just being part of the team, learn how to become the leader of the team.

You Will Learn
• The definition and characteristics of an exceptional manager
• Recruitment, compensation and selection
• Performance management, coaching and motivation techniques
• Training and development techniques
• Negotiation strategies and conflict resolution techniques – interpersonal and group
• How to represent management to direct reports

Who Should Attend
New managers who want to develop leadership and project management skills; existing managers who want to learn new techniques in remote working and group decision making

CEUs: 2.3 PDHs: 23
Member Price: $595 List Price: $695

Also available as a 2-day Public Course: PD531, “Leadership and Organizational Management”

Ethics for Engineers: Doing the Right Thing When No One is Looking
Online Assessment Based Course ZABC3
Ethics has been defined as doing the right thing when no one is watching. Are you? Is everyone around you? What should you do if they’re not? Is what you think is right the same thing as what others think is right? In this learning for engineers we’ll explore all these questions and you’ll finish with how-to’s for yourself and others. This is an intermediate level course for all engineers as we all have to display ethical behavior and help others display it as well.

PDHs: 3
Price: $75

Changing Organizational Culture
Online Assessment Based Course ZABC8
This course explains how to deal with change in your organization and offers management techniques that incorporate both engineering and psychological approaches to change the way an organization functions to help minimize discomfort and uncertainty throughout the organization. Changing the way an organization functions can be a tenuous process; therefore it is crucial to implement initiatives in a way that minimizes turnover of talented employees and maximizes employee productivity.

PDHs: 1.5
Price: $95

ASME Books of Interest

Geometric Dimensioning and Tolerancing Handbook: Applications, Analysis & Measurement
Order No. 802166 (print) $129.00 (list) / $103.00 (member)
Order No. 80216Q (digital) $129 (list) / $103 (member)

GD&T Update Guide: ASME Y14.5-2009: Changes, Improvements and Clarification
Order No. 859GDG $89.00

Geometric Dimensioning and Tolerancing Visual Glossary— with GD&T At-A-Glance™ Sheets
Order No. 859GDV $29.00

Study Guide for Certification of Geometric Dimensioning and Tolerancing Professionals
Order No. 801888 $56.00 (list) / $45.00 (member)

Becoming Leaders: A Practical Handbook for Women in Engineering, Science, and Technology
Order No. 802BLW $29.00 (list) / $23.00 (member)

Conflict Resolution: Concepts and Practice (The Technical Manager’s Survival Guides)
Order No. 802748 $46.00 (list) / $37.00 (member)

Fundamentals of Agile Project Management: An Overview
Order No. 802960 $40.00 (list) / $32.00 (member)

Get more information at www.asme.org/kb/books

Cursos Virtuales Disponible en Español
(Ver página 25)

ZI644 Gerencia de Proyectos de Mantenimiento
ZI620 Gerencia de Proyectos para Ingenieros, Profesionales y Técnicos

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Manager, Corporate Development
Telephone: +1.973.244.2304
email: francisp@asme.org

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Managing Projects

Project Management for Engineers

Online Instructor-Supported Course EL511

Benefits of this course include identifying the project management skills you have and the ones that need enhancement; learn how to use a step-by-step process to plan, implement and evaluate each project; develop strategies for making other people “able” and communicating with them on their progress; and how to steer a project around lack of resources, wrong direction and office politics.

You Will Learn
• How to apply several skills to facilitate the success of a project
• How to describe the project life-cycle
• How to provide effective feedback to others and improve your listening skills
• How to develop and implement the strategy and plan
• To explain how to set performance standards

Who Should Attend
All levels of engineers who manage projects (ones you handle on your own and/or ones that involve other people) but have no formal project management training

CEUs: 2.3 PDHs: 23
Member Price: $595 List Price: $695

Also available as a 3-day Public Course: PD467, “Project Management for Engineers and Technical Professionals”

Technical Writing for Engineers: Giving Readers What They Need

Online Assessment Based Course ZABC2

Different reader groups read the same documents; however, their level of understanding can vary greatly due to their experience and your writing. Want to help them understand your intent? Learn to create your documents (the writing and the layout on the screen/page) so they do just that. And in this training you work with your own weekly reports, SOPs, system designs, inspection reports, etc., so you get actual work done at the same time you’re learning!

PDHs: 4
Price: $100

Total Quality Management

Online Assessment Based Course ZABC6

Total Quality Management (TQM) is a system for satisfying internal and external customers and suppliers through both continuous improvements and breakthrough results that ultimately change organizational culture. This course provides the basic concepts and practices so you can apply these tools to your work and generate improvement and results. When you apply the TQM approach, it has an overarching impact on all aspects of the core business processes. This self-paced course provides students with case studies, which illustrate how to apply effective TQM strategies in the workplace.

PDHs: 3
Price: $145

Financial Resource Management

Online Instructor-Supported Course EL533

This course covers a wide range of financial management of topics, including the fundamentals and key components of the business plan, available and alternative funding sources, engineering economic analysis techniques such as NPV and ROI, and the preparation, interpretation and management of contracts.

You Will Learn
• How to apply financial accounting and budgeting procedures
• How to use applied finance, short & long term
• How to use engineering economic analysis techniques
• How to perform capital budgeting and resource planning
• How to use Financial Risk Analysis
• How to identify procurement and contract procedures; contract management

Who Should Attend
All engineering managers responsible for finance and procurement issues

CEUs: 2.3 PDHs: 23
Member Price: $595 List Price: $695

Financial Resource Management for Engineers

Online Assessment Based Course ZABC40

This course describes the fundamental terminology, processes, and strategies of business finance and accounting and covers business plan fundamentals and key components, available and alternative funding sources, engineering economic analysis techniques such as NPV and ROI, along with contract preparation, interpretation and management.

