ASME LEARNING & DEVELOPMENT

CORPORATE TRAINING COURSE CATALOG 2021-2022

Live and On Demand courses
from top engineering experts

ASME L&D LEARNING & DEVELOPMENT

ASME LEARNING & DEVELOPMENT

Training for Engineering Transformation

In the last century alone, the engineering industry has boldly brought us through several industrial revolutions. Great engineering achievements have positively impacted humankind. But as remarkable as these innovations are, there are many more engineering opportunities to be realized.

At ASME Learning and Development (L&D), our mission is to advance the skills and grow careers of engineering professionals and their teams. Our vision is to empower the global engineering community to solve the challenges of today and tomorrow.

Your Workforce Development Resource

ASME Learning and Development has been collaborating with engineering organizations to aid in their professional development initiatives for decades. ASME Corporate Training can upskill your team and solve for your organization's unique needs. From working with you to standardize your business processes with best practices and boosting productivity to improving employee engagement, we can help you maximize the potential of your workforce all while growing your organization's competitive edge.

Flexible Training for Your Team

Work with ASME Corporate Training to create a comprehensive learning solution for your workforce, built from our broad range of courses, learning paths and credentials. With technical and non-technical topics available in a variety of formats, including live and on demand, we collaborate with you to create a professional development learning solution based on your workforce's unique schedules, preferences, responsibilities and aspirations.

Top Industry Experts

Our team of accomplished educators, with years of technical knowledge and experience, focus on you and your organization to provide targeted world-class professional engineering instruction. All of our educators are ASME-approved and meet IACET accreditation requirements. Many also serve as ASME Code Committee members and/or volunteers. Our top educators can also deliver learning experiences globally, often in multiple languages.

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ASME Virtual Classroom

Guided Study

Self Study

ASME VIRTUAL CLASSROOM

Live online courses with an instructor and peers.

Remote Learning Reinvented

ASME Virtual Classroom is a live instructor-led learning solution that provides working professionals with an enhanced classroom learning experience through video conferences with ASME's world-class instructors, collaboration with peers, discussion boards, online assessments, and much more.

With thousands of hours of successful virtual instruction already logged, ASME Learning & Development is poised to provide you with training you can trust.

ASME Virtual Classroom delivers an enhanced online learning experience with:

- Real-time live learning from expert instructors
- Interactive Q&A
- Discussion boards, polls and surveys
- Online assessments (when applicable)
- Digital access to course material
- Digital certificate of completion
- Collaboration with peers

"THE COURSE MATERIAL, INSTRUCTOR, AND MODERATOR WERE EXCELLENT"

GEOMETRIC DIMENSIONING & TOLERANCING VIRTUAL CLASSROOM

VCPD570
Geometric Dimensioning & Tolerancing Fundamentals I

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

Not only is ASMEs Y14.5 Standard considered the authoritative guideline for the design language of geometric dimensioning and tolerancing (GD&T); it is essential in ensuring that drawing information and symbols are being interpreted and communicated properly. This official ASME course is based on the latest ASME Y14.5-2018 Standard and makes GD&T concepts easy to learn and apply. By combining lecture with animated graphics and display models, this course aims to ensure that all students are engaged throughout.

VCPD561
Geometric Tolerancing Applications and Tolerance Stacks

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

This Applications and Tolerance Stacks course teaches one how to take GD&T skills to the next level and apply and perform tolerance stacks using a series of case study problems including sheet metal, machinings, plastic parts, castings etc. Being able to identify a tolerance on a part can influence the products cost and performance. Learning the skills in this course will help the learner balance functionality with manufacturing capabilities.

VCPD603
GD&T Combo Course

PDHs: 30 **CEUs:** 3 **Format:** Virtual Classroom

The common language known as GD&T can help facilitate communication amongst key team members responsible for the production of a part. GD&T is an essential tool for communicating design intent how the parts from technical drawings have the desired form, fit, function, and interchangeability. This official ASME learning path is designed to provide attendees with the skills and applied knowledge they need to avoid costly manufacturing mistakes, provide better quality control, and shorten delivery time.

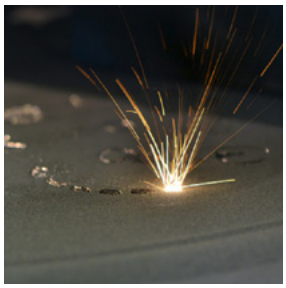
MANUFACTURING VIRTUAL CLASSROOM

VCAM270
AM Part Failure Analysis: What went wrong?

PDHs: 4 **CEUs:** 0.4 **Format:** Virtual Classroom

What happens when an AM part fails? Curious to learn more about how to avoid common failures before they occur? This ASME and Siemens Energy course partnership explores failure modes of laser powder bed fusion prints, covering the root cause and analysis of unique use caseswith a focus on avoiding future defects.

MODELING AND SIMULATION VIRTUAL CLASSROOM



VCAM271
Candidate Part Selection

PDHs: 4 **CEUs:** 0.4 **Format:** Virtual Classroom

Are you looking to build parts with metal additive manufacturing?While Additive Manufacturing opens doors to new lines of design thinking and creative configurations, the key to a successful project lies in the selection of appropriate parts.This Virtual Classroom course will guide you as you identify parts that can benefit from design for additive manufacturing and learn a methodology for selection of parts.

VCPD841
Verification and Validation in Scientific Computing

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

In ASMEs Verification and Validation in Scientific Computing learn modern terminology, practical techniques and procedures for verification of numerical simulations, validation of mathematical models, and uncertainty quantification for assessing the credibility of the predicted performance, reliability, and safety of engineering systems.

VCPD842
Probabilistic and Uncertainty Quantification Methods for Model Verification & Validation

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

This course explains the concepts and effective procedures used not only to predict uncertainties in a model, but to also mature your model and build trust in your organization by being able to communicate and document your findings. This systematic framework focuses on methods, approaches, and strategies for quantifying uncertainties in model predictions.

VCPD843
Verification & Validation of Models and Simulation Combo Course

PDHs: 30 **CEUs:** 3 **Format:** Virtual Classroom

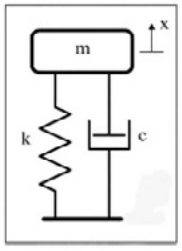
The modeling process itself can introduce uncertainties due to a variety of factors and approximations made during modeling simulations. The techniques in this series of courses will give the learner the terminology, practical techniques and procedures for verification of numerical simulations, validation of mathematical models, and uncertainty quantification for assessing the credibility of the predicted performance, reliability, and safety of engineering systems.

