



Advancing the Profession of Plumbing Engineering

### **Connect with ASPE!**

You can learn all about ASPE's events, webinars, educational offerings, news, and more on our Facebook page at [bit.ly/ASPEFacebook](http://bit.ly/ASPEFacebook), and for even more up-to-the-minute access, follow ASPE on Twitter ([twitter.com/ASPEorg](https://twitter.com/ASPEorg)).

### **Join the Discussion**

ASPE's LinkedIn discussion group allows plumbing industry professionals to get timely answers to their most pressing questions from industry experts. Join [linkd.in/ASPELinkedIn](https://linkd.in/ASPELinkedIn) today and add your two cents or start a new discussion.



**[aspe.org](http://aspe.org)**

# American Society of Plumbing Engineers

*The Voice of the Plumbing Engineering Profession*

The American Society of Plumbing Engineers (ASPE) is the international organization for professionals skilled in the design, specification, inspection, and manufacture of plumbing systems. ASPE is dedicated to the advancement of the science of plumbing engineering, to the professional growth and advancement of its members, and to the health, welfare, and safety of the public.

The Society disseminates technical data and information, sponsors activities that facilitate interaction with fellow professionals, and, through research and education, expands the base of knowledge of the plumbing industry. ASPE members are leaders in innovative plumbing design, effective materials and energy use, and the application of advanced techniques throughout the world.

ASPE was founded in 1964 and currently has more than 6,000 members. Spanning the globe, members are located in the United States, Canada, Asia, Mexico, South and Central America, the South Pacific, Australia, Europe, Africa, the Caribbean, and the Middle East. They represent an extensive network of experienced engineers, designers, contractors, educators, code officials, manufacturers, and manufacturer representatives interested in furthering their careers, the profession, and the industry. ASPE is at the forefront of technology. In addition, ASPE represents its members and promotes the profession among all segments of the engineering and construction industries.

## Enhancing the Profession Through Collaboration

ASPE maintains partnerships with numerous industry organizations to help develop and strengthen the plumbing engineering and design field. Our partners include:

- » American Backflow Prevention Association
- » American Rainwater Catchment Systems Association
- » ASSE International
- » Canadian Institute of Plumbing and Heating
- » CSA Group
- » Get the Lead Out Plumbing Consortium
- » International Association of Plumbing and Mechanical Officials
- » International Code Council
- » NSF International
- » Plumbing Efficiency Research Coalition
- » Plumbing Industry Leadership Coalition
- » Plumbing Manufacturers International
- » United Association
- » Water Quality Association
- » World Plumbing Council

**The purpose of ASPE is to continually enhance and promote the profession of plumbing engineering while assisting in improving the safety and well-being of the public on a global scale.**

## What Is a Plumbing Engineer?

Plumbing engineers are professionals skilled in the design and specification of plumbing systems for commercial, institutional, municipal, educational, healthcare, and residential buildings. Such systems include domestic hot and cold water; sanitary; drain, waste, and vent; site and storm drainage; natural and liquefied petroleum gas; medical gas and vacuum; and fire suppression. Plumbing engineers also are involved in the design, manufacture, and sale of plumbing fixtures and products.

## What Is Plumbing Engineering?

Plumbing engineering is the application of scientific principles to the design, installation, and operation of efficient, economical, ecological, energy-conserving, and code-compliant systems for the transport and distribution of liquids and gases. It is a vital part of the building design and construction process.

# EDUCATING THE INDUSTRY

ASPE offers a robust series of educational programs to fulfill our mission to provide professional growth opportunities for the plumbing engineering community. A wide variety of ASPE educational tools is available for any plumbing industry professional seeking to enhance their technical expertise, increase their productivity, or advance their career.

“ASPE Education is a convenient and affordable way for plumbing industry professionals to enhance their skill set, learn a new design technique, or increase opportunities for career advancement.”

## The ASPE Webinar Series

The cornerstone of ASPE's education program is its webinar series. Each month, ASPE broadcasts an educational webinar on topical industry issues to teach plumbing engineers about new technologies and techniques to help them maintain an edge in the profession. ASPE often partners with industry organizations and manufacturers to bring new ideas and perspectives to webinar participants. All webinars are archived so you can watch them whenever you need a refresher on a specific topic.