PDHs: 3
Price: $195

Marketing, Sales and Communications for Engineers

Online Assessment Based Course ZABC41

This course introduces the skills, knowledge and techniques of marketing and its interaction with the operations and technical arenas of a firm. It covers a broad range of topics, including market research and analysis; the impact of trends and the environment; forecasting; risk analysis; sales, pricing, and consumer satisfaction; advertising and integrated marketing communications; and branding.

PDHs: 2
Price: $195

Execution: How to Get Results

Online Assessment Based Course ZABC7

To achieve great results takes a lot of planning, effort and effective execution. How do you define the results you wish to achieve? How do you appropriately plan your efforts? How can you get others truly involved in helping you achieve what you want to achieve? How do you address the problems that come up along the way? How can you effectively learn from and share your execution experience? This course answers these and many other related questions.

PDHs: 1.5
Price: $99
Marketing, Sales and Communications for Engineers

Online Instructor-Supported Course EL531

This course provides skills, best practices and an appreciation of marketing and its interaction with the operations and technical arenas of an organization. It covers communication skills, market research and analysis, benchmarking, trends, the impact of the environment, technology assessment forecasting, risk analysis, sales and consumer satisfaction, advertising and integrated marketing communications, pricing, products and branding.

You Will Learn

• Market analysis (customer base, competition)
• Business research and forecasting tools and techniques
• Risk analysis, trend analysis (economics, social, political, environmental, technology) and technology assessment techniques
• Presentation skills, sales and advertising practices and customer satisfaction strategies
• Marketing and branding techniques, product portfolio analysis, global trade and international operations, and pricing strategies

Who Should Attend

Engineering managers with little to no exposure to marketing, whether at the college level or in their work environment

CEUs: 1.5 PDHs: 15

Member Price: $395 List Price: $495

“Having only been a member of ASME for one year, I was surprised to find the number of ASME distance learning opportunities that are available for the practicing engineer to study online. I found this method of distance learning very rewarding and I would highly recommend it to others. I would not hesitate enroll in future online learning opportunities.”

– Glen LeComte, PE
Owner
Argus Engineering PLLC

Managing Projects

Strategic Planning

Online Instructor-Supported Course EL534

This course deals primarily with business strategies, and covers: strategic destinations and planning domestically and internationally, planning for new technologies, technology assessment practices and techniques, system design and life-cycle engineering, partnering and outsourcing strategies, as well as change management techniques and adjustment strategies.

You Will Learn

• Formulating and communicating recommendations and action plans
• Obtaining information on competitors method application
• Synthesizing information and interpreting results
• Applying technology assessment practices and techniques
• Designing for environment, maintenance, re-usability and life cycle analysis
• Establishing outsourcing and partnering relationships

Who Should Attend

Engineering managers responsible for planning, adjusting and implementing business strategies

CEUs: 2.3 PDHs: 23

Member Price: $595 List Price: $695

ASME Books of Interest

Natural Negotiation for Engineers and Technical Professionals

by James S. Jetton
Order No. 859650 $39.00 (list) / $31.00 (member)

Guide to the Engineering Management Body of Knowledge (BOK)

Order No. 802991 $70.00 (list) / $56.00 (member)

Technical Presentation Workbook, Third Edition Winning Strategies for Effective Public Speaking

by Richard L. Sullivan and Jerry L. Wircenski
Order No. 859575 $50.00 (list) / $40.00 (member)

Get more information at www.asme.org/kb/books
BPV Code, Section III: Introduction

Online Instructor-Supported Course EL509
This course introduces participants to the fundamentals of Section III of the ASME Boiler Code with an in-depth review of the "Rules for Construction of Nuclear Facility Components." Participants learn the ASME Code requirements for the design and construction of a pressure boundary of nuclear power plant components. The course also reviews and discusses the requirements for planning, managing and conducting Q.A. programs for controlling the quality of activities performed under the jurisdiction of Section III. It also updates designers, procurement engineers and quality assurance engineers on the latest developments, Addenda and Code Cases pertaining to the application of the Code.

You Will Learn

- Classification of Components and Supports - Article NCA-2000
- Responsibilities and Duties - Article NCA-3000
- Quality Assurance Requirements - Article NCA-4000
- Authorized Inspection - Article NCA-5000
- Application of Concepts - Article NB-3200
- Class 1 Vessel Design - Article NB-3300
- Finite Element Analysis, Stress Classification & Interpretation of FEA Stress Results for NB-3200 Design
- Pipe Fittings and Components
- Piping Stress Analysis as per ASME Code
- Layout Considerations in Class 1 Piping Systems
- Specific Component Support Requirements

Who Should Attend

Nuclear component, support, piping, pumps, vessel and valve manufacturers, as well as parts manufacturers, engineers, designers and QA personnel involved in nuclear engineering /procurement and construction; registered professional engineers in need of updating their qualifications per N626.3-1993

CEUs: 2.3    PDHs: 23
Member Price: $595 List Price: $695

Essentials: BPV Code, Section III, Division 1: Rules For Construction of Nuclear Facility Components

Online Assessment Based Course ZABC20
Introduces the requirements of the BPV Code Section III, Division 1 and covers the general requirements and scope of Division 1, the responsibilities and duties of personnel involved in the construction of a nuclear power plant, quality assurance and certification.

