

Propane & Natural Gas Technician Description

The Propane & Natural Gas courses at KVCC are designed to provide students with the knowledge and skills required to pursue licensure and certification as Propane & Natural Gas Technicians. KVCC has incorporated the Propane Education Research Council (PERC) Certified Employee Training Program (CETP) into its Propane curriculum as well as the Propane Gas Association of New England's Maine Natural Gas curriculum. Successful completion of the required courses and exams fulfills the training requirements for the State of Maine's Propane & Natural Gas Technician in the following authorities: Delivery Technician, Tank Setter & Outside Piping, Appliance Connection & Service (which includes the Maine Natural Gas Supplement), and Large Equipment Connection & Service. The completion of NPGA CETP Certification requirements also include a performance based Skills Assessment Evaluation, and are not available through KVCC. For more information on completing an NPGA CETP Certification, please visit the NPGA website at www.NPGA.org (CETP Certification). For more information on the State of Maine Propane and Natural Gas Technician licenses, please visit:

http://www.maine.gov/pfr/professionallicensing/professions/fuel/license_types.html

Audience

PNG1 010 Propane & Natural Gas: **Basic Principles & Practices of Propane (CETP 1.0)**

This course is designed to train various types of propane employees such as: field personnel and delivery drivers, customer relations and office personnel, installation and service personnel, sales personnel and plant personnel. Successful completion of this course is required before students can matriculate in any of the other CETP courses at KVCC.

PNG1 020 Propane & Natural Gas: **Appliance Connection and Service Technician (CETP 4.2, 4.3, 4.4, 4.5, 4.6 & Maine Natural Gas Supplement)**

This course is designed to train: installation and service personnel, sales personnel, managers and supervisors on the required components to install and service gas/propane appliances. Employees throughout the propane industry will also find this training useful.

PNG1 030 Propane & Natural Gas: **Delivery Technician (CETP 2.1 & 2.4, 2.2 & 2.5)**

This course is designed for drivers who operate commercial motor vehicles to deliver propane and provides training for inspecting, maintaining and operating propane delivery vehicles, filling propane storage containers, and making customer deliveries.

PNG1 040 Propane & Natural Gas: **Large Industrial/Commercial Gas-Fired Equipment Connection & Service (CETP 8.0)**

This course is designed to enable experienced gas industry managers, sales representatives and service technicians to properly size and install gas service connections for large industrial and commercial gas-fired equipment and systems.

PNG1 050 Propane & Natural Gas: **Tank Setter & Outside Piping (CETP 4.1, 4.2 & 5.1)**

This course is designed for those who design and install vapor distribution systems. It also covers the general knowledge that a propane employee would need to use and operate a dispenser and the different system tests required for vapor distribution systems and appliances.

Course Code	Course Name	Contact Hours
PNG1 010	<u>Propane & Natural Gas:</u> Basic Principles & Practices of Propane	20
PNG1 020	<u>Propane & Natural Gas:</u> Appliance Connection and Service	84
PNG1 030	<u>Propane & Natural Gas:</u> Delivery Technician	32
PNG1 040	<u>Propane & Natural Gas:</u> Large Industrial/Commercial Gas-Fired	20
PNG1 050	<u>Propane & Natural Gas:</u> Tank Setter & Outside Piping	64
Total Contact Hours		252

Course Descriptions

PNG1 010 Propane & Natural Gas: Basic Principles & Practices of Propane

This course is designed to provide all personnel with the basic principles and practices of working with propane to ensure safety and help provide quality service to customers and the community. Basic Principles and Practices of Propane is a prerequisite to the more advanced CETP classes and is designed to be both a learning resource and a career development tool.

This course provides prerequisite instruction about propane’s physical and combustion properties, and how propane is produced and transported. Other topics covered include:

- Organizations that influence, publish or enforce codes and standards
- How basic functions are performed in a bulk plant, including primary safety concerns, and customer service
- Odorants and service interruptions
- Complete and incomplete combustion characteristics, and more
- NFPA 54 & NFPA 58

Upon conclusion of this course, students will be eligible to take the CETP Certification Exam for Basic Principles and Practices of Propane.

Prerequisites: None

Required Materials: CETP 1.0 textbook; NFPA 54 & NFPA 58. Course fee includes exam fee. Course fee does not include books.

PNG1 020 Propane & Natural Gas: Appliance Connection and Service

This course encompasses four sections, CETP 4.2, 4.3, 4.4, 4.5, 4.6 & FGT 1.1 (Maine Natural Gas Supplement).

CETP Section 4.2 “Placing Vapor Distribution Systems and Appliances into Operation” focuses primarily on the procedure of placing a vapor distribution system into operation and addresses the different system tests required for vapor distribution systems and appliances; validating the container, piping, and regulator; how and when to make the final connections; how to purge the system of air, appliance controls and safety devices; and how to adjust the burner.