## Regional Workshops

ASPE also routinely partners with other industry organizations to bring one- or two-day design classes to our membership and other industry professionals. These courses are taught by experts who share their knowledge and real-world experiences with participants.

Contact [education@aspe.org](mailto:education@aspe.org) for more information on webinar or workshop opportunities.

## Continuing Education Credits

All ASPE educational programs offer the chance to earn continuing education units or professional development hours (CEUs/PDHs), which are nationally recognized units of achievement that may be used as evidence of performance capabilities for job advancement. ASPE develops these programs to assist plumbing engineers, designers, and others in meeting the continuing education requirements of their professional licenses and certifications.

ASPE is recognized as an approved provider and sponsor of CEUs and PDHs throughout all 50 states for registrations and licensing requirements.

## ASPE CEU Provider Program

ASPE's CEU Provider Program allows continuing education providers to issue ASPE continuing education units for their professional development programs. Participants can use these CEUs toward ASPE's Certified in Plumbing Design and Certified Plumbing Design Technician recertification requirements. Professional development programs that qualify are those that advance, broaden, and enhance participants' technical knowledge and job skills in plumbing design and engineering.

Visit [ASPE.org/CEUProviderProgram](http://ASPE.org/CEUProviderProgram) for more information.

## Alfred Steele Scholarship

Alfred Steele, PE, was a long-time member of the American Society of Plumbing Engineers and a visionary and pioneer in advocating education and professional development for plumbing engineers and designers. The scholarship is limited to an ASPE member and his/her immediate family; planning a career in engineering; enrolled in a school or program of engineering as a full-time student at a college, university, or technical school; and maintaining a minimum grade point average of 3.0 on a 4.0 scale. Additional information can be found at [ASPE.org](http://ASPE.org)

## ASPE's Educational Offerings

- » Monthly webinars
- » Regional workshops
- » Biennial Convention
- » Biennial Technical Symposium
- » College/university certificate programs
- » Online learning
- » PowerPoint presentations
- » Read, Learn, and Earn
- » CEUs/PDHs

# CERTIFYING OUTSTANDING PLUMBING ENGINEERING PROFESSIONALS



ASPE administers the Certified in Plumbing Design program—the only international credential program in the plumbing engineering field—to provide professional recognition of qualified individuals who design plumbing systems. Completion of the program and examination confers upon the successful candidate the designation Certified in Plumbing Design, or CPD.

The Certified in Plumbing Design program has five primary objectives:

1. Establish specific standards for professional competence in the field
2. Identify and recognize those individuals who successfully demonstrate their acquired knowledge and abilities
3. Encourage plumbing engineers to participate in a continuing program of professional development
4. Provide a standard for educational programs in plumbing engineering
5. Enhance the status of plumbing engineering as a unique discipline

Created to provide a single, uniform credential in the field of engineered plumbing systems, the CPD program is not in any way connected to state-regulated Professional Engineer (PE) registrations.

## Eligibility

Full members of ASPE are automatically approved to sit for the exam. Nonmembers must have the following qualifications:

- » A minimum of four years of practical experience in a position of responsibility for the design of plumbing systems
- » A baccalaureate degree in a field related to engineering. In lieu of an accredited degree, a candidate may substitute up to an additional four years of practical experience in the design of plumbing systems, for a total of eight years, or be granted a credit of one-half year of practical experience for each full year of education in an accredited curriculum related to plumbing engineering.

