

APPLIED INDUSTRIAL TECHNOLOGY (PLUMBERS) (ATPL)

ATPL-1000 Care and Use of Tools 2 Credits

Identifies the hand and power tools used in the plumbing industry and discusses the operation and respective safety concerns as prescribed in the standards found in the Occupational Safety and Health Administration (OSHA) and in the manufacturer's specifications.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-1010 Soldering and Brazing 2 Credits

Basic principles of joining tubing used in domestic water and medical gas installations. In addition, discussion of the principles and practices used in soldering and brazing applications.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-1030 State of Ohio Plumbing Code I 2 Credits

Introduction to the State of Ohio code for plumbing. Covers general regulations, definitions and specific installations including hot water tanks and storm water systems.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-1040 Plumbing Heritage 2 Credits

Introduction to labor history and the roles of the apprenticeship, apprentice, journeyman, local union and union contractors in the construction industry. Also discusses good work habits and skills needed to excel in the construction industry.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-1050 Construction Drawings 2 Credits

Covers residential blueprint reading as applied to mechanical and architectural trades. Includes sections explaining the use of various plans (site, foundation, floor) with building sections and details.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumber's apprenticeship program.

ATPL-1060 Medical Gas 2 Credits

Certification course that studies the installation, maintenance and safety concerns of medical gas and its environmental effects.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-1070 Pipe Fittings, Valves, and Supports 2 Credits

Identifies the pipe, pipe fittings, valves and supports that are used in the plumbing trade and discusses the fabrication and installation methods that are required for proper and safe installations.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-1210 State of Ohio Plumbing Code II 2 Credits

A study of the State of Ohio Plumbing Code with concentration on governing provisions of venting materials, design, construction, and installation of venting systems. In addition, code provisions covering fixtures, faucets and fittings, special health care regulations, and indirect waste systems are included.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-1220 Gas Systems 2 Credits

Study of the procedures followed in the installation of natural gas systems, pipe sizing, safety and the repair of natural gas systems.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumber's apprenticeship program.

ATPL-1230 Water Supply 2 Credits

Overview of potable water from its source to its end use. Includes discussion of water treatment, water mains, service and building water systems including water system layout, installation and maintenance, and different effects of the introduction of heat to potable water.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-1240 Underground Plumbing Systems; Application and Installation 2 Credits

Advanced course covering the application and installation of underground plumbing systems including safety requirements. Also covered are installation techniques, applied math, construction tools and equipment and interpretation of mechanical drawings.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprentice program

ATPL-1800 Special Topics: Confined Space 1 Credit

Certification course for plumbers working in confined spaces. Also, an introduction to Material Safety Data Sheets (MSDS) and competent person training in accordance with the Occupational Safety and Health Administration (OSHA) for trenching and excavation operations will be covered.

Lecture: 1 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-1801 Special Topics: Signal Certification

1 Credit

Certification course for a pipe trades member of the United Association covering the certification standards with respect to regulations established by the Occupational Health and Safety Administration OSHA and the American Society of Mechanical Engineers ASME. Course covers crane operations including crane limitations and procedures for general lifting and specific requirements for hoisting personnel.

Lecture: 1 hours

Prerequisite(s): Departmental approval and/or a member of the U/A union.

ATPL-1806 Special Topics: Underground Plumbing Systems: Application and Installation

2 Credits

Advanced course covering the application and installation of underground plumbing systems including safety requirements. Also covered are installation techniques, applied math, construction tools and equipment and interpretation of mechanical drawings.

Lecture: 2 hours

Prerequisite(s): Departmental Approval: admission to Plumber's apprenticeship program.

ATPL-1807 Special Topics: OSHA 510

2 Credits

This course identifies the hand and power tools used in the plumbing industry and discusses the operation and respective safety concerns as prescribed in the standards found in the Occupational Safety and Health Administration (OSHA) specifications and in the manufacturer's specifications.

Lecture: 2 hours

ATPL-1808 Special Topics: Natural Gas Pipe Applications and Installation

2 Credits

Advanced course covering the application and installation of natural gas piping systems including safety requirements. Also covered are installation techniques, applied math, construction tools and equipment and interpretation of mechanical drawings.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumber's apprenticeship program.

ATPL-1809 Special Topics: Plumbing Gas Systems

2 Credits

This course is the study of the procedures followed in the installation of natural gas systems, pipe sizing, safety and the repair of natural gas systems.