PDHs: 2    Price: $195

BPV Code, Section III, Advanced Design and Construction of Nuclear Facility Components

Online Instructor-Supported Course EL524
From suppliers’ shops to construction sites, this advanced course details Code requirements for the design, fabrication, construction and life extension of nuclear power plants. Covering all aspects of the nuclear pressure boundary as well as the application of methods for fabrication of nuclear pressure boundary components, it provides the required skills for applying Code requirements for NDE (nondestructive examination) techniques for radiography, ultrasonic techniques and other forms of NDE. It also outlines the requirements for performing hydro testing and leak testing. Case studies examine real scenarios encountered in the nuclear industry. This advanced course explores the requirements of Section III of the ASME BPV Code.

You Will Learn

- Advanced concepts related to design by analysis and design by rule
- How to compare ASME BPV Code with other international codes
- Welding and heat treatment requirements
- What is required for non-destructive examination and testing

Who Should Attend

Nuclear power plant designers, stress analysts, QA and inspection personnel, regulators, and reactor, welding, operations and utility engineers involved in the design, fabrication, construction and life extension of nuclear power plant (NPP) components

CEUs: 2.3    PDHs: 23
Member Price: $595 List Price: $695

Also available as a 4-day Public Course: PD644, “Advanced Design and Construction of Nuclear Facility Components per ASME Section III”

BPV Code, Section III, Division 1: Class 1 Piping Design

Online Self-Study Course EL542
This course provides information and instruction on the design and construction of nuclear power plant piping systems consistent with ASME Boiler and Pressure Vessel Code (BPV Code), Section III, Division 1, Subsection NB. The course incorporates a brief historical perspective on as well as general overview of the BPV Code. The balance of the course focuses on the appropriate use of BPV Code Section III, Division 1, Subsection NB for the design and construction of Class 1 piping systems.

You Will Learn

- An overview of the ASME Boiler and Pressure Vessel Code
- Code requirements for Class 1 Piping Design Specifications
- Class 1 Piping Design by Rule (NB-3600)
- Class 1 Piping Design by Analysis (NB-3200)

Who Should Attend

Design and mechanical engineers, QA and inspection personnel, reactor engineers, welding engineers, operations engineers

PDHs: 23
Member Price: $295 List Price: $395

Also available as a 2-day Public Course: PD599, “BPV Code, Section III, Division 1: Class 1 Piping Design”

ASME Book of Interest

by Ian Hore-Lacy
Order No. 859NUC $49.00 (list) / $39.00 (member)

Get more information at www.asme.org/kb/books
BPV Code, Section III, Division 1: Class 2 & 3 Piping Design
Online Self-Study Course EL543

This course provides information and instruction on the design and construction of nuclear power plant piping systems and the appropriate use of ASME Boiler and Pressure Vessel Code, Section III, Division 1, Subsection NC and ND with respect to Class 2 & 3 piping systems. While they will be discussed briefly, detailed instruction will not be provided on the design and construction of Class 2 & 3 pipe supports. Participant exercises are provided as an integral part of the training program.

You Will Learn
• Class 2 & 3 Piping Design by Rule methods
• Class 2 & 3 pipe supports design requirements
• Selected individual piping component design requirements
• Design of a simple Class 2 & 3 piping system
• To describe “non-Code” but related nuclear piping design issues

Who Should Attend
Design and mechanical engineers, QA and inspection personnel, reactor engineers, welding engineers, operations engineers

PDHs: 23
Member Price: $295 List Price: $395
Also available as a 3-day Public Course: PD597, “BPV Code, Section III, Division 1: Class 2 & 3 Piping Design”

Inservice Testing of Pumps
Online Instructor-Supported Course EL523

This course teaches how to develop a Pump-IST (Inservice Testing) Program that the NRC will accept and approve. It covers the full range of Pump-IST requirements, including general concepts, the scope of Pump-IST, overviews of ISTA and ISTB, pump testing, program preparation, comprehensive pump test, pump vibration, risk-informed initiatives, performance-based initiatives, and two case studies. It focuses specifically on the NRC required 10-year updates of the Pump-IST Program. The course is geared toward IST engineers working at a plant or IST program regulators with 5-10 years’ experience in the nuclear industry. It also teaches engineers, who are new to the field, the basics of safety systems and standby equipment.

You Will Learn
• How to perform ten-year updates of the Pump-IST program
• The latest Pump-IST requirements, including ASME OM Code, Subsection ISTB
• Pump-IST strengths and weaknesses
• Details of current and future regulatory changes affecting Pump-IST

Who Should Attend
Inservice testing engineers, maintenance engineers, inservice testing program regulators, licensing engineers

CEUs: 2.3 PDHs: 23
Member Price: $595 List Price: $695
Also available as a 2-day Public Course: PD595, “Developing a 10-Year Pump Inservice Testing Program”

Risk-Informed Inservice Testing Program
Online Instructor-Supported Course EL527

How to convert a typical IST Program 10-year update to a RI-IST (Risk Informed Inservice Testing) Program that the Nuclear Regulatory Commission will accept and approve is the focus of this course. It provides an overview of the ISTE (the subsection of the code referring to Risk Testing Requirements); an overview of ISTA (General Testing Requirements); program requirements, guidance, and preparation; industry risk-informed initiatives; performance-based initiatives; and several case studies. While designed specifically for the IST engineers working at the plant or IST program regulators with 5 to 10 years of experience in the nuclear industry, new engineers also benefit from the basic information the course provides related to safety systems, standby equipment, and application of Probabilistic Risk Assessment Methods (PRA).

