Architecture and Construction Career Cluster

The Architecture and Construction career cluster focuses on designing, planning, managing, building, and maintaining the built environment. This career cluster includes occupations ranging from architect, carpenter, and construction manager to electrician, plumber and heating, air conditioning and refrigeration technician.

Statewide Program of Study: Architectural Drafting and Design

The Architectural Drafting and Design program of study focuses on occupational and educational opportunities associated with developing, engineering, and designing building structures and facilities. This program of study includes reading, interpreting, and drawing blueprints for interior and exterior construction projects.

Secondary Courses for High School Credit

Level 1
- Principles of Architecture
- Principles of Construction

Level 2
- Interior Design I
- Architectural Design I
- Computer Aided Drafting for Architecture

Level 3
- Civil Engineering and Architecture (PLTW)
- Interior Design II
- Architectural Design II

Level 4
- Practicum in Interior Design
- Practicum in Interior Design + Extended Practicum in Interior Design
- Practicum in Architectural Design
- Practicum in Architectural Design + Extended Practicum in Architectural Design
- Practicum in Construction Technology
- Practicum in Construction Technology + Extended Practicum in Construction Technology
- Career Preparation for Programs of Study
- Career Preparation for Programs of Study + Extended Career Preparation
- Career and Technical Education Project-Based Capstone

Aligned Advanced Academic Courses

Dual Credit	Dual credit offerings will vary by Local Education Agency.

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 document do not count toward Completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	• Intern at an architectural firm to develop CADD drafting and design technology skills • Shadow a civil engineer to learn more about their day-to-day responsibilities
Expanded Learning Opportunities	• Conduct an informational interview with an architect to learn about their role and responsibilities • Participate in SkillsUSA

Industry-Based Certifications

- Autodesk Associate (Certified User) 3ds MAX
- Autodesk Associate (Certified User) AutoCAD
- Autodesk Associate (Certified User) Fusion 360
- Autodesk Associate (Certified User) Revit Architecture
- Autodesk Associate (Certified User) Revit for Electrical
- Autodesk Associate (Certified User) Revit for Structural Design
- Autodesk Certified Professional Fusion 360
- Autodesk Certified Professional in AutoCAD for Design and Drafting
- Autodesk Certified Professional in Civil 3D for Infrastructure Design
- Autodesk Certified Professional in Revit for Architectural Design
- Autodesk Certified Professional in Revit for Electrical Design
- Autodesk Certified Professional in Revit for Structural Design
- Certified SOLIDWORKS Associate (CSWA) - Academic
- Certified SOLIDWORKS Associate (CSWA) - Electrical
- Certified SOLIDWORKS Associate (CSWA) - Simulation
- Certified SOLIDWORKS Associate (CSWA) - Sustainability
- Certified SOLIDWORKS Professional (CSWP) - Academic
- Certified SOLIDWORKS Professional (CSWP) - Model Based Definition
- Certified SOLIDWORKS Professional (CSWP) - Simulation
- Certified SOLIDWORKS Professional (CSWPA) - Drawing Tools
- LEED Green Associate
- Residential Plans Examiner - R3

Successful completion of the Architectural Drafting and Design program of study will fulfill Requirements of the Business and Industry endorsement.

Postsecondary Opportunities

Apprenticeships
- Drafter

Associate Degrees
- CAD/CADD Drafting and/or Design Technology
- Drafting and Design Technology
- Surveying Technology/Surveying
- Architectural Drafting and Architectural CAD/CADD

Bachelor's Degrees
- Civil Engineering
- Construction Engineering
- Surveying Engineering
- Drafting and Design Technology

Master's, Doctoral, and Professional Degrees
- Civil Engineering
- Geographic Information Science and Cartography
- Construction Engineering Technology

Example Aligned Occupations

Architectural and Civil Drafters
Median Wage: $57,424
Annual Openings: 1,366
10-Year Growth: 15%

Architects
Median Wage: $80,903
Annual Openings: 966
10-Year Growth: 18%

Construction Managers
Median Wage: $95,072
Annual Openings: 6,325
10-Year Growth: 24%

Data Source: TexasWages, Texas Workforce Commission. Retrived 3/8/2024

For more information visit: https://tea.texas.gov/academics/college-career-_and-military-prep/career-and-technical-_education/programs-of-study-additional-resources

