

# COURSE DESCRIPTIONS



## WLDG 2553 Advanced Pipe Welding

This course covers advanced topics involving welding of pipe using the shielded metal arc welding process. Topics include electrode selection, equipment setup, and safe shop practices, with an emphasis on weld positions 5G and 6G using various electrodes. (5:3-5)



## WLDG 2580 Cooperative Education Welding

This course covers career-related activities encountered in the student's area of specialization offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. It includes a lecture component. Prerequisite: None (5:1-28)

## Continuing and Professional Development

### Pipefitting

#### PFPB 1001 Pipefitting Certificate: Introduction to Pipefitting: Pipefitting 1B

This course offers instruction in pipefitting hand and power tools, threaded pipe, ladders and scaffolds, motorized equipment, excavation, underground pipe and installation, drawings and detail sheets, piping systems, and trade math. 64 contact hours

#### PFPB 1008 Basic Pipefitting Skills

This course is the study of the Mathematical operations necessary to calculate laying lengths of pipe fittings for fabrication. Identification and use of hand tools and power tools. Identification of pipe, pipe fittings, flanges, and fasteners used in the trade. 64 contact hours

#### PFPB 1043 Pipefitting Fabrication and Blueprint Reading: Pipefitting II

This course offers instruction in socket and butt weld pipe fabrication, rigging, pipe hangers and supports, advanced blueprint reading, standards and specifications, and advanced trade math. 64 contact hours

#### PFPB 2032 Advanced Pipefitting Standards, Specifications, Installation: Pipefitting III

This course promotes skill development related to these areas: motorized equipment, above-ground pipe installation valves, field routing and vessel trim, spring can supports, testing piping systems and equipment, basic plumbing, planning work activities, and non-destructive testing (NDT). 64 contact hours

#### PFPB 2033 Pipefitting, Advanced Fabrication and Installation: Pipefitting IV

This course promotes skill development in these areas: advanced pipe fabrication, aligning pipe to rotating equipment, steam traps, inline specialties, special piping, hot taps, and maintaining valves. 64 contact hours

## Plumbing

#### PFPB 1001 Pipefitting Certificate: Introduction to Pipefitting: Pipefitting 1B

This course offers instruction in pipefitting hand and power tools, threaded pipe, ladders and scaffolds, motorized equipment, excavation, underground pipe and installation, drawings and detail sheets, piping systems, and trade math. 64 contact hours

#### PFPB 1003 Basic Plumbing Skills

In this course students develop skills and knowledge required to install drains, sanitary sewers, water and natural gas supply lines, and fixtures commonly used in residential and light commercial buildings and facilities. 72 contact hours

#### PFPB 1071 Plumbing Standards for Water Supplies

This course focuses on the installation of water service from the installation of valves and faucets to connecting to water mains. It covers both residential and commercial settings. 72 contact hours

#### PFPB 2031 Advanced Technologies and Specialized Applications for Piping Trades (Plumbing IVB)

This course offers instruction in new plumbing techniques and materials in the pipe trades. Topics include specialized piping/fitting procedures for specific industrial applications and upgrades to techniques and practices designed to deal with federal, state, and local environmental and safety regulations. 72 contact hours

#### PFPB 2032 Pipefitting Standards, Specifications, Installation

This course promotes skill development related to these areas: motorized equipment, above-ground pipe installation valves, field routing and vessel trim, spring can supports, testing piping systems and equipment, basic plumbing, planning work activities, and non-destructive testing (NDT). 72 contact hours

#### PFPB 2033 Pipefitting, Advanced Fabrication and Installation (Plumbing IIIA)

This course promotes skill development related to these areas: advanced pipe fabrication, aligning pipe to rotating equipment, stream traps, in-line specialties, special piping, hot taps, and maintaining valves. 72 contact hours

#### PFPB 2071 Installation and Repair of Potable Water Systems

This course focuses on the plumbing of potable water systems according to local plumbing codes. Methods of filtering and softening water systems are also discussed. 72 contact hours



## Sheet Metal

### MCHN 1001 Sheet Metal I

This is an introduction to the materials, tools, and techniques used in the sheet metal industry. It reviews trade math problems involving measurement of lines, area, volume, weight, and geometric figures. The course focuses on types and uses of hand, layout, and cutting tools along with bending and forming machines. Students practice using material of various type and properties as they apply the principles of layout and metal forming. 72 contact hours

### MCHN 1049 Sheet Metal II

In this introduction to various types of pipe and fittings, emphasis is on principles and types of fittings for radial line development and on factors that influence bend allowances and calculations necessary for determining proper bend allowances. The course also focuses on principles of soldering roof flashings, gutters, down spouts, and sheet metal duct fabrications. 72 contact hours