DESIGN, MATERIALS, AND ANALYSIS VIRTUAL CLASSROOM

VCPD268
Fracture Mechanics

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

Providing a practical understanding of fatigue and fracture calculations, this course is intended for engineers who are required to perform such calculations, or who specify or evaluate testing and draft fatigue or fracture portions of design requirements. It covers the latest methodologies such as weight functions and the failure assessment diagram (FAD) approach. Related subjects such as damage tolerance analysis, reliability, and risked-based inspection will also be discussed.



VCPD231
Applied Shock and Vibration Analysis and Design

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

In this intermediate level course, engineers with backgrounds in mechanical, structural or related engineering disciplines will learn how to compute natural frequencies and response to dynamic forces, and designs to reduce vibration of new and existing systems. Thirty-two detailed, step-by-step, worked-out examples of analysis and design are presented at appropriate junctures throughout the course.

VCPD673

Design and Selection of Heat Exchangers

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

This course covers the design, selection, and sizing of heat exchangers. It begins with a brief review of heat transfer fundamentals. It continues with a look at four main types of heat exchangers that are used in the industry: the Double Pipe Heat Exchanger, the Shell and Tube Heat Exchanger, the Plate and Frame Heat Exchanger, and the Cross Flow Heat Exchanger.

VCPD618

Problem-solving for Engineers: Root Cause Analysis Fundamentals

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

This three-day course provides a collaborative and dynamic learning environment that affords the participant the ability to perform RCA on real-world problems and overlay solutions to the problems. Each RCA tool is presented in an easy-to-follow structure: a general description of the tool, its purpose and typical applications, the procedure when using it, an example of its use, a checklist to help you make sure it is applied properly, and different forms and templates.

BOILERS & PRESSURE VESSELS VIRTUAL CLASSROOM

VCPD395

API 579-1/ASME FFS-1 Fitness for Service

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

This fundamental course trains participants to apply the requirements of API 579/ ASME FFS-1 to make run, repair, and replacement decisions for pressure vessels, piping, and tanks.

VCPD583

Pressure Relief Devices: Design, Sizing, Construction, Inspection & Maintenance

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

Possibly the most important single safety device on a boiler or pressure vessel, the pressure relief device is all that stands between overpressure conditions and catastrophic explosions. This comprehensive review of the design, construction, installation, operation, inspection and maintenance of pressure relieving devices currently in use on boilers and pressure vessels details how to protect pressurized equipment from exceeding the maximum allowable working pressure.

VCPD077

Failure Prevention, Fitness-for-Service, Repair and Life Extension of Piping, Vessels and Tanks

PDHs: 20 **CEUs:** 2 **Format:** Virtual Classroom

Learn to make run-or-repair decisions on degraded pressure equipment, piping and pipelines.

VCPD441

Operating, Maintaining, Repair and Alterations of In-Service Pressure Equipment

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

Focusing specifically on in-service pressure equipment, this course introduces attendees to the requirements of various codes and standards, and highlights inspection, repairs and alterations of in-service pressure equipment, and in particular, pressure vessels.

VCPD442

Introduction to ASME BPV Code, Section VIII, Division 1

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

ASMEs BPV Code, Section VIII, Division 1 course is a comprehensive introduction to Code requirements based on a high-level overview of the current Section VIII, Div 1 rules for pressure vessel design and construction.

VCPD443

ASME BPV Code, Section VIII, Division 1: Combo Course

PDHs: 38 **CEUs:** 3.8 **Format:** Virtual Classroom

This comprehensive ASME Boiler and Pressure Vessel Code (BPVC), Section VIII, Division 1 Learning Path consisting of two courses trains participants on the requirements of the Section VIII, Division 1, including design, materials, fabrication, testing and inspection of pressure vessels. With real-world industry examples, it also helps participants analyze pressure vessels for fitness for service, and ensures participants can identify potential repairs, alterations and develop the documentation requirements for each.

VCPD448

ASME BPV Code, Section VIII, Division 2: Design & Fabrication of Pressure Vessels

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

This introductory course describes the use of alternative rules for the design and fabrication of pressure vessels given in Section VIII, Division 2 of the ASME Boiler & Pressure Vessel Code.

VCPD769

ASME/API Boilers and Fired Pressure Equipment Operation and Maintenance

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

ASMEs Boilers and Fired Pressure Equipment Operation and Maintenance course provides a broad scope of boiler (fired & unfired) and fired pressure equipment operation and maintenance, covering requirements of ASME BPVC Sections I, III, IV, VI, VII, and VIII, and covers API recommendations to reflect the current changes to the industry's practices.

VCPD770

Boilers and Fired Pressure Equipment Inspection, Repairs, and Alterations Industry Best Practices

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

This course has been designed to provide participants with comprehensive knowledge of boiler and fired pressure equipment inspection requirements and methods for repairs and alterations in compliance with ASME BPV, NBIC and API Codes and Standards.

VCPD771

Boiler Combo Course: Operation, Maintenance, Inspection, Repairs, and Alterations

PDHs: 38 **CEUs:** 3.8 **Format:** Virtual Classroom

This comprehensive learning path covers design & failures, materials, fabrication, examination, and testingas well as thorough understanding of the BPVC requirements.

PIPING & PIPELINES VIRTUAL CLASSROOM

VCPD389

ASME BPV Code, Section V: Nondestructive Examination Requirements

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

This course is designed for individuals who require an understanding of the principles, techniques and applications of the key Nondestructive Examination methods. Examples of NDE devices supplement lectures to demonstrate practical applications of the methods presented.

VCPD837

ASME B31.3 and B31.1 Practical Piping Design for Process and Power Applications

PDHs: 30 **CEUs:** 3 **Format:** Virtual Classroom

This course introduces the ASME B31.3 Process Piping Code. It covers the requirements of B31.3 for design, analysis, materials, fabrication, testing, and inspection of process piping systems. Since these requirements are similar to that of ASME B31.1 Power Piping Code, it identifies significant and subtle differences between the two Codes.

VCPD014

ASME B31.3 Process Piping Design

PDHs: 20 **CEUs:** 2 **Format:** Virtual Classroom

This fundamental Process Piping Design course trains participants on the requirements of ASME B31.3 and focuses specifically on piping design and failures.

VCPD457

ASME B31.3 Process Piping Materials Fabrication, Examination & Testing

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

ASME's B31.3 course examines materials, fabrication, examination, and testing of Process Piping Systems, ensuring participants understand how piping system design relates to these requirements.

VCPD581

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

PDHs: 35 **CEUs:** 3.5 **Format:** Virtual Classroom

This comprehensive ASME B31.3 Process Piping Learning Path trains participants on the requirements of the ASME B31.3 Code, including design, analysis, materials, fabrication, testing and inspection of process piping systems utilizing real-world industry best practices.