## The CPD Exam

The CPD examination is held annually at online testing sites around the world. It consists of 100 multiple-choice questions covering five major job dimensions: Gathering Information; Design; Specifications; Construction Services; and Administration. ASPE offers a *CPD Review Manual* and webinars, as well as local review workshops, to help candidates prepare for the exam. [ASPE.org/CPD](https://www.aspe.org/cpd)



As a first step toward the CPD designation, ASPE developed the Certified Plumbing Design Technician (CPDT) program to provide professional recognition of plumbing designers who are early in their careers. The CPDT program has four primary objectives:

1. Provide a standard of professional competence in the practice of plumbing design at the technician level
2. Identify and recognize those individuals who successfully complete the certification examination, thereby demonstrating their acquired knowledge and abilities in the field of plumbing design
3. Encourage plumbing designers to become lifelong learners and participate in a continuing program of professional development and reach CPD certification
4. Provide a standard for educational programs in plumbing design and encourage implementation of such programs

The CPDT exam is held annually at testing sites around the world. [ASPE.org/CPDT](https://www.aspe.org/cpd)



The Green Plumbing Design (GPD) certificate program, sponsored by ASPE and the International Association of Plumbing and Mechanical Officials, is for engineers and designers with advanced skills in sustainable plumbing system design and consulting. Available only for engineers and designers who hold either the Certified in Plumbing Design (CPD) certification or a Professional Engineer (PE) license, the GPD certificate denotes professionals with a high level of experience and training in sustainable practices who are dedicated to ensuring the efficient use of our precious water resources via water-conserving plumbing system designs for commercial and residential applications. [ASPE.org/GPD](https://www.aspe.org/gpd)

# ENSURING PUBLIC SAFETY

## THROUGH STANDARDS DEVELOPMENT AND CODE ACTIVITIES

ASPE is committed to helping its members, and the plumbing industry as a whole, design high-quality, water- and energy-efficient plumbing systems that protect the public's health and safety. ASPE fulfills this commitment through the development of consensus standards focusing on plumbing system design and via involvement on various code development committees.

### ASPE Standards Program

The ASPE standards development program was created to achieve consistency in plumbing system design techniques across the United States. ASPE standards are adopted in model plumbing codes as a guideline toward the safe, efficient, and economical design and installation of plumbing systems.

ASPE is a member of the American National Standards Institute (ANSI) and is approved as an ANSI-accredited standards developer. All ASPE standards undergo a rigorous consensus and public review process before publication and submittal to become American National Standards.

Current ASPE standards include:

- » ASPE/ANSI 45: Siphonic Roof Drainage
- » ARCSA/ASPE/ANSI 63: Rainwater Catchment Systems
- » ARCSA/ASPE/ANSI 78: Stormwater Harvesting System Design for Direct End-Use Applications
- » WQA/ASPE/ANSI S801: Sustainable Management
- » WQA/ASPE/ANSI S802: Sustainable Activated Carbon Media for Drinking Water Treatment
- » WQA/ASPE/ANSI S803: Sustainable Drinking Water Treatment Systems

ASPE staff and members serve on other industry organizations' standards development committees, including:

- » ASSE International (American Society of Sanitary Engineering)
- » ASHRAE (American Society of Heating, Refrigerating, and Air-conditioning Engineers)
- » ASME (American Society of Mechanical Engineers)
- » ASTM International (American Society for Testing and Materials)
- » IAPMO (International Association of Plumbing and Mechanical Officials)
- » ICC (International Code Council)
- » NFPA (National Fire Protection Association)
- » NSF International (National Sanitation Foundation)

### Plumbing Code Involvement

ASPE maintains an active liaison with the national building code organizations to ensure that proper engineering practices are included in model plumbing code requirements.

ASPE staff and members are active on numerous code committees, including:

- » IAPMO Green Technical Committee
- » IAPMO Uniform Plumbing Code Technical Committee
- » ICC International Green Construction—Energy and Water Code Development Committee
- » ICC Plumbing, Mechanical, Fuel Gas, and Swimming Pool Code Interpretation Committees
- » ICC International Residential Code Development Committee
- » NFPA Healthcare Facilities Technical Committee

For more information on ASPE's code activities, contact ASPE's Vice President, Legislative at [aspeVPL@aspe.org](mailto:aspeVPL@aspe.org)

### Governmental Liaisons

The Society maintains liaisons with various federal, state, and local government agencies and departments, including the EPA, DOE, NIST, GSA, Department of Defense, Corps of Engineers, and HUD. ASPE members participate on special government committees such as the EPA Safe Drinking Water Conservation Guidelines Committee.