You Will Learn
• How to perform a Risk Informed-IST 10-year update of the IST program
• RI-IST requirements
• PRA strengths and weaknesses
• Details of current and future regulatory changes affecting RI-IST

Who Should Attend
Inservice testing engineers and regulators, project managers, engineering managers with risk assessment responsibilities

CEUs: 2.3 PDHs: 23
Member Price: $595 List Price: $695
Also available as a 3-day Public Course: PD597, “Risk-Informed Inservice Testing Program”

Essentials: ASME/ANS RA-S Standard for Level 1/ Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications
Online Assessment Based Course ZABC55 NEW!

This course introduces the ASME/ANS PRA Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications. This standard sets forth the requirements for probabilistic risk assessments (PRAs) used to support risk-informed decisions for commercial nuclear power plants, and prescribes a method for applying these requirements for specific applications.

The course discusses the basis and background of the standard’s development, the role of the Joint Committee on Nuclear Risk Management (JCNRM), the contents of the standard, and the use and application of the standard. The course will help you understand how to comply with the standard and meet its requirements.

Who Should Attend
This course is designed for anyone who wants an introduction to and a basic understanding of the ASME/ANS RA-S Standard.

PDHs: 2
Price: $195
Also available in Spanish as ZABC56
Inservice Testing of Valves

Online Instructor-Supported Course EL521

Upon completion of this course, you will be able to develop a Valve-IST (Inservice Testing) Program that complies with all NRC requirements. Following an introduction of the subject matter, it goes into general concepts, scope of Valve-IST, overviews of ISTA and ISTC, program requirements and guidance, valve testing, program preparation, condition-monitoring for valve test, risk-informed initiatives, performance-based initiatives, and two case studies. It highlights NRC-required 10-year updates of the Valve-IST Program. While designed primarily for IST engineers working at a plant or IST program regulators with 5 to 10 years’ experience, new engineers in the nuclear industry also learn a lot of the basics related to safety systems and standby equipment.

You Will Learn
- How to perform ten-year updates of the Valve-IST program
- The specific requirements of the ASME OM Code, Subsection ISTC
- Relevant Valve-IST requirements
- The latest thinking on Valve-IST strengths and weaknesses
- Current and likely future regulatory changes affecting Valve-IST

Who Should Attend
Inservice testing engineers, maintenance engineers, inservice testing program regulators, licensing engineers

CEUs: 2.3 PDHs: 23

Member Price: $595 List Price: $695

Also available as a 3-day Public Course: PD596, “Developing a 10-Year Valve Inservice Testing Program”

How to Get an “N” Stamp

Online Assessment Based Course ZABC4

This course makes the procedure for obtaining an ASME “N” Stamp easier to understand. The course outlines, defines and explains ASME conformity assessment programs, code requirements, along with the “N” Stamp application procedure covering the accreditation process, survey preparation, demonstration requirements and the most common deficiencies occurring in “N” Stamp applications.

PDHs: 3

Price: $295

Essentials: NQA-1, Part 1: 18 QA Requirements

Online Assessment Based Course ZABC5

This course offers an overview of the ASME NQA-1 Nuclear Quality Assurance Standard and an in-depth look at Part I (there are three parts in all). The course material provides descriptions and explanations of how each of the 18 requirements of the standard should be applied, including software design, computer test procedures, the inspection processes, identifying and managing nonconformances, and the control of measuring and test equipment. This course is for engineers, managers and quality personnel who are, or will be directly or indirectly involved in manufacturing, fabrication and examination of components or structures for nuclear power facilities.

PDHs: 4

Price: $295

NQA-1 Practical Application

Online Assessment Based Course ZABC29

ASME NQA-1, Quality Assurance Requirements for Nuclear Facility Applications contains the quality assurance program requirements for the siting, design, construction, operation and decommissioning of nuclear facilities. Part 1 describes an eighteen-point system for implementing a quality assurance program for these activities. The course describes a practical application of NQA-1 focusing on five of the principal requirements: control of design, procurement documents, purchased items & services, tests, and measuring and test equipment. This course is for design, process and quality engineers; managers, management program developers, and project managers; licensing and procurement personnel; regulators; and students and university personnel.

PDHs: 4

Price: $295

Probabilistic Risk Assessment (PRA) Standard – Introduction

Online Self-Study Course EL541

This course covers the PRA standard objectives and provides an overview of the PRA Standards Framework. A discussion of the standard’s detailed requirements is not included. The course takes approximately two hours to complete.

You Will Learn
- When the PRA standard should be applied
- The interaction between technical requirements of the PRA standard and the applications of PRA
- The implications of PRA standard compliance

Who Should Attend
Engineers, project managers and engineering managers with risk assessment responsibilities

PDHs: 2

Member Price: $195 List Price: $295
Design of Buried High Density Polyethylene (HDPE) Piping Systems

Online Self-Study Course EL544

This course provides training on the design and analysis of buried high density polyethylene (HDPE) pipe in accordance with the ASME Boiler and Pressure Vessel Code Case N-755. The course covers all aspects of the design of buried HDPE pipe including pressure design, soil loadings, thermal expansion loads and seismic design requirements. The design of coupled buried HDPE and above ground steel piping systems is also presented. The class includes two in-class piping design exercises as well as a complete set of handouts and identification of applicable reference documents.