VCPD838

ASME B31.1 Power Piping Design

PDHs: 25 **CEUs:** 2.5 **Format:** Virtual Classroom

This course explores the background, rules and trends in piping design, analysis, and fabrication all vital elements of power, industrial and institutional plant construction, and maintenance within the context of meeting the requirements and intent of ASME B31.1 and its appendices.

VCPD839

ASME B31.1 Power Piping Materials Fabrication, Examination & Testing

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

ASMEs B31.1 Code on Power Piping is widely adopted by jurisdictions worldwide. It is prominently referenced in ASMEs Boiler and Pressure Vessel Code, Section I. This course details the latest Power Piping Code requirements such as Materials, Welding Qualifications, & Power Piping Maintenance

VCPD840

ASME B31.1 Power Piping Design, Materials, Fabrication, Examination and Testing Combo Course

PDHs: 40 **CEUs:** 4 **Format:** Virtual Classroom

Take this Combo course and learn to examine how various stakeholders employ the ASME B31.1 Codes design requirements to effectively design power piping systems and prevent power piping system failures.

VCPD391

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

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

This course provides the foundation for properly applying B31.4 in the interest of public and employee safety.

VCPD370

ASME B31.8 Gas Transmission & Distribution Piping Systems

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

ASME B31.8 is the most widely used Code for the design, operation, maintenance, and repair of natural gas distribution and transmission pipelines. This course explains the present-day piping Code provisions, the principal intentions of the Code, and how the Code should be used. The emphasis is primarily on transmission pipelines.

VCPD410

Detail Engineering of Piping Systems

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

This introductory course trains participants to develop detailed engineering diagrams, plot plans, and arrangements for piping systems.

VCPD777

Pipe Sizing, Pipe Wall Stresses, and Water Hammer

PDHs: 30 **CEUs:** 3 **Format:** Virtual Classroom

It is important to understand the relationship between the pipe wall stresses and the changes in fluid pressure and velocity to predict a pipe wall failure. This course furnishes students with the equations and calculations necessary to solve these problems. It also provides a review of fluid mechanics: fluid properties, equations for steady and for unsteady flows, flow in a pipeline, friction factor, hydraulic and energy gradient lines, and axial and hoop stress calculations in a pipe wall.

NUCLEAR VIRTUAL CLASSROOM

VCPD763

Centrifugal Pumps: Testing, Design, and Analysis

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

This course focuses on the hydraulic principles of centrifugal pumps, as well as the interaction between a pump and a pipeline. It covers a review of fluid mechanics, the modified Bernoulli equation applied to piping systems, the energy equation applied to pumps and piping systems, energy loss in a pipeline and in fittings, and much more.

VCPD675

ASME NQA-1 Lead Auditor Training

PDHs: 30 **CEUs:** 3 **Format:** Virtual Classroom

The objective of this course is to provide the prospective lead auditor, with sufficient formal training to assist in meeting the training requirement for ASME NQA-1 and N45.2.23 auditors. This course gives each student the body of knowledge and understanding of auditing methods and techniques to conduct audits of nuclear quality assurance programs. The material includes the development, organization and administration of an audit program; the mechanics of an individual audit; audit objectives; and auditing techniques.

VCPD606

ASME NQA-1 Requirements for Computer Software used in Nuclear Facilities

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

Focusing primarily on Subpart 2.7, QA Requirements for Computer Software, this course examines the requirements found in NQA-1 for using computer software in nuclear facilities. Participants will learn to apply NQA-1 to the practice of developing, using, maintaining or procuring software used in nuclear facilities.

VCPD615

Nuclear Piping Systems ASME BPV Code, Section III and B31.1: Design, Integrity-Operability Assessment, and Repairs

PDHs: 20 **CEUs:** 2 **Format:** Virtual Classroom

This course provides information and instruction on the design, analysis, and qualification of nuclear power plant piping systems that are consistent with the ASME BPV Code, Section III, Division 1, Subsections NB/NC/ND, as well as the parallel requirements of ASME B31.1 for nuclear power plants. The methods and criteria described throughout the course, apply to new systems, as well as modifications or repairs to existing systems.

VCPD184

ASME BPV Code Section III, Division 1: Rules for Construction of Nuclear Facility Components and USNRC Regulations

PDHs: 30 **CEUs:** 3 **Format:** Virtual Classroom

This course is a comprehensive overview of Section III, Division 1, including interfaces with Sections II, V, IX, XI, and NQA-1. The course explains how Section III is implemented by the US NRC in its regulations.

VCPD192

ASME BPV Code, Section XI: Inservice Inspection of Nuclear Power Plant Components

PDHs: 38 **CEUs:** 3.8 **Format:** Virtual Classroom

Covering all aspects of ASME BPV Code, Section XI, this course highlights repair, replacement, modification, and maintenance activities; pressure testing; and the relationship between the Code and regulatory and enforcement requirements for in-service inspection of nuclear power plant components.

FLUIDS & HEAT TRANSFER VIRTUAL CLASSROOM

VCPD679
Fundamentals of Pumps and Valves and Their Selection for Optimum System Performance

PDHs: 30 **CEUs:** 3 **Format:** Virtual Classroom

This course discusses the requirements necessary for the selection of pumps and valves. It is structured in a sequence, starting from basics to detailed discussion of various aspects of both pumps and valves. It is designed to help participants develop a full understanding of how pumps and valves work, covering selection, installation, operation, maintenance, and trouble shooting.

VCPD146
Flow Induced Vibration with Applications to Failure Analysis

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

Learn practical applications of the latest design and analysis tools for the prediction and prevention of vibration in structures exposed to high energy fluid flow.

VCPD027
Heating, Ventilating and Air-Conditioning Systems: Sizing & Design

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

This course explores the design of HVAC systems that deliver comfort, energy efficiency and economic value. It starts with a brief review of heat transfer, refrigeration, and basic concepts of heating, cooling, and dehumidification.These concepts are extended to a variety of design methods and tools.

WELDING & BRAZING VIRTUAL CLASSROOM

VCPD190
ASME BPV Code, Section IX: Welding, Brazing, & Fusing Qualifications

PDHs: 25 **CEUs:** 2.5 **Format:** Virtual Classroom

This is a fundamental course that trains participants to comply with the requirements of ASME BPV Code Section IX, Welding, Brazing and Fusing Qualifications.

VCPD359
Practical Welding Technology

PDHs: 30 **CEUs:** 3 **Format:** Virtual Classroom

This course introduces participants to the subject of welding technology, including ASME, API, and AWS welding codes and standards, NDE symbols, carbon equivalence, A-numbers, strength of welds, joint details, welding procedures, selection of filler metals, and preheat.