**To maintain unbiased and objective independence and provide effective input and impact, ASPE does not endorse any one specific plumbing code.**

# INCREASING ENGINEERING SKILLS

## THROUGH OUR TECHNICAL PUBLISHING PROGRAM

### Technical Publications

The foundation of ASPE's publishing program is the *Plumbing Engineering Design Handbook*, a four-volume set of plumbing system design and installation practices. Each year an updated version of one volume is published after undergoing an intensive review and revision process. The set includes:

- » Volume 1: Fundamentals of Plumbing Engineering
- » Volume 2: Plumbing Systems
- » Volume 3: Special Plumbing Systems
- » Volume 4: Plumbing Components and Equipment

ASPE also publishes numerous in-depth technical manuals on a wide variety of plumbing systems and design techniques.

### Plumbing Engineer Magazine

The official publication of the American Society of Plumbing Engineers is *Plumbing Engineer*, a monthly magazine owned and published by TMB Publishing Inc. *Plumbing Engineer* is the authoritative source of professional and technical information for those involved in the design and specification of plumbing systems. ASPE provides guidance and support of *Plumbing Engineer* by contributing articles and ensuring the technical accuracy of content through its volunteer member review committee.

Industry professionals can learn more about *Plumbing Engineer* and sign up for a free subscription at [plumbingengineer.com](http://plumbingengineer.com).

### Plumbing Engineering & Design Handbook of Tables App

The Plumbing Engineering & Design Handbook of Tables App is an exact replica of the 2,500-page handbook—except it's in an easy-to-use Adobe Air application. Instead of paging through hundreds of pages to find sizing data, all you have to do is choose the appropriate pipe material and other design criteria, and the sizing data appears instantly!

### Research Reports

Through its Research Foundation, ASPE publishes reports and white papers on the latest research available on topics directly affecting the work of plumbing engineers and designers, to help them improve their skills and increase expertise. These reports enable plumbing engineers, manufacturers, and contractors to design and install more effective and efficient plumbing systems. They also directly affect personal health and societal concerns such as drinking water quality, energy efficiency, the quality of lakes and streams, and other water-conservation issues.

### Technical Library

ASPE's current publications include the following top sellers:

- » *Advanced Plumbing Technology*
- » *CPD Review Manual*
- » *Domestic Water Heating Design Manual*
- » *Engineered Plumbing Design II*
- » *Fire Protection Systems*
- » *Illustrated Plumbing Codes Design Handbook*
- » *Pharmaceutical Facilities Plumbing Systems*
- » *Plumbineering Dictionary*
- » *Plumbing Engineering Design Handbook, Vol. 1–4*
- » *Plumbing Engineering & Design Handbook of Tables*
- » *Plumbing Technology*
- » *Practical Plumbing Engineering*
- » *Pumps & Pump Systems*
- » *Solar Energy System Design*
- » *Stormwater Drainage Calculator*
- » *Vent and Drainage System Slide Rule*
- » *Water Pipe Size Calculator*

All ASPE publications are available for purchase at:

**[ASPE.org](http://ASPE.org)**

# ASPE CONVENTION AND EXPOSITION

## THE CAN'T-MISS INDUSTRY EVENT FOR PLUMBING ENGINEERS

*Every other year, ASPE produces the ASPE Convention and Exposition, attracting thousands of plumbing engineers, designers, specifiers, and contractors with the largest plumbing products and systems tradeshow in the country combined with unparalleled professional development seminars and networking opportunities.*

*ASPE's Convention and Exposition is the only industry event designed to showcase innovations in plumbing system design—where plumbing engineers, designers, specifiers, and contractors can learn about the latest plumbing products, services, and design techniques.*

### Professional Development at Its Best

The ASPE Convention and Exposition offers attendees more than 30 educational seminars on topics ranging from project management to green building to advanced plumbing technologies—all guaranteed to provide the information and skills plumbing industry professionals need to succeed in their careers.