Architectural Drafting and Design

Architecture and Construction Career Cluster

Statewide Program of Study: Architectural Drafting and Design

Course Information

Level 1

Course	Prerequisites | Corequisites	Career Clusters
Principles of Architecture* 13004210 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommend Prerequisites: None** **Recommended Corequisites:** None	
Principles of Construction* 13004220 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites: None** **Recommended Corequisites:** None	

Level 2

Course	Prerequisites | Corequisites	Career Clusters
Interior Design I 13004300 (1 credit)	**Prerequisites:** Algebra I and English I **Corequisites:** None **Recommended Prerequisites:** Principles of Architecture and Principles of Construction or Architectural Design I **Recommended Corequisites:** None	
Architectural Design I 13004600 (1 credit)	**Prerequisites:** Algebra I and English I **Corequisites:** None **Recommended Prerequisites:** Geometry, Principles of Architecture, and Principles of Construction **Recommended Corequisites:** None	
Computer Aided Drafting for Architecture N1300429 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** Architectural Design **Recommended Corequisites:** None	

Level 3

Course	Prerequisites | Corequisites	Career Clusters
Civil Engineering and Architecture (PLTW) N1303747 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommend Prerequisites:** Introduction to Engineering Design course **Recommended Corequisites:** students be concurrently enrolled in college preparatory mathematics and science courses	
Interior Design II 13004400 (2 credits)	**Prerequisites:** English II, Geometry, and Interior Design I **Corequisites:** None **Recommended Prerequisites:** Principles of Architecture and Principles of Construction or Architectural Design I **Recommended Corequisites:** None	
Architectural Design II 13004700 (2 credits)	**Prerequisites:** Architectural Design I or Advanced Interior Design and Geometry **Corequisites:** None **Recommend Prerequisites:** Principles of Architecture and Principles of Construction **Recommended Corequisites: None**	

Level 4

Course	Prerequisites | Corequisites	Career Clusters
Practicum in Interior Design* First Time Taken: 13004500 (2 credits) Second Time Taken: 13004510 (2 credits)	**Prerequisites:** Interior Design II **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	

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** Indicates course is included in more than one program of study.*

For additional information on the **Architecture and Construction career cluster**, contact cte@tea.texas.gov or visit https://tea.texas.gov/cte

Architecture and Construction Career Cluster

Statewide Program of Study: Architectural Drafting and Design

Course Information

Level 4

Course	Prerequisites | Corequisites	Career Clusters
Practicum in Interior Design + Extended Practicum in Interior Design* First Time Taken: 13004505 (3 credits) Second Time Taken: 13004515 (3 credits)	**Prerequisites:** Interior Design II **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Practicum in Architectural Design* First Time Taken: 13004800 (2 credits) Second Time Taken: 13004810 (2 credits)	**Prerequisites:** Architectural Design II **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Practicum in Architectural Design + Extended Practicum in Architectural Design* First Time Taken: 13004805 (3 credits) Second Time Taken: 13004815 (3 credits)	**Prerequisites:** Architectural Design II **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Practicum in Construction Technology* First Time Taken: 13005250 (2 credits) Second Time Taken: 13005260 (2 credits)	**Prerequisites:** Construction Technology II, Building Maintenance Technology II; Electrical Technology II; Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II; Plumbing Technology I; or Mill and Cabinetmaking Technology **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Practicum in Construction Technology + Extended Practicum in Construction Technology* First Time Taken: 13005255 (3 credits) Second Time Taken: 13005265 (3 credits)	**Prerequisites:** Construction Technology II, Building Maintenance Technology II; Electrical Technology II; Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II; Plumbing Technology I; or Mill and Cabinetmaking Technology **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Career Preparation for Programs of Study* First Time Taken: 12701121 (2 credits)	**Prerequisites:** At least one Level 2 or higher CTE course **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Career Preparation for Programs of Study + Extended Career Preparation* First Time Taken: 12701141 (3 credits)	**Prerequisites:** At least one Level 2 or higher CTE course **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Career and Technical Education Project-Based Capstone First Time Taken: 12701101 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	

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Architectural Drafting and Design