BOLTING VIRTUAL CLASSROOM

VCPD386
Design of Bolted Flange Joints

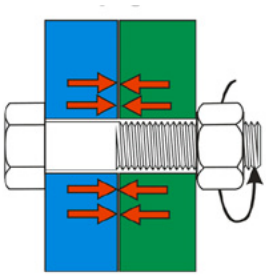
PDHs: 0.8 **CEUs:** 0.8 **Format:** Virtual Classroom

Bolted flange joints are essential components for the design and operation of pressure vessels and piping. This one-day course provides a fundamental understanding of how to design bolted flange joints and predict their resulting behaviors. Practical examples and case studies are shared with a discussion of variables that can affect flange joints along with some remediation options.

VCPD539
Bolted Joints and Gasket Behavior

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

Bolted and gasketed joints are critical to pressure-containing and industrial systems worldwide. This two-day course is an engineers guide to bolting and gasket design, selection and installation. It provides an overview of bolted joint fundamentals and focuses on the roles of bolts and gaskets in developing and maintaining leak-tight connections of bolted flange joints, including troubleshooting of existing bolted flange connection.



VCPD577
Bolted Joint Assembly Principles Per ASME PCC-1-2019

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

Although the mechanical principles that make a screw or bolt work are elementary the inclined plane and the lever the proper application of those simple machine principles to seal a vertical joint or sustain a tower crane under stress, is extremely complex. This course trains and tests bolting personnel at the supervisory level on the technological and practical problems of assembling bolted joints in large scale industrial applications.

MANAGEMENT, LEADERSHIP & INNOVATION VIRTUAL CLASSROOM

VCPD601
Bolting Combo Course

PDHs: 38 **CEUs:** 3.8 **Format:** Virtual Classroom

This course is acombinationof Bolted Joints and Gasket Behavior, Design of Bolted Flange Joints and Bolted Joint Assembly Principles Per PCC-1 2019

VCPD844
Todays Engineering Professional: Workplace Skills Bootcamp

PDHs: 41 **CEUs:** 4.1 **Format:** Virtual Classroom

Maximize your proficiency and literacy in all business situations and become a well-rounded engineering professional. ASMEs Workplace Skills Bootcamp for Todays Engineering Professional will provide engineers and technical professionals with the soft skills needed in order to be successful at their career.

VCPD513

TRIZ: The Theory of Inventive Problem Solving

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

This course provides a basic introduction to the Inventive Problem Solving Process known as TRIZ (Russian acronym for Theory of Inventive Problem Solving). TRIZ is a structured, left-brained approach to breakthrough innovation that utilizes patterns documented in the worlds most inventive patents. This analysis demonstrates an overall algorithm, which when followed, allows anyone to provide breakthrough and novel solutions to problems as well as new product and business concepts.

VCPD475

The Engineering Manager: Engaging Today's Workforce

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

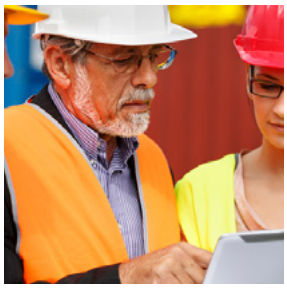
This course provides simple, direct solutions to the most common challenges managers encounter, such as, how to motivate others, when and how to coach, and dealing with non-performance. The most useful concepts in the behavioral sciences have been distilled into a basic approach to managing people and teams. In addition, special emphasis is placed on the changing nature of todays workforce.

VCPD676

Strategic Thinking

PDHs: 7.5 **CEUs:** 0.8 **Format:** Virtual Classroom

In this one-day course you will be presented with both standard tools (e.g., SWOT) and innovative approaches from game theory. You will learn how to discern fallacious reasoning traps as well as ways to counter them. In addition, you will practice using a powerful model to construct and deliver a winning argument.



VCPD685

The Engineering Manager: Engaging Today's Workforce and Strategic Thinking Combo Course

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

This is a combo course consisting ofThe Engineering Manager: Engaging Todays Workforce and Strategic Thinking

VCPD467

Project Management for Engineers and Technical Professionals

PDHs: 23 **CEUs:** 2.3 **Format:** Virtual Classroom

This fundamentals of project management course is focused on applying critical PMI concepts in the engineering workplace using lecture, team projects, discussions, and real world scenarios.

VCPD794

Agile Project Management

PDHs: 15 **CEUs:** 1.5 **Format:** Virtual Classroom

This fundamentals of Agile project management course is focused on applying critical Agile methodologies from PMI to engineering projects.

VCPD836

Traditional and Agile Project Management for Engineers and Technical Professionals Combo Course

PDHs: 38 **CEUs:** 3.8 **Format:** Virtual Classroom

Thiscombo course consists ofProject Management for Engineers and Technical Professionals andAgile Project Management.

GUIDED STUDY COURSES

Online learning augmented with instructor-led activities and/or graded assignments to complete at your own pace. Courses run in 6-week sessions.

WITH OUR EXCLUSIVE LEARNING PATHS, PROGRAMS, AND CREDENTIALS YOU CAN BUILD IN-DEMAND SKILLS AND TACKLE REAL-WORLD CHALLENGES WITH CONFIDENCE.

GEOMETRIC DIMENSIONING & TOLERANCING GUIDED STUDY

EL504
Drawing Interpretation

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

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; finish and welding symbols.

EL505
Introduction to Geometric Dimensioning & Tolerancing (GD&T) Y14.5

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

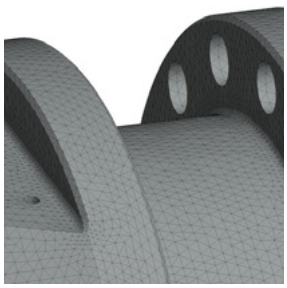
Designed for those who use the ASME Y14.5 Dimensioning and Tolerancing standard, this course covers most of the geometric dimensioning controls used on mechanical engineering drawings. Theoretical and practical concepts of each of the geometric controls are explained relative to design, tooling, production, 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.

EL506
Advanced Geometric Dimensioning and Tolerancing (GD&T) Y14.5

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

This advanced, online, instructor-supported course thoroughly covers some of the more used geometric dimensioning controls 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. How to control the size and location non-size features are also explained. Coaxial relationships and control of rectangular features is also covered.

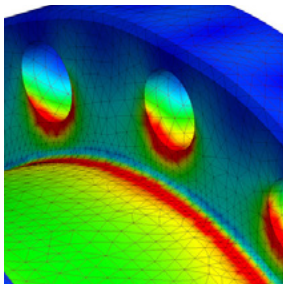
DESIGN, MATERIALS & ANALYSIS GUIDED STUDY



EL507
Introduction to Finite Element Analysis

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

Originally developed for aerospace structural analysis, Finite Element Analysis (FEA) is now a convenient and speedy tool for approximation of the solution to a wide variety of complicated engineering problems across a wide range of industries. This online, instructor-supported course explains how FEA can produce accurate, reliable approximate solutions, at a small fraction of the cost of more rigorous, closed-form analyses.