Lecture: 2 hours

ATPL-2320 State of Ohio Plumbing Code III

2 Credits

Review of the State of Ohio Plumbing Codes I & II with the study of storm and sanitary drainage.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-2350 Electricity for Plumbers

2 Credits

Fundamentals of electricity for the plumbing trade. Covers safety, transformers, direct and alternating current, and basic controls. Discussion of motors and troubleshooting exercises.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-2360 Green Plumbing Systems

1 Credit

Fundamentals of sustainable design, green building practices and installation procedures that are used in the plumbing industry. Includes applied green awareness and function with respect to the conservation and recycling of potable water and the reuse of storm and sanitary water disposal systems.

Lecture: 1 hours

Prerequisite(s): Departmental approval: admission to Plumber's apprenticeship program.

ATPL-2410 City & State Backflow Cert

2 Credits

Preparation to test and repair various backflow prevention devices that are used to protect the public water supply.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-2430 Trench & Excavation Safety

1 Credit

Introduction to hazards and dangers of working in confined spaces. Examination of spaces with limited means of egress and limited natural ventilation that are not meant for continuous occupancy and examination of permit-required work areas with compliance to OSHA standards.

Lecture: 1 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-2440 City of Cleveland Plumbing License

1 Credit

Certification course identifies the natural gases that are installed for application in the medical industry and discusses their environmental effects. Discussion of methods of installation and maintenance while addressing safety concerns with installations.

Lecture: 1 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-2510 Pumps

2 Credits

Pumps, pump theory, and different systems used to pump various viscous liquids in plumbing systems. Reviews basic electricity and applies that knowledge to sequence of operations of pumping controls. Includes pump installation and alignment procedures and safety.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-2550 Plumbing Service & Procedures**2 Credits**

Discusses the service division of the plumbing industry including customer service and salesmanship. Includes sections explaining maintenance and servicing of drains, faucets, valves and hot water.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to the Plumber's apprenticeship program.

ATPL-2560 Foreman Certification**2 Credits**

Discussion on the responsibilities of foremanship including leadership roles to the employer and to the respective labor organization.

Covers methods of handling job and labor disputes using effective communication techniques, efficient work practices and attention to safety and consequences resulting from failure to do so.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-2580 Design and Layout**2 Credits**

Utilization of residential and commercial drawings to identify mechanical areas within a structure where problem situations exist including conflicting elevations, illegal venting, interferences and others. In addition, writing "requests for information" (RFI's), and change work orders will be covered.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.

ATPL-2806 Special Topics: Installation Techniques for Copper Tube & Pipe**2 Credits**

This course is designed to demonstrate and qualify the students in the multiple installation practices of copper tube and pipe. Tool use, safety practices, tube/pipe and fitting identification, drawing use and applied mathematics will all be covered in this course as it relates to the installation techniques of copper tubing and pipe.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to program.

ATPL-2807 Special Topics: Installation Techniques for PVC**2 Credits**

This course is designed to demonstrate and qualify the students in the multiple installation practices of PVC Pipe. Tool use, safety practices, pipe and fitting identification, drawing use and applied mathematics will all be covered in this course as it relates to the installation techniques of PVC pipe.

Lecture: 2 hours

Prerequisite(s): Departmental approval admission to program.

ATPL-2808 Special Topics: Cast Iron Pipe: Application and Installation**2 Credits**

Advanced course covering the application and installation of cast iron pipe including waste water drainage and venting requirements. Also covered are installation techniques, applied math, construction tools and equipment and interpretation of mechanical drawings.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to program.

ATPL-2809 Special Topics: Plumbing Heritage**2 Credits**

This course introduces the apprentices to labor history and the roles of the apprenticeship, apprentice, journeyman, local union and union contractors in the construction industry. The course will also discuss good work habits and skills needed to excel in the construction industry.

Lecture: 2 hours

ATPL-2812 Special Topics: Electricity for Mechanical**2 Credits**

Basic course on fundamentals of electricity for the plumbing trade. The course covers safety, transformers, direct and alternating current, and basic controls. Course also includes discussion of motors and troubleshooting exercises.

Lecture: 2 hours

Prerequisite(s): Departmental approval: admission to Plumbers' apprenticeship program.