



Principles of Construction
<b>Level 1</b>
Plumbing Technology I
<b>Level 2</b>
Plumbing Technology II
<b>Level 3</b>
Practicum in Construction Technology
<b>Level 4</b>

HIGH SCHOOL/INDUSTRY CERTIFICATION	CERTIFICATE/LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/DOCTORAL PROFESSIONAL DEGREE
OSHA Training	Commercial Plumbing Inspector	Plumbing Technology/Plumber	Construction Science	Construction Management
Plumbers Apprentice	Journey Level Pipefitter-Steamfitter	Electrical and Power Transmission Installation/Installer, General	Operations Management and Supervision	Operations Management and Supervision
	Plumbing Plans Inspector	Pipefitting/Pipefitter and Sprinkler Fitter		
	Certified Service Manager	High Performance and Custom Engine Technician/Mechanic		

Occupations	Median Wage	Annual Openings	% Growth
Mechanics, Installers, and Repairers	\$63,710	4,243	17%
Plumbers, Pipefitters and Steamfitters	\$44,928	5,765	23%
Helpers-Pipelayers, Plumbers, Pipefitters, and Steamfitters	\$30,098	1,567	18%
Pipe Installers	\$31,616	802	21%

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES	
Exploration Activities:	Work Based Learning Activities:
SkillsUSA Industry Tours Guest Speakers	Participate in internships

The Plumbing and Pipefitting program of study explores the occupations and educational opportunities related to assembling, installing, or repairing pipes, fittings, or fixtures of heating, water, or drainage systems. This program of study may also include exploration into maintaining pipe supports or related hydraulic or pneumatic equipment for steam, hot water, heating, cooling, lubricating, sprinkling, or industrial production or processing systems.



The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

Successful completion of the Plumbing and Pipefitting program of study will fulfill requirements of the Business and Industry Endorsement. Revised - July 2020

# COURSE INFORMATION: PLUMBING

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	Grade
Principles of Construction	13004220 (1 credit)	None	9-10
Plumbing Technology I	13006000 (1 credit)	None	10-12
Plumbing Technology II	13006100 (2 credits)	PREQ: Plumbing Technology I	11-12
Practicum in Construction Technology	13005250 (2 credits)	PREQ: Construction Technology II; Building Maintenance Technology II; Electrical Technology II; HVAC II or Plumbing Technology I	12

FOR ADDITIONAL INFORMATION ON THE PLUMBING PROGRAM OF STUDY,  
PLEASE CONTACT YOUR LOCAL COUNSELOR OR VISIT

[HTTPS://AMTECH.AMAISD.ORG](https://amtech.amaisd.org)



## PLUMBING TECHNOLOGY PROGRAM OF STUDY

### **Principles of Construction**

**Grade Placement: 9–10, Credit: 1**

**Prerequisite: None.**

Principles of Construction is intended to provide an introduction and lay a solid foundation for those students entering the construction or craft skilled areas. The course provides a strong knowledge of construction safety, construction mathematics, and common hand and power tools. This course also provides communication and occupation skills to assist the student in obtaining and maintaining employment.

**Course #0154**

**CHS, PDHS**

### **Plumbing Technology I**

**Grade Placement: 10–12, Credit: 1**

**Prerequisite: None.**

In Plumbing Technology, I, students will gain knowledge and skills needed to enter the industry as a plumbing apprentice, building maintenance technician, or supervisor or prepare for a postsecondary degree in construction management, architecture, or engineering. Students will acquire knowledge and skills in industry workplace basics and employer/customer expectations, including how to use a plumbing code book; how to identify and use power and hand tools; how to be safe on the jobsite and when using hand and power tools; how to apply basic plumbing mathematics and plumbing drawing; and how to identify, fit, and use plastic, copper, cast iron, carbon steel, and corrugated stainless steel pipe. In addition, students will be introduced to gas, drainage, and water supply systems and continue their knowledge of workplace basics and green technologies.

**Course #0170c**

**AMTECH**

### **Plumbing Technology II (future offering)**

**Grade Placement: 11–12, Credits: 2**

**Prerequisite: Plumbing Technology I.**

In Plumbing Technology II, students will gain the advanced knowledge and skills needed to enter the industry as a plumber, building maintenance technician, or supervisor or prepare for a postsecondary degree in mechanical engineering. Students will acquire knowledge and skills in plumbing codes, industry workplace basics, and employer/customer expectations, including tool and jobsite safety, advanced plumbing mathematics, commercial drawings, basic electricity, hanger installation, supports and structural penetrations, roof drains, fixture installation, valves and faucets, and oxy-fuel safety. Students will also learn about setup, cutting, brazing, and welding water system sizing; gas, drain, waste and vent installation and testing; and water heater installation.

**Course #0171c**

**AMTECH**

### **Practicum in Construction Technology (future offering)**

**Grade Placement: 12, Credits: 2**

**Prerequisites: Construction Technology II; Building Maintenance Technology II; Electrical Technology II; HVAC Technology II; or Plumbing Technology I.**

In Practicum in Construction Technology, students will be challenged with the application of knowledge and skills gained in previous construction-related coursework. In many cases students will be allowed to work at a job (paid or unpaid) outside of school or be involved in local projects the school has approved for this class.

**Course #0172**

**AMTECH**

**Plumbing Technology I, II will move to AmTech in 2022.**