You Will Learn

• The scope of Code Case N-755 and its relationship to the ASME BPV Code
• HDPE piping design requirements and analysis methods as specified in Code Case N-755
• Calculation methods for soil springs and other needed soil parameters
• Design of coupled buried HDPE and above ground steel piping systems

Who Should Attend

Operating nuclear plant and “architect/engineers” staff engineers, management and project management personnel involved with design, procurement, inspection or installation of buried HDPE piping in new applications or the replacement of existing corroded steel piping systems in ASME Section III, Class 3 safety related (Subsection ND) applications

PDHs: 10

Member Price: $295  List Price: $395

Also available as a 2-day Public Course: PD617, “Design of Buried High Density Polyethylene (HDPE) Piping Systems”

NQA-1 Quality Assurance Requirements for Nuclear Facility Applications

Online Instructor-Supported Course EL520

This online, instructor-supported course provides an overall understanding of the basic principles and applications of ASME Nuclear Quality Assurance. Managers, engineers, and program developers who take this course gain an enhanced understanding of ASME as an organization, its codes and standards, and the ASME Nuclear Quality Assurance code and standard NQA-1 as it is applied to nuclear facilities.

In addition to covering the NQA-1 Standard, it also provides a brief overview of sections of Section III Rules for Construction of Nuclear Facility Components of the BPV Code as they apply ASME NQA-1 for their quality assurance standard for new construction of nuclear facilities and plant modifications.

This course is designed for engineers, managers and quality personnel who are, or will be, directly or indirectly involved in manufacturing, fabrication and examination of components or structures for nuclear power facilities.

You Will Learn

• To explain the purpose of the NQA-1 Standard and its role in nuclear construction and operation
• To describe the 18 criteria basis of the NQA-1 Standard contained in Part 1
• To describe the organization of the NQA-1 Standard and the major topics (or activities) covered in the standard
• To explain the differences between Parts 1, 2, 3, and 4

Who Should Attend

Design, process, and quality engineers; managers, management program developers, and project managers; licensing and procurement personnel; regulators; and students and university personnel

CEUs: 1.5  PDHs: 15

Member Price: $395  List Price: $495

Also available as a 2-day Public Course: PD634, “Comparison of Global Quality Assurance and Management System Standards Used for Nuclear Applications”

Comparison of Global Assurance and Management Standards Used for Nuclear Application

Online Instructor-Supported Course EL526

This course provides managers, engineers and program developers with a better understanding of the major international Nuclear Quality Assurance Standards and how they interact.

Following an introduction to the ASME Section III Nuclear Power Code, the course offers an overview of the ASME NQA-1 Nuclear Quality Assurance Standard, the ISO 9001 Quality Management Standard, and the IAEA GS-R-3 Management Systems Standard. It also compares the NQA-1 Standard with the ISO 9001:2008 and the IAEA GS-R-3 Management Systems Safety Series Standard. The course also provides analysis of the areas of their agreement and differences.

You Will Learn

• To identify ASME NQA-1 Nuclear Quality Assurance Standard contents and organization
• To provide an overview of International Atomic Energy Agency (IAEA) Safety Standard GS-R-3, 2006-STI/PUB/1252
• To provide an overview of ISO 9001: 2008
• To explain the practical application of these quality assurance requirements for the nuclear industry

CEUs: 1.5  PDHs: 15

Member Price: $395  List Price: $495

go.asme.org/eLearning
Piping and Pipelines

FRP Piping Fabrication and Installation Processes

Online Instructor-Supported Course EL522
This course covers the application of Bonding Procedure Specifications (BPS) required by B31 codes. It covers the qualifications for people, material and the procedure.

You Will Learn

• To describe FRP (Fiberglass Reinforced Plastic) piping fabrication and installation processes
• To define typical problem areas and what can be done to avoid problems
• How to apply the ASME B31 Code requirements to the Flue Gas Desulfurization System installation application

Who Should Attend
Construction and maintenance personnel responsible for installing FRP piping
CEUs: 1.5 PDHs: 15
Member Price: $395 List Price: $495
Also available as a 1-day Public Course: PD593, “FRP Piping Fabrication and Installation Processes”

Design of Buried High Density Polyethylene (HDPE) Piping Systems

Online Self-Study Course EL544
This course provides training on the design and analysis of buried high density polyethylene (HDPE) pipe in accordance with the ASME Boiler and Pressure Vessel Code Case N-755. The course covers all aspects of the design of buried HDPE pipe including pressure design, soil loadings, thermal expansion loads and seismic design requirements. The design of coupled buried HDPE and above ground steel piping systems is also presented. The class includes in-class piping design exercises as well as a complete set of handouts and identification of applicable reference documents.

You Will Learn

• The scope of Code Case N-755 and its relationship of Code Case N-755 to the ASME BPV Code
• HDPE piping design requirements and analysis methods as specified in Code Case N-755
• Calculation methods for soil springs and other needed soil parameters
• Design of coupled buried HDPE and above ground steel piping systems

Who Should Attend
Operating nuclear plant and architect/engineer staff engineers, management and project management personnel involved with design, procurement, inspection or installation of buried HDPE piping in new applications or the replacement of existing corroded steel piping systems in ASME Section III, Class 3 safety related (Subsection ND) applications
PDHs: 10
Member Price: $295 List Price: $395
Also available as a 2-day Public Course: PD617, “Design of Buried High Density Polyethylene (HDPE) Piping Systems”

Hydraulic Design of Liquid or Water Piping Systems

Online Self-Study Course EL539
This course covers the basic fundamentals and flow equations used for sizing flow lines or solving the line pressure drop of steady-state simple hydraulic systems flowing non-flashing incompressible Newtonian liquids or water. Industry’s generally accepted fundamental Darcy’s equation and the empirical Hazen-Williams formula for water flows are introduced as the models of calculating the frictional pressure drop. Explicit equations between pipe pressure drop and parameters such as pipe inside diameter, fluid’s flowing velocity or flow rate and pipe run length are also provided in order for the participants to gain insight of their direct relationship. Working equations provided in this course allow participants to effectively perform hydraulic analysis and evaluate design options of de-bottlenecking their piping or flow line infrastructure for future service requirement.

