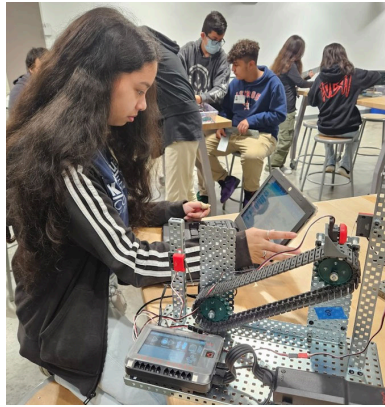


# Spring Branch ISD CTE



## Programs of Study 2025-2026



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# Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) career cluster focuses on the essential elements of life, food, water, land, and air. This career cluster includes occupations ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

## Statewide Program of Study: *Animal Science*

The Animal Science program of study focuses on occupational and educational opportunities associated with the science, research, and business of animals and other living organisms. This program of study includes applying biology and life science to real-world life processes of animals and wildlife, either in laboratories or in the field, which could include a veterinary office, a farm or ranch, or any outdoor area harboring animal life. Students will research and analyze the growth and destruction of species and research or diagnose diseases and injuries of animals.



### Secondary Courses for High School Credit

- |                |   |
|----------------|---|
| <b>Level 1</b> | <ul style="list-style-type: none"> <li>Principles of Agriculture, Food, and Natural Resources <b>AND</b></li> <li>Small Animal Management <b>AND</b> Equine Science</li> </ul>                  |
| <b>Level 2</b> | <ul style="list-style-type: none"> <li>Livestock Production with Lab</li> </ul>   |
| <b>Level 3</b> | <ul style="list-style-type: none"> <li>Advanced Animal Science <b>AND</b> Veterinary Medical Applications</li> <li><b>OR</b></li> <li>Agribusiness Management and Marketing with Lab</li> </ul> |
| <b>Level 4</b> | <ul style="list-style-type: none"> <li>Practicum in Agriculture, Food, and Natural Resources <b>OR</b></li> <li>Agribusiness Management and Marketing with Lab</li> </ul>                       |

*Successful completion of the Animal Science program of study will fulfill requirements of a Business and Industry endorsement.*

### Aligned Advanced Academic Courses

<b>AP or IB</b>	AP Biology IB Biology SL IB Biology HL
<b>Dual Credit</b>	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 towards concentrator/completer status for this program of study.*

### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Shadow an animal scientist in a biology lab to learn about applying science to understand animals and wildlife</li> <li>Intern in a veterinary clinic, caring for animals and wildlife being treated in the clinic</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Participate in an FFA career, leadership, and speaking contest like an agriscience fair</li> <li>Attend an agricultural industry seminar</li> </ul>

### Aligned Industry-Based Certifications

- Elanco Fundamentals of Animal Science Certification
- Elanco Veterinary Medical Applications Certification
- Equine Management and Evaluation Certification

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### Example Postsecondary Opportunities

#### Apprenticeships

- Reproduction Technician

#### Associate Degrees

- Biological and Physical Sciences
- Entomology

#### Bachelor's Degrees

- Animal Science
- Zoology/Animal Biology

#### Master's, Doctoral, and Professional Degrees

- Marine Sciences
- Biotechnology

#### Additional Stackable IBCs/License

- Veterinarian
- Certified Veterinary Technician



### Example Aligned Occupations

#### **Veterinary Assistants and Laboratory Animal Caretakers**

Median Wage: \$29,906  
Annual Openings: 1,348  
10-Year Growth: 24%

#### **Veterinary Technologists and Technicians**

Median Wage: \$33,679  
Annual Openings: 1,217  
10-Year Growth: 24%

#### **Veterinarian**

Median Wage: \$103,160  
Annual Openings: 347  
10-Year Growth: 26%

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/programs-of-study-additional-resources>