EL508
Advanced Finite Element Analysis

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

Based on practical application of Abaqus software, this course builds on the introductory level course to provide a fuller appreciation of how Abaqus works as well as FEA in general. Presented in five modules, the course emphasizes the various aspects of structural analysis. The topics covered can also be abstracted to provide a useful guide for use of FEA for non-structural applications.

BOILERS & PRESSURE VESSELS GUIDED STUDY

EL501
ASME BPV Code, Section VIII, Division 1: Design & Fabrication of Pressure Vessels

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

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.

EL502
ASME BPV Code, Section VIII, Division 2: Design & Fabrication of Pressure Vessels

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

This introductory course describes the use of alternative rules for the design and fabrication of pressure vessels given in ASME BPV Code, Section VIII, Division 2.

EL503
Overview of In-service Codes for Inspections, Repairs and Alterations of Pressure Equipment

PDHs: 15 **CEUs:** 1.5 **Format:** Guided Study

This course is a comprehensive introduction to the requirements of various codes and standards, regarding inspection, repairs and alterations of pressure equipment, and in particular, pressure vessels. The requirements of the National Board Inspection Code and the API-510 are covered in detail. A brief introduction to API-579, Fitness-for-Service is presented, and simple flaw evaluation procedures are evaluated.

NUCLEAR GUIDED STUDY

EL520
ASME NQA-1 Quality Assurance Requirements for Nuclear Facility Applications

PDHs: 15 **CEUs:** 1.5 **Format:** Guided Study

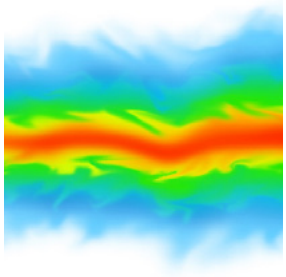
This online, instructor-supported course provides an overall understanding of the basic principles and applications of ASME Nuclear Quality Assurance. Managers, engineers, and program developers who take this course gain an enhanced understanding of ASME as an organization, its codes and standards, and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

EL526
Comparison of Global Assurance & Management System Standards Used for Nuclear Application

PDHs: 15 **CEUs:** 1.5 **Format:** Guided Study

Following an introduction to the ASME Section III Nuclear Power Code, this 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.

FLUIDS & HEAT TRANSFER GUIDED STUDY



EL513
Introduction to Computational Fluid Dynamics

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

This course provides an introduction to the scientific principles and practical engineering applications of CFD. Although it provides an overview of some of the fundamental mathematical equations governing the fluid flow and heat transfer phenomena, its emphasis is not to teach the theory behind the technology but to help the participants apply the knowledge gained into practical use of commercial CFD codes, particularly ANSYS Fluent.

EL510
Two Phase Flow and Heat Transfer

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

Participants in this online, instructor-supported course will gain a phenomenological understanding of two-phase flow and heat transfer in engineering processes and components, as well as an ability to compute two-phase flow and heat transfer for common situations. The focus is on single component/two phase systems (e.g., a liquid and its vapor), which is the most common, yet most difficult to model.

EL545
Compressors and Process Fit for Mechanical Engineers

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

This online, instructor-supported course will help to improve the ability of the mechanical engineer to assess existing equipment and specify the proper centrifugal compressor for a given application. This course covers the basic concepts of thermodynamics, without being an in-depth thermodynamics course. It provides the tools you can use to avoid relying only on canned calculations, proprietary performance programs, or manufacturers recommendations.

BOLTING GUIDED STUDY

EL512
The Bolted Joint

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

This online, instructor-supported course presents the basics on an important element of many products, systems, and structures: the bolted joint. Learn the fundamentals of bolts and bolted joints, including their strength, behavior, design approaches and failure prevention.

WELDING & BRAZING GUIDED STUDY

EL515
Principles of Welding

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

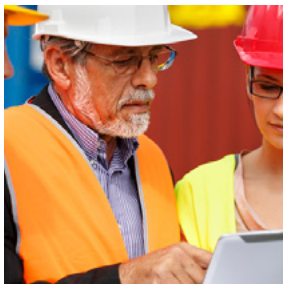
This course provides an introduction to the principles of welding technology. The course describes the process of welding and how it affects welded materials and structures. It describes the electric circuits that are used to generate welding arcs, material properties, and the metallurgical and dimensional 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.

EL516
ASME BPV Code, Section IX: Welding & Brazing Qualifications

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

This online, instructor-supported course explains the layout, scope, and use of Section IX of the ASME Boiler and Pressure Vessel Code using illustrative examples. It explains and demonstrates the rules for qualification of welding and brazing procedures and personnel. The course also discusses basic rules for the use of Section IX in conjunction with other construction codes.

MANAGEMENT, LEADERSHIP & INNOVATION GUIDED STUDY



EL511
Project Management for Engineers

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

This course teaches you how project management will improve your outcomes on all fronts, and allow you to manage your many other responsibilities at the same time. Some benefits of this course include learning how to use step-by-step processes 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.

EL530
Developing Products

PDHs: 23 **CEUs:** 2.3 **Format:** Guided Study

This course is directed at engineering managers who are responsible for new product development, services, or processes. The purpose of the course is to provide skills and knowledge in managing the product planning, design, and manufacturing processes. It covers the project life cycle, determining resource requirements, detailed planning, and management of the design process.

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AM210
Design for Additive Manufacturing with Metals

PDHs: 10 **CEUs:** 1 **Format:** Self Study

ASMEs Design for Additive Manufacturing with Metals for Engineers (DfAM) course provides the key foundational knowledge to properly evaluate Additive Manufacturing (AM) as a potentially viable technology solution coupled with the in-depth technical knowledge necessary to efficiently shepherd AM parts from design, through post-processing and eventually into the market through three use cases: replication, adaptation, and optimization.

AM200C
Design for Additive Manufacturing with Metals Use Cases Package

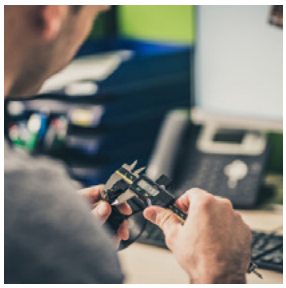
PDHs: 6 **CEUs:** 0.6 **Format:** Self Study

Already completed AM210? Apply what you have learned to three common AM use cases: Replication, Adaptation, and Optimization. This series of courses includes 3 project-based courses. In these Project-based courses an instructor will grade assignments and provide feedback within 2-3 business days.