You Will Learn

• Basic principles that govern the fluid flow in pipes
• How to describe and calculate specific gravity, pressure heads, velocity heads, head losses and pressure losses
• The dependence of frictional pressure drop on pipe flowing velocity, pipe mass flow rate, pipe inside diameter
• The trade-off between the pipe inside diameter and run length at constant pressure drop
• The considerations of consulting experts and considering guidelines involved in selecting optimal pipe sizes for piping line sizing

Who Should Attend
New practicing engineers or experienced engineers entering a new area of practice or seeking a refresher course in fluid flow or pipe hydraulics
PDHs: 10
Member Price: $295 List Price: $395

Essentials: B31.1 Power Piping

Online Assessment Based Course ZABC14
This course introduces the B31.1 Power Piping code and discusses its relationship with BPV Code, Section I: Rules for Construction of Power Boilers and the requirements for design, fabrication and testing. It covers the jurisdictional limits of the B31.1 code and the ASME Boiler and Pressure Vessel Code, Section I and design issues specific to power piping systems. Also reviewed are qualification requirements for operators and operating procedures for welders and brazers, along with nondestructive examination requirements.
PDHs: 2
Price: $195
BPV Code, Section III, Division 1: Class 1 Piping Design

Online Self-Study Course **EL542**

This course provides information and instruction on the design and construction of nuclear power plant piping systems consistent with ASME Boiler and Pressure Vessel Code (BPV Code), Section III, Division 1, Subsection NB. The course incorporates a brief historical perspective on as well as general overview of the BPV Code. The balance of the course focuses on the appropriate use of BPV Code Section III, Division 1, Subsection NB for the design and construction of Class 1 piping systems.

**You Will Learn**

- An overview of the ASME Boiler and Pressure Vessel Code
- Code requirements for Class 1 Piping Design Specifications
- Class 1 Piping Design by Rule (NB-3600)
- Class 1 Piping Design by Analysis (NB-3200)

**Who Should Attend**

Design and mechanical engineers, QA and inspection personnel, reactor engineers, welding engineers, operations engineers

PDHs: 10

Member Price: $295  List Price: $395

Also available as a 2-day Public Course: PD599, “BPV Code, Section III, Division 1: Class 1 Piping Design”

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Essentials: B31.8 Gas Transmission and Distribution Piping Systems

Online Assessment Based Course **ZABC12**

This course introduces the requirements and scope of B31.8, including its history, the types of systems to which it applies, the organization and intended use of the Codebook as well as the requirements for pipeline materials and equipment, welding and design, installation and testing of pipeline systems.

PDHs: 2  
Price: $195

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Essentials: B31.3 Process Piping Code

Online Assessment Based Course **ZABC15** NEW!

This course explains how piping systems function and what the code requirements are for various types of piping installations, including guidance and limitations on the selection and application of materials and components. Also covered are requirements for fabrication, assembly, inspection, examination and testing, as well as special types of piping.

PDHs: 2  
Price: $195

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BPV Code, Section III, Division 1: Class 2 & 3 Piping Design

Online Self-Study Course **EL543**

This course provides information and instruction on the design and construction of nuclear power plant piping systems and the appropriate use of ASME Boiler and Pressure Vessel Code, Section III, Division 1, Subsection NC and ND with respect to Class 2 & 3 piping systems. While they will be discussed briefly, detailed instruction will not be provided on the design and construction of Class 2 & 3 pipe supports. Participant exercises are provided as an integral part of the training program.

**You Will Learn**

- Class 2 & 3 Piping Design by Rule methods
- Class 2 & 3 pipe supports design requirements
- Selected individual piping component design requirements
- Design of a simple Class 2 & 3 piping system
- To describe “non-Code” but related nuclear piping design issues

**Who Should Attend**

Design and mechanical engineers, QA and inspection personnel, reactor engineers, welding engineers, operations engineers

PDHs: 10

Member Price: $295  List Price: $395

Also available as a 1-day Public Course: PD600, “BPV Code, Section III, Division 1: Class 2 & 3 Piping Design”

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Cursos Virtuales Disponible en Español  
(Ver página 25)

- **ZI511** Código ASME Sección VIII Div. 1 Diseño, Construcción e Inspección de Tanques y Recipientes de Presión
- **ZI512** Gestión de Integridad de Recipientes, Calderas y Tuberías a Presión
- **ZI513** Introducción a Normas y Códigos para el Mantenimiento de Recipientes, Calderas y Tuberías
- **ZI514** Inspección Basada en Riesgo I - Un Sistema Integrado de Análisis de Riesgo, Aptitud para el Servicio y Análisis de Fallas
- **ZI520** Código ASME B31.1 Tuberías de Vapor y Sistemas de Potencia
- **ZI570** Código ASME B31.3 Tuberías de Proceso de Refinerías y Plantas Químicas
- **ZI580** Código ASME B31.8 Tuberías de Transporte y Distribución de Gas
- **ZI590** Código ASME B31.4 Tuberías de Transporte de Hidrocarburos Líquidos y otros Líquidos
- **ZI621** Inspección Basada en Riesgo II
Welding

Principles of Welding
Online Instructor-Supported Course EL515

This course provides an introduction to the principles of welding technology, and is specifically designed for professionals who wish to understand the fundamental principles of welding to control and troubleshoot welding processes, reduce operating cost and improve the quality of their products. It describes the process of welding and how it affects welded materials and structures. It describes the electric circuits that are used to generate welding arcs, material properties, and the metallurgical and dimensional effects of welding on structures. The course also provides an overview of weld design concepts including efficient weld sizing and communication of weld and welding information through weld symbols on drawings. The course is an ideal prerequisite to the ASME BPV Code, Section IX for those individuals with little or no prior welding experience.