# Agriculture, Food, and Natural Resources Career Cluster

## Statewide Program of Study: Animal Science



### Course Information

	Course	Prerequisites   Corequisites	Local ID   Service ID
Level 1	Principles of Agriculture, Food, and Natural Resources*	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	CTAG10 13000200 (1 credit)
	Small Animal Management	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	CTAG12 13000400 (0.5 credit)
	Equine Science	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	CTAG 13 13000500 (0.5 credit)
Level 2	Livestock Production with Lab	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	CAG20 A/B 13000310 (2 credits)
Level 3	Veterinary Medical Applications	Prerequisites: Equine Science, Small Animal Management, or Livestock Production Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	CTAG14 13000600 (1 credit)
	Advanced Animal Science 13000700 (1 credit)	Prerequisites: Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	CTAG15 13000700 (1 credit)
Level 4	Practicum in Agriculture, Food, and Natural Resources*	Prerequisites: None Corequisites: None Recommended Prerequisites: A minimum of one credit from the courses in the AFNR career cluster Recommended Corequisites: None	CAG82 A/B 13002500 (2 credits)
	Agribusiness Management and Marketing with Lab*	Prerequisites: None Corequisites: None Recommended Prerequisites: Advanced Animal Science, Vet Med Applications, or Floral Design with Lab Recommended Corequisites: None	CAG44 A/B 13000910 (2 credits)

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



# Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) career cluster focuses on the essential elements of life, food, water, land, and air. This career cluster includes occupations ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

## Statewide Program of Study: *Plant Science*

The Plant Science program of study focuses on occupational and educational opportunities associated with the science, research, and business of plants and other living organisms. This program of study includes the application of biology and life science to real-world life processes of plants and vegetation, either in laboratories or in the field.

## Secondary Courses for High School Credit



- |                |  |
|----------------|--|
| <b>Level 1</b> | <ul style="list-style-type: none"> <li>Principles of Agriculture, Food, and Natural Resources</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>Small Animal Management <b>AND</b> Equine Science</li> </ul> |
| <b>Level 2</b> | <ul style="list-style-type: none"> <li>Landscape Design and Management <b>AND</b> Turf Grass Management</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>Greenhouse Operation and Production</li> </ul>     |
| <b>Level 3</b> | <ul style="list-style-type: none"> <li>Floral Design with Lab</li> </ul>   |
| <b>Level 4</b> | <ul style="list-style-type: none"> <li>Practicum in Agriculture, Food, and Natural Resources</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>Agribusiness Management and Marketing with Lab</li> </ul>      |

*Successful completion of the Plant Science program of study will fulfill requirements of the Business and Industry endorsement.*

## Aligned Advanced Academic Courses

<b>AP or IB</b>	AP Biology AP Environmental Science IB Biology SL IB Biology HL	AP Chemistry IB Chemistry SL IB Chemistry HL
<b>Dual Credit</b>	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 towards concentrator/completer status for this program of study.*

## Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Work in a part-time job at a landscaping company to learn about production and management of plants.</li> <li>Intern at an agricultural research company, working alongside a biological technician to learn about application of biology to plant production</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Participate in an FFA career, leadership, and speaking contest like an agriscience fair</li> <li>Participate in an industry-related competition like an agriscience fair</li> </ul>

## Aligned Industry-Based Certifications

- Equine Management and Evaluation
- Texas State Florists' Association Knowledge Based Floral Certification

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## Example Postsecondary Opportunities

### Apprenticeships

- Horticulturist

### Associate Degrees

- Biology/Biological Sciences
- Biological and Physical Sciences

### Bachelor's Degrees

- Horticulture
- Plant Pathology/Phytopathology

### Master's, Doctoral, and Professional Degrees

- Plant Breeding
- Botany/Plant Biology

### Additional Stackable IBCs/License

- Nursery Floral License
- Horticulturist Certification



## Example Aligned Occupations

### **Pesticide Handlers, Sprayers, and Applicators, Vegetation**

Median Wage: \$46,153

Annual Openings: 205

10-Year Growth: 17%

### **Biological Technicians**

Median Wage: \$45,787

Annual Openings: 879

10-Year Growth: 14%

### **Farmers, Ranchers, and Other Agricultural Managers**

Median Wage: \$65,490

Annual Openings: 28,020

10-Year Growth: 4%

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/programs-of-study-additional-resources>