AM223
Additive Manufacturing Material Prorperties

PDHs: 5 **CEUs:** 0.5 **Format:** Self Study

This Materials Properties course provides an introduction to material properties for L-PBF parts.It covers the range of material properties observed, the variability in material properties, how and why this variability exists, and methods to account for this variability.



ZABC74
Essentials - ASME Y14.1/Y14.2/Y14.3

PDHs: 2 **CEUs:** 0 **Format:** Self Study

This course introduces ASMEs Y14 Standards, which provide guidelines for engineering drawing sheet layout. The Standards covered in this course (Y14.1, Y14.1M, Y14.2, Y14.3, and Y14.35) form the foundation for most of the remaining Y14 Standards.

ZABC13
Essentials - Bioprocessing Equipment (BPE)

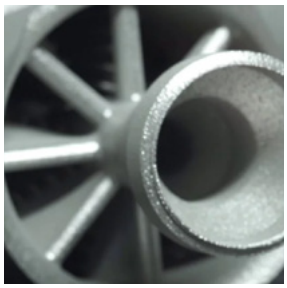
PDHs: 2 **CEUs:** 0 **Format:** Self Study

The ASME BPE Standard covers directly or indirectly the subjects of materials, surface requirements, design for cleanability and sterility, component manufacture, fabrication (including material joining), pressure systems (vessels and piping), examinations, inspections, testing, and certifications. This course explains how this Standard has improved the manufacturing practices of the bioprocessing and pharmaceutical industries as a whole.

AM200B
Design for Additive Manufacturing with Metals Professional Package

PDHs: 16 **CEUs:** 1.6 **Format:** Self Study

This series of courses provides the key foundational knowledge to properly evaluate Additive Manufacturing (AM) as a potentially viable technology solution coupled with the in-depth technical knowledge necessary to efficiently shepherd AM parts from design, through post-processing and eventually into the market through three use cases: replication, adaptation, and optimization.

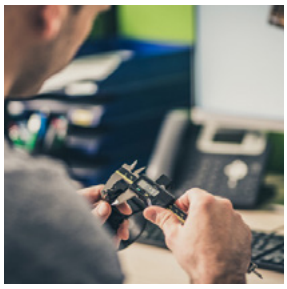


AM214
AM Manufacturability: Laser Powder Bed Fusion

PDHs: 4 **CEUs:** 0.4 **Format:** Self Study

This course is an interactive, self-study course in which engineers and managers will work through the L-PBF technology, and what needs to be considered to complete a successful print. Engineers and managers will learn about design restrictions, technology limitations, and support structure design.

GEOMETRIC DIMENSIONING & TOLERANCING SELF STUDY



ZABC73
Essentials - Y14.5 Dimensioning & Tolerancing

PDHs: 3 **CEUs:** 0 **Format:** Self Study

This course introduces the contents and guidelines outlined in the ASME Y14.5 - 2009 Dimensioning and Tolerancing Standard. The information in this standard shows acceptable, standardized methods for applying dimensions and tolerances through a language of letters, numbers, and special symbols. The course covers the nine sections and five appendices of the ASME Y14.5 Standard.

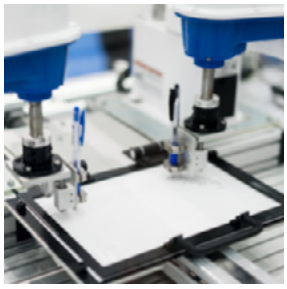
BIOPROCESS SELF STUDY

BE110
Cell Manufacturing for Engineers

PDHs: 10 **CEUs:** 1 **Format:** Self Study

ASMEs Cell Manufacturing for Engineers online course is the only learning product designed specifically for engineering professionals that provides education on cell culture techniques, manufacturing and production processes, and regulatory and other business requirements. The course introduces cell therapy through the lens of a series of engineering problems or challenges which exist throughout the process.

ROBOTICS SELF STUDY



IAR211
Fundamentals of Industrial Automation

PDHs: 2 **CEUs:** 0.2 **Format:** Self Study

This course gives learners the ability to discuss and understand, at a high level, the techniques and strategies used in industrial automation with robotics projects as well as the capability to make suggestions for the types of robotics hardware that are appropriate for a given task. This course is also an opportunity to receive an introduction to the social, cultural, safety, and financial topics and concepts relevant in industrial automation with robotics.

IAR212
6 Axis Robot Arm

PDHs: 2 **CEUs:** 0.2 **Format:** Self Study

When it comes to manufacturing, speed, efficiency, quality maximization, and cost reduction are hallmarks of the six-axis robot. In this course you will learn key foundational knowledge of the anatomy that goes into this rapidly developing articulated robot. You will gain valuable skills in the specification of robotic properties such as payload and reach requirements, while learning how to startup, shutdown, and jog six-axis systems.

RB210
Assessing Suitability for Robotics in Manufacturing: A Case Study

PDHs: 10 **CEUs:** 1 **Format:** Self Study

Robots are selling in record numbers in the U.S. and throughout the world, but there arent yet enough people who know how to work effectively with these new automation tools in existing processes let alone expanding and even optimizing their applications. This self-study Robotics Case Study uses an immersive eLearning Experience to illustrate critical concepts to review, select, and plan the integration of a robot to automate a portion of an industrial process, successfully.

ZABC17
Essentials - BPV Code, Section V: Nondestructive Examination

PDHs: 3 **CEUs:** 0 **Format:** Self Study

The course provides an introduction to the ASME Boiler & Pressure Code, Section V Nondestructive Examination (NDE). Participants will learn about the various applications of NDE as well as the various techniques. NDE uses techniques such as radiographic examination, ultrasonic examination, magnetic particle examination, liquid penetrant examination to determine if materials or components are acceptable for use or if they are defective. NDE is an indispensable means of assuring sound construction.

ZABC37
Essentials - PTC 6 - Testing Steam Turbines

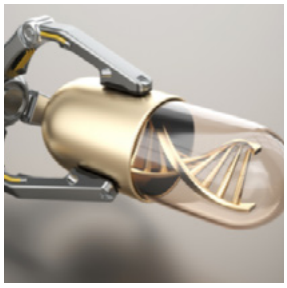
PDHs: 2 **CEUs:** 0 **Format:** Self Study

This course covers the PTC 6 Standard, which provides procedures for the accurate testing of steam turbines. It is used in conducting acceptance tests of steam turbines and any other situation in which performance levels must be determined with minimum uncertainty.

