PIPING DEVELOPMENT UNITS COURSES

Our units, short-length study piping Courses and assessment are structured as a series of easily digestible training modules. Each self-paced and highly affordable training course includes end-of-module assessment tests and tutorials media files with commentary and review questions. Participants complete the end-of-module assessment with a required pass rate of 75% or above before advancing to the next module in the training program. An Petrocertif Vocational Certificate and Professional Development Units are awarded.

Piping Information Flow

Information Flow Info to Pipers
Provides basic information on sources of energy and the complexities of the evolving energy world. PDUs $110

Design Phases
Learn how to create documents – from organizing, writing and illustrating to final layout and design – that will improve your communication skills. PDHs $110

Layout Deliverables
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. PDHs $110

Pipe Design

Elbows and Bends
Introduces the gas turbine engine, including manufacture, operation and maintenance, as well as how the technology works and the factors that affect performance. PDHs $110

Pipe Branching
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. PDHs $110

Size Change and Termination
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. PDHs $110

Pipe Drafting

1- and 2-Line Symbols
Explore the origins and development of Section XII, its organization and general layout, the classes of tanks covered by Section XII and design specifics. PDHs $110

Fabrication Tolerances
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. PDHs $110

Fittings
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. PDHs $110

Flange Systems
Learn how the ASME BPE Standard has improved manufacturing
practices of bioprocessing and pharmaceutical industries. PDHs $110

Isometric Cues
Introduces the B31.1 Power Piping Code and discusses its relationship with BPV Code, Section I: Rules for Construction of Power Boilers. PDHs $110

Pipe Detail Dimensioning
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. PDHs $110

Sizes and End Prep
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. PDHs $110

Spool Dimensioning
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

Pipe Fabrication

Finding the Weight of a Spool
Introduces Section IX: Welding & Brazing Qualifications of the ASME Boiler & Pressure Vessel Code, covering the section's scope, organization and requirements. PDHs $110

Manufacturing Processes
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. PDHs $110

Pipe Coating and Marking
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 PDHs $110

Pipe Spool Shipping
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. PDHs $110

Pipe Fabrication

Shop Welding and Tooling

This course introduces the PTC 19.1-2005 Test Uncertainty defines the measurement process and discusses the foundations of the mathematical treatment of uncertainty. PDHs $110

Spool Fabrication

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. PDHs $110

Typical Fabrication ISO

Provides an introduction to the ASME BPV Code, Section IV, and discusses requirements for boilers constructed of wrought materials, cast iron and cast aluminum. PDHs $110

Pipe Materials

ASME Code Welding

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. PDHs $110

Corrosion

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. PDHs $110

Material Properties

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. PDHs $110

Weld Callouts

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. PDHs $110

Welding Technologies

This course describes and explains what ASME codes and standards are, the process for creating them, the people who are responsible for creating them and ASME's role in developing and maintaining codes and standards. After taking this course you will be able to define codes, standards and regulations, including what they mean and how to apply them. PDHs $110

Instrumentation

Sequential Execution

Outlines, defines and explains ASME conformity assessment programs, code requirements, plus all of the steps involved in the "N" Stamp application process. PDHs $110

Flow Measurement

Presents basic concepts and practices of total quality management so you can apply these tools to your work and generate improved processes and results. PDHs $110

Instrument Mounting Details

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

Pressure Measurement

Learn how to mobilize an organization by implementing change in ways that minimize employee uncertainty, discomfort and turnover and maximize employee productivity. PDHs $110

Temperature Measurement

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. PDHs $110

Control Loop Element

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. PDHs $110

Level Measurement

Discover current practices to create nanocomposites, nanocomposite properties and experimental aspects of nanocomposite behavior. PDHs $110

Passive Control

Covers theory, fabrication and applications of microscale and nanoscale systems. Discusses specific application areas – energy, water, plus chemical and biological separations. PDHs $110

PID Drafting

Narrative Description

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. PDHs $110

PID Layout

Describes terminology, processes and strategies of business finance and accounting and covers business plan fundamentals, funding sources, engineering economic analysis techniques. PDHs $110

PID Drafting

PID PFD Cross Check

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 and branding. PDHs $110

PID Simplifications

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. PDHs $110

Symbols

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. PDHs $110

Pipe Racks

Examples and Terminology

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.
PDHs $110

Other Uses for Pipe Rack Columns

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.
PDHs $110

Pipe Rack Construction

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.
PDHs $110

Rack Pipe Layout

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.
PDHs $110

Rack Pipe Support and Thermal Growth

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.
PDHs $110

Examples and Terminology 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.
PDHs $110

Pipe Routing

Material Spec and Class

This course describes the practices for the preparation of drawingrements, datum referencing, and notes and items.

2 PDHs $195

Rack to Pump Example

This course describes the practices for the preparation of drawings reladatum referencing, and notes and items.
2 PDHs $19

Route Narrative Description

An introduction to the requirements of various codes and standards regarding inspection, repairs and alterations of pressure equipment, PDHs $110

Routing Considerations

This course provides the information you need to know in order to receive a code certification mark stamp for use on non-nuclear
PDHs $110

Pipe Stress

ASME B31-3 Applicabilité

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.
PDHs $110

B16-5 Bride Sélection

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.
PDHs $110

Assurance B31-3

This course describes the practices for the preparation of drawings related to castings, forgings and molded parts, and covers drawum referencing, and notes and items.
PDHs $110

Concepts

This course describes the practices for the preparation of drawings related to castings, forgings and molded parts, and covers dequirements, datum referencing, and notes and items.
PDHs $110

