



How to Customize the Program of Study Frameworks

The Texas Education Agency designed these files to enable Local Education Agencies (LEAs) to tailor them according to their local implementation of each Career and Technical Education (CTE) Programs of Study. The link to the editable framework documents is located at the bottom of the Program of Study webpage.

Step 1: Customize Page One

1. Remove any courses that are not offered by your LEA.
2. Add or remove aligned advanced academics. Insert information about dual credit courses.
3. Update the Exploration Activities to match your offerings.
4. Update the Work-Based Learning Activities to align to local opportunities.
5. Adjust the Industry-Based Certifications to align to your offerings.
6. Add your mascot, logo, and/or photos of your students.
7. Increase the font size for the secondary course listing or any other sections — aim for a minimum size of 10-11pt or larger if space allows.

Architecture and Construction Career Cluster

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.

Statewide Program of Study: Plumbing and Pipefitting

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.

1 **Secondary Courses for High School Credit**

- Principles of Architecture
- Principles of Construction
- Introduction to Welding

Level 2

- Pipefitting Technology I
- Pipefitting Technology Lab I
- Plumbing Technology I
- Building Maintenance Technology I

Level 3

- Pipefitting Technology II
- Pipefitting Technology Lab II
- Plumbing Technology II

Level 4

- Practicum in Entrepreneurship
- Practicum in Construction Technology
- Practicum in Construction Technology/Extended Practicum in Construction Technology
- Career Preparation I
- Career Preparation I/Extended Career

6 **Postsecondary Opportunities**

Associate Degrees

- Pipefitting/Pipefitter and Sprinkler Fitter
- Building/Construction Site Management/Manager
- Plumbing Technology/Plumber
- Building/Property Maintenance

Bachelor's Degrees

- Construction Engineering Technology/Technician
- Construction Management, General
- Plumbing Technology/Plumber
- Building/Construction Site Management/Manager

Master's, Doctoral, and Professional Degrees

- Construction Engineering Technology/Technician
- Construction Engineering
- Construction Management, General
- Project Management

2 **Aligned Advanced Academic Courses**

Dual Credit (Insert LEA dual credit offerings here.)

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework do not count toward Completer status for this Program of Study.

3 **Work-Based Learning and Expanded Learning Opportunities**

Work-Based Learning Opportunities

- Intern with a plumber
- Pre-apprentice plumber or pipe-fitter

Expanded Learning Opportunities

- Job shadowing plumber, or steamfitter
- Participate in industry programs
- Tour existing programs

4 **Industry-Based Certifications**

- NCCER Industrial Pipefitter
- NCCER Pipefitting Level I
- NCCER Plumbing Level I
- NCCER Plumbing Level II
- Tradesman Plumber - Limited

Example Aligned Occupations

Helpers—Pipelayers, Plumbers, Pipefitters, and Steamfitters

Median Wage: \$34,148
Annual Openings: 1,045
10-Year Growth: 9%

Plumbers, Pipefitters, and Steamfitters

Median Wage: \$48,271
Annual Openings: 5,773
10-Year Growth: 15%

Construction Managers

Median Wage: \$78,180
Annual Openings: 6,615
10-Year Growth: 25%

Data Source: Lightcast™ (2022), Occupation Table. Retrieved 9/27/2022.

For more information visit: <https://tea.texas.gov/economics/college-career-and-military/prsp/career-and-technical-education/programs-of-study-additional-resources>

Successful completion of the Plumbing and Pipefitting Program of Study will fulfill requirements of the Business and Industry endorsement.
Revised – October 2023

Step 2: Customize Page Two

1. Update the bracketed text in the Notice of Nondiscrimination footer.
2. Remove any courses that are not offered by your LEA for Levels 1-4.
3. Adjust the course number, credits, prerequisites, and corequisites to match your available course offerings.
4. Delete extra rows and Career Cluster Icons as needed.
5. Add photos of your students, your logo, or mascot as space allows.

Architecture and Construction Career Cluster

Statewide Program of Study: Plumbing and Pipefitting

Level 1

Course	Prerequisites Corequisites	Career Clusters
Principles of Architecture 13004210 (1 credit)	Prerequisites: None Corequisites: None	
Principles of Construction 13004220 (1 credit)	Prerequisites: None Corequisites: None	
Introduction to Welding* 13032250 (1 credit)	Prerequisites: None Corequisites: None	

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Level 2

Course	Prerequisites Corequisites	Career Clusters
Pipefitting Technology I N1300427 (1 credit)	Prerequisites: Algebra I and Geometry Corequisites: None	
Pipefitting Technology Lab I N1300427 (1 credit)	Prerequisites: Algebra I and Geometry Corequisites: None	
Plumbing Technology I 13006000 (1 credit)	Prerequisites: None Corequisites: None	
Building Maintenance Technology I 13005400 (2 credits)	Prerequisites: None Corequisites: None	

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Level 3

Course	Prerequisites Corequisites	Career Clusters
Pipefitting Technology II N1300426 (1 credit)	Prerequisites: Pipefitting Technology I Corequisites: None	
Pipefitting Technology Lab II N1300428 (1 credit)	Prerequisites: Pipefitting Technology I Corequisites: None	
Plumbing Technology II 13006100 (2 credits)	Prerequisites: Plumbing Technology I Corequisites: None	

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For additional information on the Architecture and Construction Career Cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>

On the basis of race, color, national origin, sex, or disability in its programs or activities and provides equal access to the Boy Scouts and other designated youth organizations. This document is designed to handle inquiries regarding the nondiscrimination policies (Title IX, Section 504, and the ADA) of the Texas Education Agency. For more information, visit <https://tea.texas.gov/cte>.

















How to Customize the Program of Study Frameworks

Notice on Examples

The example occupations, postsecondary options, and program offerings are samples only and are not intended to reflect every option in a field aligned to a Program of Study. School counselors are advised to use these as starting places for discussion by ensuring that students and parents are aware that these samples cannot capture the breadth of any field.

Programs of Study Icon Cheat Sheet

- | | |
|---|--|
|  Agriculture, Food and Natural Resources |  Hospitality and Tourism |
|  Architecture and Construction |  Human Services |
|  Arts, Audio Visual Technology and Communication |  Information Technology |
|  Business, Marketing and Finance |  Law and Public Service |
|  Education and Training |  Manufacturing |
|  Energy |  Transportation, Distribution and Logistics |
|  Health Science |  Engineering |