ZABC59
Essentials - PCC-2 Repair of Pressure Equipment & Piping

PDHs: 2 **CEUs:** 0 **Format:** Self Study

This course covers the contents of ASMEs PCC-2 Standard. This includes an introduction to the repair of pressure equipment and piping and how it is applicable in the engineering world; the general methods of repair, including welded repairs, mechanical repairs, nonmetallic repairs, and bonded repairs; and specific methods of repair, including butt-welded insert plates in pressure components, full encirclement steel reinforcing sleeves for piping, freeze plugs, and nonmetallic composite repair systems.



IAR231
End Effectors in the Industrial Automation Ecosystem

PDHs: 2 **CEUs:** 0.2 **Format:** Self Study

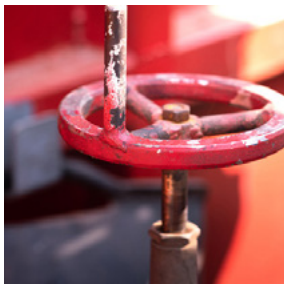
ASMEs End Effectors in the Ecosystem course introduces the learner to some of the common types of end effectors, also known as grippers and provides a framework for consideration when designing and selecting an end effector for your application. Additionally, tools are provided to assist with hard to estimate problems to allow for a more efficient design cycle.

BOILERS & PRESSURE VESSELS SELF STUDY

ZABC11
Essentials - BPV Code, Section VIII, Division 3: Alternative Rules for the Construction of High Pressure Vessels

PDHs: 2 **CEUs:** 0 **Format:** Self Study

The course introduces the requirements of ASME BPV Code, Section VIII, Division 3: Alternative Rules for Construction of High Pressure Vessels. It covers the history, scope, and requirements for design, examination, testing and specialty construction. It also looks at the differences between Section VIII Division 2 and Section VIII Division 3, and how Section VIII Division 3 requirements are applied.



ZABC36
Essentials - PTC 25 Pressure Relief Devices

PDHs: 2 **CEUs:** 0 **Format:** Self Study

This course covers the fundamentals of the ASME PTC 25 Code for pressure relief devices. It describes the purpose of Performance Test Codes, their general scope, application, and typical use. It also examines the various types of pressure relief devices (PRDs), their characteristics and terminology.

ZABC48
Essentials - CSD-1 Controls & Safety Devices for Automatically Fired Boilers

PDHs: 3 **CEUs:** 0 **Format:** Self Study

This course provides an introduction to the different parts of the ASME CSD-1 Standard and prevention methods for the major hazards in operating automatically fired boilers are loss of water (low water), furnace explosions, overpressure, and overtemperature.

ZABC68
Essentials - PTC-46 Overall Plant Performance

PDHs: 2 **CEUs:** 0 **Format:** Self Study

PTC 46 has been applied as the basis of ongoing plant performance engineering activities in plants, worldwide. Power plants, which produce secondary energy outputs, e.g., cogeneration facilities, are included within the scope of this Code. Learn the Code's provisions for explicit methods and procedures for combined cycle power plants and for most gas, liquid, and solid fueled Rankine cycle plants.

PIPING & PIPELINES SELF STUDY

ZABC9
ASME Boiler & Pressure Vessel Certification Process

PDHs: 3 **CEUs:** 0 **Format:** Self Study

The Code Certification Mark Stamp is part of the ASME Conformity Assessment program. This course will provide the information you need to know to receive a Code Certification Mark Stamp for use on Non-Nuclear Boilers and Pressure Vessels.

PIP206
Practical Piping Design

PDHs: 10 **CEUs:** 1 **Format:** Self Study

This series of four eLearning courses is relevant to the application of B31.3 code, with a specific focus on the design of piping systems. Over-reliance on software without a fundamental understanding of the underlying principles of engineering has become a common industry issue. This learning path intentionally focuses on developing problem-solving and complex decision-making skills related to piping design without the use of software.

ZABC15
Essentials - B31.3 Process Piping Code

PDHs: 2 **CEUs:** 0 **Format:** Self Study

This course introduces the B31.3 Process Piping Code. Explaining how piping systems function and what the Code requirements are for various types of installations is the aim of this course. The B31.3 Code provides guidance and limitations on the selection and application of materials and components; requirements for the fabrication, assembly, and erection of piping; and requirements for examination, inspection, and testing of piping.

ZABC14
Essentials - B31.1 Power Piping

PDHs: 2 **CEUs:** 0 **Format:** Self Study

This course introduces the B31.1 Power Piping Code (2014 Edition). It discusses its relationship with ASME BPV Code, Section I - Rules for Construction on 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.

ZABC12
Essentials - B31.8 Gas Transmission and Distribution Piping Systems

PDHs: 2 **CEUs:** 0 **Format:** Self Study

The course introduces the requirements of the ASME B31.8 Gas Transmission and Distribution Piping Systems Code. It covers the scope of B31.8, including its history, the types of systems to which it applies, its organization, and the intended use of the Codebook. It also introduces requirements for pipeline materials and equipment, welding, and design, installation and testing of pipeline systems.

EL539
Hydraulic Design of Liquid or Water Piping Systems Online Self-Study Course

PDHs: 10 **CEUs:** 0 **Format:** Self Study

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. Industrys generally accepted fundamental Darcys equation and the empirical Hazen-Williams formula for water flows are introduced as the models of calculating the frictional pressure drop.

NUCLEAR SELF STUDY

EL544
Design of Buried High Density Polyethylene (HDPE) Pipe

PDHs: 10 **CEUs:** 0 **Format:** Self Study

This self-study 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. In addition, the design of coupled buried HDPE and above ground steel piping systems will be presented.

ZABC50
Essentials - B31.4 Pipeline Transportation Systems for Liquids & Slurries

PDHs: 2 **CEUs:** 0 **Format:** Self Study

This course provides an introduction to the different parts of the ASME B31.4 Code. The B31.4 Code establishes requirements for safe design, construction, inspection, testing, operation and maintenance of liquid pipeline systems. It was the first code to be published separately for oil transportation piping. Assessing pipeline integrity is an essential part of this Code to ensure the safe transportation of liquids, such as gas and slurries.

EL542
BPV Code, Section III, Division 1: Class 1 Piping Design Online Self-Study Course

PDHs: 10 **CEUs:** 0 **Format:** Self Study

This self-study course provides information and instruction on the design and construction of nuclear power plant piping systems consistent with ASME Boiler and Pressure Vessel Code, Section III, Division 1, Subsection NB.

ZABC29
NQA-1 Practical Application

PDHs: 4 **CEUs:** 0 **Format:** Self Study

This 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 & test equipment.

FLUIDS & HEAT TRANSFER SELF STUDY

ZABC5
NQA-1 Part 1 18 QA Requirements

PDHs: 4 **CEUs:** 0 **Format:** Self Study

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 description 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.