### The Largest Plumbing Tradeshow in the Country

The ASPE Convention and Exposition features more than 350 exhibits displaying the latest plumbing products and services offered by the industry's top manufacturers. Plumbing industry professionals travel from all over the country to get acquainted with the products they will be specifying in their designs. Exhibitors send their product engineers and sales staff to answer all technical questions attendees may have and to demonstrate their products' applicability in plumbing system designs.

## ASPE TECHNICAL SYMPOSIUM

### Advanced Education for Plumbing Professionals

In odd-numbered years, ASPE offers its Technical Symposium—two and one-half days of nonstop technical education for plumbing industry professionals. Taught by industry experts working in the field of plumbing system design, the educational seminars offered at the ASPE Technical Symposium delve into the nitty-gritty details of current plumbing system design techniques and technologies.

### The Latest Engineering Innovations

At the ASPE Technical Symposium, attendees can choose from a variety of educational seminars in several tracks to customize their learning experience. Classes are designed to teach participants how to integrate the most current design techniques into their projects, with hands-on calculation examples.

To further immerse plumbing industry professionals in the latest engineering innovations, each ASPE Technical Symposium includes a tabletop product show where the industry's top manufacturers showcase their newest products and teach attendees how to use them in their plumbing system designs.

# ASPE RESEARCH FOUNDATION

## ADVANCING THE SCIENCE OF PLUMBING ENGINEERING

*The ASPE Research Foundation is the only independent, impartial organization involved in plumbing engineering and design research. By sponsoring unbiased technical research, the ASPE Research Foundation upholds the best interests of the public and the plumbing industry.*

*The work of the ASPE Research Foundation is instrumental in promoting the entire plumbing industry. Information collected and disseminated helps support code revisions, provides a scientific basis for innovative engineering techniques and materials, and leads to more cost-effective plumbing designs.*

### Our Mission

The mission of the ASPE Research Foundation is to facilitate research that advances plumbing engineering by improving the understanding of plumbing systems for the public good. To accomplish this mission, the Foundation:

- » Identifies and evaluates specific technical research areas
- » Finances research in plumbing engineering and engineering sciences
- » Sponsors and coordinates definitive projects
- » Educates the plumbing engineering and design community
- » Publishes research findings

### Research Achievements

The ASPE Research Foundation has conducted numerous studies designed to improve the design and installation of plumbing systems, including:

- » Roof drain capacity
- » Medical gas systems
- » Water demand and pipe sizing methodologies
- » Water-saving fixtures
- » Restroom fixture requirements
- » Water reclamation and recycling

Completed research reports are available upon request.

### How to Participate

The ASPE Research Foundation welcomes research project proposals from engineers, scientists, and other industry organizations. Proposals are evaluated for their ability to complete the scope of work within the available budget. The Research Foundation is interested in conducting studies to influence needed code changes, provide rational data on which legislation may be based, encourage innovative areas of design, and provide needed technical data to plumbing engineers.

The ASPE Research Foundation is recognized as a 501(c)3 nonprofit corporation, so all donations are fully tax deductible. Investing in the ASPE Research Foundation will help lead to safer, more efficient, and more environmentally responsible plumbing systems. To learn more, go to:

[ASPE.org/ResearchFoundation](https://www.aspe.org/ResearchFoundation)



**The science of plumbing engineering affects everyone. From the quality of our drinking water to the conservation of our water resources to the building codes for plumbing systems – our lives are impacted daily by the advances made in plumbing engineering technology.**

# MEMBERSHIP VALUE

When you join ASPE, you become part of a worldwide family of plumbing engineering and design professionals and gain immediate access to their combined technical knowledge and industry support. ASPE members are leaders in the plumbing engineering industry, and joining their ranks offers invaluable networking and career-advancement opportunities. Our members benefit from ASPE's international exposure, and our involvement in national and local legislative initiatives helps strongly convey the important role of plumbing engineers and designers in the construction industry.

In addition to sharing professional knowledge, ASPE members also like to have fun. Local ASPE Chapters and special-interest groups such as ASPE Young Professionals and Women of ASPE host social networking events throughout the year. With more than 6,000 ASPE members, a fellow professional is never far away.