Solutions de poids

This course describes the practices for the preparation of drawings related to castings, forgings and molded parts, and covers datum referencing, and notes and items.
PDHs $110

Pipe Supports

Concepts

This course describes the practices for the preparation of drawings related to castings, forgings and molded parts, and covers duirements, datum referencing, and notes and items.
PDHs $110

Pipe Supports

Design Failures
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.
PDHs $110

Displacement Control
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.
PDHs $110

Displacement Support
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.
PDHs $110

Nonlinear Movement
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.
PDHs $110

Support Design
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.
PDHs $110

Support Span
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.
PDHs $110

Plant Assembly

CG of a Spool
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%. PDHs $110

Clean and Hydrotest
Thermodynamics, computer dynamics, electric circuits, engineering economics, ethics, fluid mechanics, material science, mathematics, mechanics of materials, statics, chemistry
PDHs $110

Crane Concepts
Thermodynamics, computer dynamics, electric circuits, engineering economics, ethics, fluid mechanics, material science, mathematics, mechanics of materials, statics, chemistry
PDHs $110

Field Pipe Assembly
Thermodynamics, computer dynamics, electric circuits, engineering economics, ethics, fluid mechanics, material science, mathematics, mechanics of materials, statics, chemistry
PDHs $110

Pipe and Vessel Insulation
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.
PDHs $110

Pipe and Vessel Labeling
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.
PDHs $110

Pipe and Vessel Rigging
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.
PDHs $110

Scaffolding
This course covers most of the geometric dimensioning controls used on mechanical engineering drawings. Theoretical and practical concepts of each of the geometric contro seals, castings and threaded fasteners.
PDHs $110

Setdown and Alignment
This course explains the basic applicationontrol the size and location of nonsize features are also explained, as are coaxial relationships and control of rectangular features.
PDHs $110

Pipe Welding

Heat Treatment
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.
PDHs $110

Pipe Weld Inspection
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.
PDHs $110

Weld Defects
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.
PDHs $110

Piping CAD

Concepts
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.
PDHs $110

Data Capture and Reuse
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.
PDHs $110

Data Integrity Checks
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.
PDHs $110

Database Issues
This course explains how lean manufacturing techniques eliminate waste from typical production processes, and in turn improve product quality. PDHs $110

Models and Rendering
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.
PDHs $110

Pressure Vessels

ASME Sect VIII Concepts
Learn to guide the design and development of high-quality products. Emphasis is on lean manufacturing and information technology, emphasis on optimization tools, FMEA and root cause analysis.
PDHs $110

Heads
Thermodynamics, computer dynamics, electric circuits, engineering economics, ethics, fluid mechanics, material science, mathematics, mechanics of materials, statics, chemistry
PDHs $110

- **Terminolgy**

Thermodynamics, computer dynamics, electric circuits, engineering economics, ethics, fluid mechanics, material science, mathematics, mechanics of materials, statics, chemistry
PDHs $110

Vessel Details
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. PDHs $110

Vessel Erection
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.
PDHs $110

Process Plant Design

Post Design Life Cycle
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
PDHs $110

Stakeholders
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.
PDHs $110

Pump Layout

Configuration and Elevation
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.
PDHs $110

Pump Access
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.
PDHs $110

Pump Loading and Redundancy
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%. PDHs $110

- **Pump iInstallation Examples**

Thermodynamics, computer dynamics, electric circuits, engineering economics, ethics, fluid mechanics, material science, mathematics, mechanics of materials, statics, chemistry
PDHs $110

- **Pump Piping Layout**

Thermodynamics, computer dynamics, electric circuits, engineering economics, ethics, fluid mechanics, material science, mathematics, mechanics of materials, statics, chemistry
PDHs $110

Pump Layout

Temporary Strainers
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.

PDHs $110

Pumps

Centrifugal Confuguration
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.

PDHs $110

Centrifugal Pump Cavitation and NPSH
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.

PDHs $110

Centrifugal Pump System Design
This course explains how lean manufacturing techniques eliminate waste from typical production processes, and in turn improve product quality. PDHs $110

Motive Power
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.

PDHs $110

Positive Displacement Pumps
Learn to guide the design and development of high-quality products. Emphasis is on lean manufacturing and information technology, emphasis on optimization tools, FMEA and root cause analysis.

PDHs $110

Self-Actuated Valves

Steam Traps
Thermodynamics, computer dynamics, electric circuits, engineering economics, ethics, fluid mechanics, material science, mathematics, mechanics of materials, statics, chemistry

PDHs $110

Pressure Relief Valves
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.

PDHs $110

Regulator Valves
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.

PDHs $110

Check Valves
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.

PDHs $110

Valves

Actuators
This course explains how lean manufacturing techniques eliminate waste from typical production processes, and in turn improve product quality PDHs $110

CV Station Layout
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.

PDHs $110

Isolation Applications
Learn to guide the design and development of high-quality products. Emphasis is on lean manufacturing and information technology, emphasis on optimization tools, FMEA and root cause analysis.

PDHs $110

Isolation Valves
Thermodynamics, computer dynamics, electric circuits, engineering economics, ethics, fluid mechanics, material science, mathematics, mechanics of materials, statics, chemistry

PDHs $110

Material Introduction and Removal
Thermodynamics, computer dynamics, electric circuits, engineering economics, ethics, fluid mechanics, material science, mathematics, mechanics of materials, statics, chemistry

PDHs $110

Valves

Selection

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.

PDHs $110

Sizing

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.

PDHs $110

Throttling Valves

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.

PDHs $110

Valve Parts

This course explains how lean manufacturing techniques eliminate waste from typical production processes, and in turn improve product quality. PDHs $110