### MCHN 1053 Sheet Metal III

This is an introduction to the principles of airflow as applied to HVAC air distribution systems, components of HVAC, and the basic refrigeration cycle. The course introduces students to welding, brazing, and field measurements along with extensive triangulation layout, fabrication and fiberglass ductwork. 72 contact hours

### MCHN 1071 Sheet Metal IIB

In this continuation of the study of various types of pipe and fittings, emphasis is on using blueprints and shop drawings to determine bend allowances and on calculations necessary for determining proper bend allowances in soldering roof flashings, gutters, down spouts, and sheet metal duct fabrications. 72 contact hours

### MCHN 1072 Sheet Metal IIIB

This is a continuation to the study of triangulation layout and fabrication and fiberglass ductwork. It focuses on application of field measurements for layout and installation of duct sections and offsets. 72 contact hours

### MCHN 2030 Sheet Metal IV

This course is a comprehensive review of developmental and fabrication techniques. It also provides an introduction to the concepts of shop production and organization, and to elements of air balance and specialty applications related to louvers, dampers, access doors, ventilators, and fume and exhaust systems. 72 contact hours

### MCHN 2071 Sheet Metal IVB

This course offers extensive practice in the application of parallel line development, radial line development, and triangulation methods of fabrication used in the layout and fabrication of sheet metal air systems. 72 contact hours

## Truck Driving

### CVOP 1013 Commercial Vehicle Operator I

CVOP 1013 is the first of two 126-clock hour courses in Commercial Truck Driving. This course is designed to familiarize students with the basic operations of a tractor-trailer combination. It consists of thirty (30) hours of classroom lecture and demonstration, and ninety (90) hours of hands-on tractor-trailer operation. Co-requisite: CVOP 1040

### CVOP 1040 Commercial Vehicle Operator II

CVOP 1040 is the second and final 120-clock hour course in Commercial Truck Driving. This course is designed to provide classroom instruction in loading and unloading, plus hands-on practice in routine equipment maintenance and making driver's daily log book entries. Several long-haul trips are taken, and the Department of Transportation (DOT) written and driving exams are administered. Co-requisite: CVOP 1013

## Welding

### WLDG 1028 Introduction to Shielded Metal Arc Welding (SMAW)

This introduction to shielded metal arc welding process emphasizes power sources, electrode selection, oxy-fuel cutting, and various joint designs. Instruction also covers SMAW fillet welds in various positions. 128 contact hours

### WLDG 1034 Introduction to Gas Tungsten Arc (GTAW) Welding

This is an introduction to the principles of gas tungsten arc welding (GTAW), setup/use of GTAW equipment, and safe use of tools and equipment. Welding instruction covers various positions on joint design. 128 contact hours

### WLDG 1035 Introduction to Pipe Welding

This introduction to welding of pipe using the shielded metal arc welding process, includes electrode selection, equipment set-up, and safe shop practices, with an emphasis on weld positions 1G and 2G, using various electrodes. 128 contact hours

### WLDG 2043 Advanced Shielded Metal Arc Welding (SMAW)

Training is provided with various electrodes in shielded metal arc welding processes with open V-groove joint positions based on accepted welding codes. 128 contact hours

### WLDG 2051 Advanced Gas Tungsten Arc Welding (GTAW)

This course focuses on advanced topics in GTAW welding, including welding in various positions and directions. 128 contact hours

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## **WLDG 2053 Advanced Pipe Welding**

This course focuses on advanced topics involving welding of pipe using the shielded metal arc welding process. Topics include electrode selection, equipment setup, and safe shop practices, with an emphasis on weld positions 5G and 6G using various electrodes. 128 contact hours. PFPB 1001 Pipefitting Certificate: Introduction to Pipefitting: Pipefitting 1B (Continuing Education Course)

This course offers instruction in pipefitting hand and power tools, threaded pipe, ladders and scaffolds, motorized equipment, excavation, underground pipe and installation, drawings and detail sheets, piping systems, and trade math. 128 contact hours

## **PFPB 1043 Pipefitting Fabrication and Blueprint**

**Reading: Pipefitting II** (*Continuing Education Course*)

This course offers instruction in socket and butt weld pipe fabrication, rigging, pipe hangers and supports, advanced blueprint reading, standards and specifications, and advanced trade math. 128 contact hours

## **PFPB 2032 Pipefitting Standards, Specifications,**

**Installation: Pipefitting III** (*Continuing Education Course*)

This course promotes skill development related to these areas: motorized equipment, above-ground pipe installation valves, field routing and vessel trim, spring can supports, testing piping systems and equipment, basic plumbing, planning work activities, and non-destructive testing (NDT). 72 contact hours

## **PFPB 2033 Pipefitting, Advanced Fabrication and**

**Installation: Pipefitting IV** (*Continuing Education Course*)

This course promotes skill development in these areas: advanced pipe fabrication, aligning pipe to rotating equipment, steam traps, inline specialties, special piping, hot taps, and maintaining valves. 72 contact hours