You Will Learn

• Use and application of common welding processes
• The technical factors that describe each welding process
• The advantages and disadvantages of each process
• Weld examination methods and quality issues

Who Should Attend

New technologists, engineers, managers and quality personnel who wish to understand the fundamental principles of welding to control and troubleshoot welding processes, reduce operating cost and improve the quality of their product

CEUs: 2.3 PDHs: 23
Member Price: $595 List Price: $695

BPV Code, Section IX: Welding and Brazing Qualifications
Online Instructor-Supported Course EL516

This course covers the layout, scope, and use of Section IX of the ASME Boiler and Pressure Vessel Code through illustrative examples. It explains and demonstrates the rules for qualification of welding and brazing procedures and personnel, and presents basic rules for the use of Section IX in conjunction with other construction codes. These rules include the identification of responsibilities for procedure and personnel qualification as well as the activities that can be subcontracted by the manufacturer. The course presents basic metallurgy and characteristics of the welding processes to assist in understanding essential and nonessential variables for the qualification of procedures and personnel. Examples of documentation for welding procedure and personnel qualification are included to demonstrate how the essential and nonessential variables are identified and documented.

You Will Learn

• Layout and scope of Section IX
• Qualification of procedures and personnel in Section IX
• Basic features of the commonly used welding processes
• The concept of carbon equivalent and hardenability of steels
• Nonessential variables and essential variables in the WPS
• How to prepare and modify the PQR and WPS from fundamental data
• Supplementary essential variables

Who Should Attend

Engineers, supervisors, quality assurance/control personnel, auditors or anyone who needs to understand and apply welding qualifications governed by Section IX of the ASME Boiler and Pressure Vessel Code

CEUs: 2.3 PDHs: 23
Member Price: $595 List Price: $695

Also available as a 3-day Public Course: PD190, “BPV Code, Section IX: Welding and Brazing Qualifications”

ASME Book of Interest

Quick Guide to Welding and Weld Inspection
by Steven Hughes

This book was written to provide a quick guide to welding inspection that is easy to read and understand. It gives you a basic understanding of the subject that helps you decide if you need to look further. In many cases the depth of knowledge required for any particular welding-related subject will be dependent on specific industry requirements.

Order No. 859506 $65.00 (list) / $52.00 (member)

Get more information at www.asme.org/kb/books

Essentials: BPV Code, Section IX: Welding and Brazing Requirements
Online Assessment Based Course ZABC18

This course introduces Section IX: Welding & Brazing Requirements of the ASME Boiler and Pressure Vessel Code, covering the section’s scope, organization and requirements.

PDHs: 2
Price: $195
eLearning FAQs

Q: What is eLearning?
A: eLearning is training where the content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, or on a CD or DVD-ROM. It can be self-paced or instructor-supported and can include media in the form of text, image, audio and video. CBT (Computer-Based Training), IBT (Internet-Based Training) or WBT (Web-Based Training) are terms also often used.

Q: What are the characteristics of a successful eLearning participant?
A: A successful eLearning participant is self-motivated, good at managing time, does not procrastinate, and enjoys writing and reading. If you put off things until the last minute, or hate to type, or absolutely must have face-to-face time with your instructor, then ASME eLearning may not be for you.

Q: What are the technical requirements to take an eLearning course?
A: All you need is a personal computer or laptop with Internet access and a web browser, PDF reader and Adobe Flash (for some courses).

Q: What are the benefits of taking an eLearning course?
A: There are many benefits of learning in this way. eLearning fits to your individual schedule and you can access the training when and where you wish. Working online eliminates the need for travel which saves you both time and money. If you’re working in one of our instructor-supported courses you’ll get to learn in groups through team projects discussions and you’ll network with people from all over the world.

Q: How do I register?
A: The easiest way is to register via the ASME Web site in the Courses section at go.asme.org/education. You can also register by telephone in the US and Canada at +1.800.843.2763, and in Mexico at 001-800-843-2763 (toll free); worldwide by calling +1.973.882.1170; by fax at +1.973.882.1717 or +1.973.882.5155; by mail to ASME, 22 Law Drive, Box 2900, Fairfield, NJ 07007-2900; and by email to customercare@asme.org.

Q: How can I pay for my eLearning course?
A: You can pay by check or credit card (Visa, MasterCard, American Express, Discover or EuroCard).

Q: How do I get started on an eLearning course?
A: Once we receive your payment you will be sent an ID and password and detailed instructions on how to enter the course and what to expect.
Representative Biographical Profiles of ASME eLearning Course Developers / Instructors

With over 30 years’ experience in the design of pressure retaining components to Section III and Section VIII of the ASME Boiler and Pressure Vessel Code and the B31 series codes, he is responsible for project management, technical consulting and design work in the areas of design/analysis of piping systems, pressure vessels/tanks, mechanical equipment, structures and application of Industry Consensus Codes and Standards for the electric power generation, petrochemical and process industries as well as DOE nuclear waste processing facilities. A recognized expert in the application of experience-based and traditional qualification techniques to the seismic evaluation of piping systems, valves, component equipment and supports, he currently serves on several ASME committees, including: ASME BPVC Section III, Subgroup on Design; ASME BPVC Section III, Working Group on Piping Design; ASME BPVC Section III, Special Working Group on Polyethylene Pipe; ASME Qualification of Mechanical Equipment, Main Committee.

