

PLUMBING & ENERGY SERVICES

ASSOCIATE IN APPLIED SCIENCE DEGREE AND CERTIFICATE PROGRAMS

The Plumbing and Energy Services program is designed to prepare students for technician level positions in the rapidly growing field of installing, maintaining, and troubleshooting high efficiency plumbing, heating, ventilation, and air conditioning. Graduates will work on systems that control water, temperature, humidity, and air quality of enclosed spaces.

“I always knew I wanted to go into heating. What I have learned at KVCC is that the world is changing and there are newer ways to heat than the old oil boilers.”

“Some people think that solar thermal panels are really impractical here in New England. While studying heating and cooling at KVCC, I found out just how untrue this is. It is exciting to be on the cutting edge of a new industry that is taking over.”

Learn to install, maintain, and troubleshoot modern heating, ventilating, and cooling systems



What Plumbing and Energy Services graduates do:

- JIT Plumber
- Resource conservation manager
- Energy management technician
- Journeyman oil burner technician
- HVAC technician

Career Opportunities:

- Educational facilities
- Small businesses
- Plumbing and heating firms
- Hospital facilities
- Manufacturing companies
- Industry plants

For further questions about this program, please contact: enrollment@kvcc.me.edu

PLUMBING AND ENERGY SERVICES

Associate in Applied Science Degree

First Semester

BPT125*	Construction Print Reading	3
COM104	Introduction to Communication	3
MAT114	Technical Math	3
PLB101*	Plumbing Fundamentals	6

Second Semester

ENG108	Technical Writing	3
MAT214	Technical Math II	3
PLB201*	Advanced Plumbing Applications	6
PLB210*	Plumbing Codes	3

Third Semester

ETL107*	Electrical Principles for HVAC	4
HAC106*	Heat Pumps and Air Conditioning	3
HAC200*	Introduction to Natural Gas and Propane	1
HAC201*	Heating System Fundamentals	6
SOC109	Technology and Society (SS)	3

Fourth Semester

ETL108*	HVAC Electronics and Controls	3
HAC202*	Advanced Heating Applications	6
HAC205*	Propane and Natural Gas	3
HIS205	Architectural Styles of New England (H)	3

Total Credits **62**

Plumbing Certificate

First Semester

BPT125*	Construction Print Reading	3
MAT114	Technical Math	3
PLB101*	Plumbing Fundamentals	6

Second Semester

ENG108	Technical Writing	3
PLB201*	Advanced Plumbing Applications	6
PLB210*	Plumbing Codes	3

Total Credits **24**

Energy Services Certificate

First Semester

ETL107*	Electrical Principles for HVAC	4
HAC106*	Heat Pumps and Air Conditioning	3
HAC200*	Introduction to Natural Gas and Propane	1
HAC201*	Heating System Fundamentals	6
MAT114	Tech Math I	3

Second Semester

ETL108*	HVAC Electronics and Controls	3
HAC202*	Advanced Heating Applications	6
HAC205*	Propane and Natural Gas	3

Total Credits **29**

CRITERIA FOR GRADUATION

Students must complete 62 credits in the Plumbing and Energy Services program, 24 credits in the Plumbing certificate, or 29 credits in the Energy Services certificate and achieve a minimum grade of “C” in designated common and program core courses (*). Students must attain a final GPA of 2.0 or higher. (H,SS) Suggested Electives. Please contact your advisor for more information.

PLUMBING AND ENERGY SERVICES

Associate in Applied Science Degree, Certificates

DESCRIPTION

The Plumbing and Energy Services program offers a two-year Associate in Applied Science degree, a Plumbing certificate, and an Energy Services certificate. The program is designed to prepare students for technician level positions in the rapidly growing field of installing, maintaining, and troubleshooting high efficiency plumbing, heating, ventilating, and cooling systems in buildings. Graduates will work on systems that control water, temperature, humidity, and air quality of enclosed spaces within building structures. They will install various types of equipment used to control human comfort in residential, commercial, industrial, and institutional environments.

This program will give the technician a working knowledge of plumbing and HVAC system building concepts and energy efficient design principles. Additionally, program graduates are eligible for State of Maine licensing in plumbing, oil burner, propane and natural gas. Students can also pursue the EPA refrigeration certification. Combined with the appropriate additional coursework, graduates will also have the necessary educational background and licenses needed for advancing into a career in renewable and sustainable energy systems.

Students are required to have the tools and equipment necessary to properly complete the hands-on portion of the program. The required tools and equipment will be in the range of \$1,200 - \$1,400.

PROGRAM MISSION

The Plumbing and Energy Services program provides graduates with the technical background and the manual skills necessary for careers in the installation and maintenance of modern, energy efficient, plumbing, heating, ventilating, and air conditioning systems. Graduates are critical thinkers and are able to troubleshoot problems in residential, commercial,

or industrial environments. The program provides students with the ability to communicate effectively using standard methods of communication.

Recognizing the need for lifelong learning, the Plumbing and Energy Services program helps students achieve various professional and personal goals that may arise over a lifetime, including the opportunity to transfer to other college and university technical programs. The program strives to maintain a high academic standard for teaching and learning through a continuous process of self-assessment and improvement.

Students are exposed to a learning environment that is safe and supportive of student growth and achievement. Using modern training equipment, innovative teaching methods and highly trained faculty members, the Plumbing and Energy Services program endeavors to fully prepare students for a variety of building energy system occupations.

EDUCATIONAL OUTCOMES

Program Goals and Student Learning Outcomes

Upon successful completion of the Plumbing and Energy Services program, graduates are expected to:

1. Practice the skills of the profession in a conscientious, responsible, and accountable manner while recognizing the need to continue to expand their technical knowledge and skills.
2. Communicate effectively and listen and respond appropriately to a variety of residential, commercial and industrial applications.
3. Think critically and use their acquired analytical skills to solve problems encountered in a residential, commercial or industrial environment.

COLLEGE ADMISSION

General admission guidelines can be found on [page 34](#) in the catalog.