



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

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|----------------|--|
| Level 1 | <ul style="list-style-type: none"> Principles of Architecture Principles of Construction |
| Level 2 | <ul style="list-style-type: none"> Architectural Design I Interior Design I Computer-Aided Drafting for Architecture |
| Level 3 | <ul style="list-style-type: none"> Architectural Design II Interior Design II Architectural Engineering |
| Level 4 | <ul style="list-style-type: none"> Career and Technical Education Project-Based Capstone Practicum in Architectural Design Practicum in Architectural Design + Extended Practicum in Architectural Design Practicum in Interior Design Practicum in Interior Design + Extended Practicum in Interior 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 for Programs 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 or TSA

Aligned Industry-Based Certifications

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| <ul style="list-style-type: none"> 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 Autodesk Certified User 3ds MAX Autodesk Certified User AutoCAD Autodesk Certified User Fusion 360 Autodesk Certified User Revit Certified SOLIDWORKS Additive Manufacturing Associate (CSWA-AM) | <ul style="list-style-type: none"> Certified SOLIDWORKS Associate (CSWA) - Academic Certified SOLIDWORKS Associate (CSWA) - Electrical Certified SOLIDWORKS CAD Design Professional (CSWP) - Academic Certified SOLIDWORKS Professional (CSWP) - Model Based Design Certified SOLIDWORKS Professional (CSWP) - Simulation Certified SOLIDWORKS Professional (CSWPA) - Drawing Tools LEED Green Associate Residential Plans Examiner - R3 Tosa Certification for Autodesk AutoCAD (Advanced or Expert) |
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Example 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: \$58,539
Annual Openings: 1,579
10-Year Growth: 15%

Architects

Median Wage: \$80,877
Annual Openings: 650
10-Year Growth: 18%

Construction Managers

Median Wage: \$98,294
Annual Openings: 5,403
10-Year Growth: 24%

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



For more information visit:

<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/architectural-drafting-and-design-extended.pdf>



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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 Recommend Prerequisites: None Recommended Corequisites: None	

Level 2

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

Level 3

Course	Prerequisites Corequisites	Career Clusters
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	

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

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

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Course Information

Level 3

Course	Prerequisites Corequisites	Career Clusters
Interior Design II 13004400 (2 credits)	Prerequisites: English II, Geometry, and Interior Design I Corequisites: None Recommend Prerequisites: None Recommended Corequisites: None	
Architectural Engineering 12756065 (2 credits)	Prerequisites: Civil Engineering I Corequisites: None Recommend Prerequisites: None Recommended Corequisites: None	

Level 4

Course	Prerequisites Corequisites	Career Clusters
Career and Technical Education Project-Based Capstone First Time Taken: 12701101 (1 credit)	Prerequisites: None 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	

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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	
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 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	

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Level 4

Course	Prerequisites Corequisites	Career Clusters
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 for Programs of Study* First Time Taken: 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

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