With 40 years’ experience in design, analysis and fabrication of pressure equipment, he presently performs consulting services to the pressure vessel industry. He is a member and past vice chairman of ASME Code Subcommittee VIII, a member of ASME Post Construction Committee, ASME/API Joint Committee on Fitness-For-Service and a number of other professional organizations. He is also a past chairman of the Pressure Vessel Research Committee (PVRC).

In 1981 he founded a firm to provide mechanical engineering consulting services specializing in bolted flanged joints and gaskets. Previously employed by Exxon Research & Engineering Co. where he engaged in the mechanical design and troubleshooting of piping systems and pressure vessels, and participated in plant start-ups around the world. He has been active in the bolted joint and gasket activities of the PVRC, ASTM, and ASME, is a contributing author to “Gaskets and Gasketed Joints” (Ed: J. Bickford, Marcel Dekker, 1998) and a founding member of the ASME Special Working Group on Bolted Flanged Joints.

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He has over thirty years’ 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, he 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. Previously an adjunct instructor in thermodynamics and heat transfer for the University of South Carolina-Aiken and Villanova University, he is currently affiliated with the University of Delaware.

He has over thirty years’ experience in design, analysis and fabrication of pressure equipment, he presently performs consulting services to the pressure vessel industry. He is a member and past vice chairman of ASME Code Subcommittee VIII, a member of ASME Post Construction Committee, ASME/API Joint Committee on Fitness-For-Service and a number of other professional organizations. He is also a past chairman of the Pressure Vessel Research Committee (PVRC).

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He has forty years of experience in the nuclear, fossil, and hydro power industry, providing technical and management support services to nuclear utilities, the US Department of Energy, the US Nuclear Regulatory Commission, and the Electric Power Research Institute. His technical expertise includes preoperational-startup testing, equipment testing and qualification, in-service testing (including RI-IST), containment testing, codes and standards compliance and maintenance plans development and implementation. An ASME codes & standards expert, he was chairman of the ASME Board on Nuclear Codes and Standards (VP-NC&S), and he has held several positions in the ASME Operations and Maintenance Committee, Post Construction Committee, and Boiler Pressure Vessel Committee. He has represented ASME in interfaces with other countries and supported their implementations of C&S’s, including China, Japan, Korea, South Africa, Sweden, Finland, France and the Czech Republic.

A senior consultant to the nuclear industry, he works with manufacturers and suppliers to develop management systems which meet requirements of codes and standards such as ASME NQA-1-2008, ISO 9001-2008 and IAEA GS-R-3. He worked for the ITER Project on-site in France, as responsible officer and division head for ITER Quality Assurance, and as expert contractor reporting to the ITER’s director general and deputy director general of safety and security. He also helped develop the ITER interfaces with international organizations such as IAEA, JSME and ISO. In addition, he works with code and standard writing organizations such as ASME, JSME and IAEA, and is a member of Section III Committees, NQA-1 Committees, the ISO 9001 TC 176 US TAG.
Cursos Virtuales en Español
(eLearning Courses in Spanish)

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2.3 CEUs, 23 PDHs Member $545 / List price $595

Gestión Para Ingenieros
ZI644 Gerencia de Proyectos de Mantenimiento
ZI620 Gerencia de Proyectos para Ingenieros, Profesionales y Técnicos

Grúas
ZI641 Seguridad Operativa en el Manejo de Equipos de Izajes

Mantenimiento
ZI510 El Análisis Vibracional en Equipos Rotativos y Mantenimiento Predictivo - Nivel I
ZI550 Mantenimiento Centrado en Confiabilidad – MCC
ZI635 Mantenimiento Productivo Total (TPM)
ZI647 Gestión y Optimización de Inventarios en Mantenimiento
ZI648 Análisis de Fallas Mecánicas en Equipos Mineros
ZI649 El Análisis de Riesgos y las Tecnologías del Mantenimiento Predictivo

Manufactura Esbelta
ZI636 Introducción a Manufactura Esbelta
ZI637 Las Herramientas de Calidad
ZI640 Metodología de las 5’s y la Administración Visual

Operaciones
ZI642 Sistemas de Alivio y Venteo, Selección de Válvulas de Seguridad y Alivio según API 521 & 520

Recipientes a Presión y Tuberías
ZI511 Código ASME Sección VIII División 1: Diseño, Construcción e Inspección de Tanques y Recipientes de Presión
ZI512 Gestión de Integridad de Recipientes, Calderas y Tuberías a Presión
ZI513 Introducción a Normas y Códigos para el Mantenimiento de Recipientes, Calderas y Tuberías
ZI514 Inspección Basada en Riesgo I - Un Sistema Integrado de Análisis de Riesgo, Aptitud para el Servicio y Análisis de Fallas
ZI520 Código ASME B31.1 Tuberías de Vapor y Sistemas de Potencia
ZI570 Código ASME B31.3 Tuberías de Proceso de Refinerías y Plantas Químicas
ZI580 Código ASME B31.8 Tuberías de Transporte y Distribución de Gas
ZI590 Código ASME B31.4 Tuberías de Transporte de Hidrocarburos Líquidos y otros Líquidos
ZI621 Inspección Basada en Riesgo II
ZI638 Curso de Preparación para Examen de Certificación en Dimensiones y Tolerancias Geométricas

Soldadura
ZI515 Introducción a la Tecnología de Soldadura
ZI540 Código ASME Sección IX - Soldadura: Desarrollo y Calificación de Procedimientos y Soldadores
ZI600 Soldadura de Oleoductos, Gasoductos y otras Tuberías según API 1104

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