EL546
Hydraulic Design of Gas or Vapor Piping Systems Self-Study Course

PDHs: 10 **CEUs:** 0 **Format:** Self Study

This self-study course presents the fundamentals for the design of gas or vapor piping systems. It covers the basic principles that govern fluid flow in these piping systems, including how to apply Bernoulli's theorem. It also discusses how to apply a variety of calculations to measure fluid flow, including the Rational Formula, Darcys equation, and the Panhandle and Weymouth empirical formulas, and how to calculate pressure drop of flow in pipe.

EL538
Heating, Ventilation, and Air-Conditioning Online Self-Study course

PDHs: 15 **CEUs:** 0 **Format:** Self Study

This self-study course provides a look at the general principles of HVAC, including psychrometrics, sensible heating and cooling, dehumidification and humidification, the adiabatic mixing process, air washers, cooling towers, ventilation and infiltration load calculations, heating and cooling load calculations, control components, refrigeration cycles, heat pumps, and refrigeration equipment.

ZABC42
Introduction to the Selection of Pumps

PDHs: 2 **CEUs:** 0 **Format:** Self Study

This course provides an introduction to pumps the way they work, different types, and some basic applications. It discusses the flow of fluids through pipes, as well as the variables that affect the flow, and it takes a close look at centrifugal and positive displacement pumps.

ZABC43
Introduction to the Selection of Valves

PDHs: 2 **CEUs:** 0 **Format:** Self Study

This course introduces the different types of valves the way they work and some of the basic applications. It provides an overview of the considerations involved when choosing the appropriate valves for a system.

ZABC64
Hydraulic Design of the Pumping Circuit

PDHs: 3 **CEUs:** 0 **Format:** Self Study

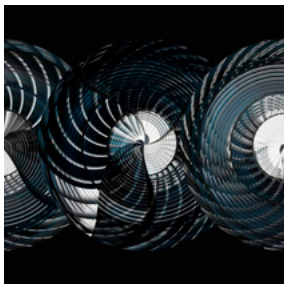
When designing a hydraulic pump delivery circuit, a working knowledge of all of the components and how they operate will help ensure optimum performance, efficiency, and safety, and prevent potentially expensive system malfunctions and damage. This course provides information on the effective design and selection of pumping equipment.

GAS TURBINES SELF STUDY

EL540
Basic Gas Turbine Engine Technology Online Self-Study Course

PDHs: 10 **CEUs:** 0 **Format:** Self Study

This course offers a non-mathematical approach to understanding the fundamental nature of gas turbine engines and the processes that affect their performance. It is ideally suited to technicians and management personnel. It will also be of value to those engineers starting a career in the fields of gas turbine engines and auxiliary equipment operation, maintenance or service, specification, sales and manufacture.



ZABC49
Basic Gas Turbine Engine Technology

PDHs: 3 **CEUs:** 0 **Format:** Self Study

This course introduces the gas turbine engine, including operation, manufacture, and maintenance. It looks at how the technology works and the factors that affect performance.

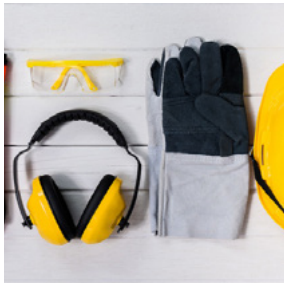
BOLTING SELF STUDY

EL607
Bolting Specialist Qualification Program

PDHs: 12 **CEUs:** 1.2 **Format:** Self Study

The Bolting Specialist Qualification Program is designed to train and evaluate a bolters ability to inspect, assemble, disassemble and tighten bolted joints in an effective and safe manner. Through online courses and hands-on training, successful candidates will understand and demonstrate the principles and practices to safe bolted joint assembly as outlined in Appendix A of ASME PCC-1: Guidelines for Pressure Boundary Bolted Flange Joint Assembly.

CRANES SELF STUDY



ZABC27
Essentials - B30 Safety Standard

PDHs: 2 **CEUs:** 0 **Format:** Self Study

This course covers the types of information included within the volumes of the ASME B30 Standard. It describes the Charter of the B30 Committee, the types of load handling equipment to which it applies, its organization, and the intended use of the B30 Standard.

ELEVATORS & ESCALATORS SELF STUDY

ZABC53

Essentials - A17.1/CSA B44 Safety Code for Elevators and Escalators

PDHs: 3 **CEUs:** 0 **Format:** Self Study

This course provides an introduction to the history and background of ASMEs Safety Code for Elevators and Escalators. It presents an overview of the eight main parts of the Code, reviewing the basic requirements for installing and maintaining Elevators, Escalators, Moving Sidewalks, Dumbwaiters, and Material Lifts.

ZABC2

Technical Writing for Engineers: Giving Readers What They Need

PDHs: 4 **CEUs:** 0 **Format:** Self Study

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

ZABC40

Financial Resource Management For Engineers

PDHs: 3 **CEUs:** 0 **Format:** Self Study

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

ZABC66

Creating Effective Technical Presentations

PDHs: 2 **CEUs:** 0 **Format:** Self Study

This course is designed to help engineers and other technical professionals plan, prepare, and deliver effective technical presentations. It demonstrates ways in which you could improve your presentations for meetings, briefings, and reports sharing research findings and other information.

MANAGEMENT, LEADERSHIP & INNOVATION SELF STUDY

ZABC101

Introduction to ASME Standards & Certification

PDHs: 2 **CEUs:** 0 **Format:** Self Study

The course provides an introduction to ASME, its Standards and Certification process. Topics include why we have standards, the process for creating them, and who is responsible for maintaining them. The course also outlines ASMEs role in developing and maintaining Standards as well as how ASME certifies organizations in the application of these Standards.

ZABC3

Ethics for Engineers: Doing the Right Thing When No One is Looking

PDHs: 3 **CEUs:** 0 **Format:** Self Study

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 theyre not? Is what you think right - the same thing as what others think is right? Use the words ethical behavior with 10 people and youll get ten variations just on what it means to behave ethically much less on how to do it. In this learning for engineers well explore all these questions and youll finish with how-tos for yourself and others.

ZABC6

Total Quality Management

PDHs: 3 **CEUs:** 0 **Format:** Self Study

Total Quality Management (TQM) is a system for satisfying internal and external customers and suppliers through both continuous improvements and breakthrough results-results that ultimately change organizational culture. The purpose of this course is to provide the basic concepts and practices of Total Quality Management so you can apply these tools to your work and generate improvement and desired results.

Discover how we can help you achieve your workforce development goals:

Contact **learningsolutions@asme.org** or visit **go.asme.org/evolve**

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