CETP Section 4.3- “Installing Appliances and Interior Vapor Distribution Systems” focuses primarily on interior of a piping system as well as the installation of gas appliances. It also addresses how to select and install appliances, design and install interior venting systems, and design and install interior piping and

tubing, as well as how to perform a pressure test.

CETP Section 4.4 – “Basic Electricity for Propane Appliance Service” focuses on basic electricity as it relates to basic propane appliances. Its focus is to develop basic electrical troubleshooting skills that can be used to service any basic propane appliance. It does not include troubleshooting basic propane appliances - this is addressed in 4.5 “Basic Propane Appliance Service and Troubleshooting”.

CETP Section 4.5 – “Basic Propane Appliance Service and Troubleshooting” focuses on efficiently servicing, troubleshooting, and repairing basic propane appliances. This course does not include any appliance with electronic ignition systems. Those systems are addressed in 4.6 “Advanced Propane Appliance Service and Troubleshooting”

CETP Section 4.6 – “Advanced Propane Appliance Service and Troubleshooting” enables participants to efficiently service, troubleshoot, and repair advanced propane appliances with electronic ignition systems.

FGT 1.1 Section – “Maine Natural Gas Supplement” focuses on the properties of natural gas, procedures for installing house piping, and procedures for placing natural gas operated equipment in-service as required by the State of Maine.

Prerequisites: PNG1 010

Required Materials: CETP 4.2, 4.3, 4.4, 4.5, 4.6 textbooks; Maine Natural Gas Supplement; NFPA 54 & NFPA 58. Course fee includes the Maine Natural Gas Supplement and exam fees. .

PNG1 030 Propane & Natural Gas: Delivery Technician

This course encompasses CETP 2.1 & 2.4, 2.2 & 2.5 (*)

CETP Section 2.1 & 2.4 “Propane Operations & Cylinder Delivery” focuses on the delivery basics and cylinder delivery.

CETP Section 2.2 “Operating a Bobtail to Deliver Propane” focuses on Bobtail equipment and systems. Explains a bobtail’s basic equipment and systems, including the cargo tank, gauges, valves, pumps, meters, delivery hoses and emergency discharge control equipment, discusses DOT requirements for bobtail inspections, and reviews the features and installation requirements of ASME tanks at customer locations.

CETP Section 2.5 “Operating a Truck, Tank Trailer or Tractor/Trailer to Deliver or Relocate ASME Tanks” is no longer a CETP Certification area. The Mobile Crane Safety in the Propane Industry program now replaces the CETP textbook. This program focuses on the general industry requirements for training a qualified crane operator, and provides the means to teach operators how to use cranes safely and effectively. It provides basic information on the safe operation of articulating and telescopic cranes.

Prerequisites: PNG1 010

Required Materials: CETP 2.1 & 2.4, 2.2 textbooks; Mobile Crane Safety in the Propane Industry Program; NFPA 54 & NFPA 58. Course fee includes exam fees. Course fee does not include books.

PNG1 040 Propane & Natural Gas: Large Industrial/Commercial Gas-Fired Equipment

This course covers determining gas supply requirements for large industrial gas fired equipment; identify characteristics and functions of valve trains and ignition safety systems used with large gas fired

equipment; identifying characteristics and functions of safety controls and burner designs used with large gas fired equipment; and identifying system testing and start up procedures that apply to large gas fired equipment.

Prerequisites: PNG1 010, PNG1 020 or License with Appliance Connection & Service authority

Required Materials: CETP 8.0 Textbook; NFPA 54 & NFPA 58. Course fee includes exam fee. Course fee does not include books.

PNG1 050 Propane & Natural Gas: Tank Setter & Outside Piping

This course encompasses CETP 4.1, 4.2 & 5.1

CETP Section 4.1 “Designing and Installing Exterior Vapor Distribution Systems” focuses on designing and installing the exterior portion of a vapor distribution system for both residential and small commercial markets. This course addresses how to select and install containers, prevent corrosion, size and install regulators and meters, and select and install outdoor piping and tubing.

CETP Section 4.2 “Placing Vapor Distribution Systems and Appliances into Operation” focuses primarily on the procedure of placing a vapor distribution system into operation and addresses the different system tests required for vapor distribution systems and appliances; validating the container, piping, and regulator; how and when to make the final connections; how to purge the system of air, appliance controls and safety devices; and how to adjust the burner.

CETP Section 5.1 “Design and Install Dispenser Transfer Systems” focuses on identifying proper container and location for a dispenser; identifying required tank valves, and fitting and verifying all required components are present, etc.

Prerequisites: PNG1 010

Required Materials: CETP 4.1, 4.2 & 5.1 Textbooks; NFPA 54 & NFPA 58. Course fee includes exam fee. Course fee does not include books.