## Membership Benefits

When you join ASPE, you receive immediate access to the following:

- » ASPE *Plumbing Engineering Design Handbook*: Each year, members receive an updated volume of this four-volume collection of plumbing engineering and design practices.
- » Plumbing Engineering and Design Tables App: This convenient app allows you to find pipe sizing data for numerous materials wherever you are.
- » *Plumbing Engineer* magazine: The official publication of ASPE is published monthly and contains case studies, columns, and technical articles directly related to the daily activities of plumbing industry professionals.
- » ASPE *Pipeline*: The Society's biweekly e-newsletter contains news and views about the events, activities, and issues impacting the plumbing engineering profession and the industry.
- » ASPE *Journal*: This quarterly journal provides a platform for ASPE members to share technical information that others can use in their daily designs.
- » ASPE *Report*: The Society's newsletter, incorporated within *Plumbing Engineer* magazine, keeps members abreast of Society activities and issues impacting the profession.
- » ASPE.org: Members receive exclusive access to sections of ASPE's website and special pricing on Society publications and services.
- » Discounts: Members receive discounts on all Society education programs, publications, and services.

## Membership Classifications

ASPE offers several levels of membership opportunities:

- » Full Member: Industry professionals with eight years of experience in plumbing engineering or a related engineering field
- » Associate Member: Professionals engaged in plumbing design as consultants or engineers with less than eight years of industry experience
- » Affiliate Member: Individuals involved in the production or marketing of plumbing products
- » Student Member: Individuals attending a recognized university, college, community college, vocational, or technical trade school full time or part time in a curriculum related to plumbing design
- » Governmental Member: Anyone employed by a municipal, state, or federal government for checking and/or inspection of plumbing plans and installations; the formulation of codes, rules, requirements, and regulations pertaining to the planning, design, and installation of plumbing systems; or the research and development of plumbing system design criteria

## Participation and Leadership Opportunities

Members are eligible for and encouraged to participate in our numerous special-interest groups and committees to cultivate their professional growth and that of the Society and the profession.

- » Affiliate Advisory Committee (AAC)
- » ASPE Young Professionals (AYP)
- » Board of Directors (both Society and local)
- » Credentialing Committee
- » Education Committee
- » Membership Committee
- » Legislative Committee
- » Technical & Research Committee
- » Women of ASPE (WOA)

# CHAPTERS OF THE AMERICAN SOCIETY OF PLUMBING ENGINEERS

All members belong to ASPE worldwide and have the opportunity to belong to and participate in one of the state, provincial, or local chapters throughout the United States and Canada. ASPE chapters provide major communication links and the first line of services and programs for individual members. At chapter functions, members can network with others who represent all segments of the plumbing engineering, design, construction, and services industry. Chapters produce newsletters, conduct monthly technical meetings, and provide opportunities for education, professional development, and information sharing to help the membership stay abreast of current trends, code changes, and technologies in the plumbing engineering profession.

Alabama  
Atlanta  
Baltimore  
Boston  
British Columbia  
Buffalo-Niagara (NY)  
Capital Region NY  
Central Florida  
Central Illinois  
Central Indiana  
• Evansville  
Central New York  
Central Ohio  
Cleveland  
Central Texas  
Charlotte  
Chicago  
Cleveland  
Columbia (SC)  
Connecticut  
Dallas/Ft. Worth  
• Oklahoma City  
Denver  
Eastern Michigan  
Greater Toronto Area

Greenville (SC)  
Houston  
Intermountain (UT)  
Johnstown (PA)  
Kansas City  
Long Island  
Los Angeles  
Memphis  
Miami  
Minnesota  
Montréal  
Nashville  
New Jersey  
New Orleans  
New York City  
Northern California  
North Florida  
Omaha  
Orange County  
Philadelphia  
Phoenix  
Pittsburgh  
Portland  
Québec City  
Raleigh

Richmond  
• Hampton Roads  
Rochester (NY)  
St. Louis  
San Diego  
San Francisco  
Seattle  
Southern Nevada  
Southwestern Ohio  
Virginia Blue Ridge  
Washington, D.C.  
West Coast Florida  
Western Michigan  
Wisconsin

• Denotes satellite  
of above chapter