# Agriculture, Food, and Natural Resources Career Cluster

## Statewide Program of Study: *Plant Science*

### Course Information

Course	Prerequisites   Corequisites	Local ID   Service ID
<b>Level 1</b>	<b>Principles of Agriculture, Food, and Natural Resources*</b>	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None <b>CTAG10</b> 13000200 (1 credit)
	<b>Small Animal Management*</b>	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None <b>CTAG12</b> 13000400 (0.5 credit)
	<b>Equine Science*</b>	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None <b>CTAG 13</b> 13000500 (0.5 credit)
Course	Prerequisites   Corequisites	Local ID   Service ID
<b>Level 2</b>	<b>Landscape Design and Management</b>	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None <b>CTAG25</b> 13001900 (0.5 credit)
	<b>Turf Grass Management</b>	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None <b>CTAG27</b> 13001950 (0.5 credit)
	<b>Greenhouse Operation and Production</b>	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None <b>CTAG31</b> 13002050 (1 credit)
Course	Prerequisites   Corequisites	Local ID   Service ID
<b>Level 3</b>	<b>Floral Design with Lab</b>	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None <b>CAG26 A/B</b> 13001810 (2 credits)
Course	Prerequisites   Corequisites	Local ID   Service ID
<b>Level 4</b>	<b>Practicum in Agriculture, Food, and Natural Resources*</b>	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> A minimum of one credit from the courses in the AFNR career cluster <b>Recommended Corequisites:</b> None <b>CAG82 A/B</b> 13002500 (2 credits)
	<b>Agribusiness Management and Marketing with Lab*</b>	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Advanced Animal Science, Vet Med Applications, or Floral Design with Lab <b>Recommended Corequisites:</b> None <b>CAG44 A/B</b> 13000910 (2 credits)

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



# 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 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

- |                |  |
|----------------|--|
| <b>Level 1</b> | • Principles of Construction   |
| <b>Level 2</b> | • Principles of Architecture<br><b>AND</b><br>• Architectural Design I |
| <b>Level 3</b> | • Architectural Design II  |
| <b>Level 4</b> | • Practicum in Architectural Design                                    |

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

## 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 towards concentrator/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 or TSA

## Aligned Industry-Based Certifications

- HBI Pre-Apprenticeship Certificate Training (PACT), Core
- Autodesk Associate (Certified User) AutoCAD
- Autodesk Certified Professional in Revit for Architectural Design

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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: \$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. Retrieved 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>



# Architecture and Construction Career Cluster

## Statewide Program of Study: Architectural Drafting and Design

### Course Information

#### Level 1

Course	Prerequisites   Corequisites	Local ID   Service ID
Principles of Construction*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommend Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CAC10 A/B</b> 13004220 (1 credit)

#### Level 2

Course	Prerequisites   Corequisites	Local ID   Service ID
Principles of Architecture*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommend Prerequisites:</b> Principles of Construction <b>Recommended Corequisites:</b> None	<b>CTAC13</b> 13004210 (1 credit)
Architectural Design I	<b>Prerequisites:</b> Algebra I and English I <b>Corequisites:</b> None <b>Recommend Prerequisites:</b> Geometry, Principles of Architecture, and Principles of Construction <b>Recommended Corequisites:</b> None	<b>CTAC12</b> 13004600 (1 credit)

#### Level 3

Course	Prerequisites   Corequisites	Local ID   Service ID
Architectural Design II	<b>Prerequisites:</b> Architectural Design I and Geometry <b>Corequisites:</b> None <b>Recommend Prerequisites:</b> Principles of Architecture and Principles of Construction <b>Recommended Corequisites:</b> None	<b>CAC22 A/B</b> 13004700 (2 credits)

#### Level 4

Course	Prerequisites   Corequisites	Local ID   Service ID
Practicum in Architectural Design	<b>Prerequisites:</b> Architectural Design II <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CAC82 A/B</b> 13004800 (2 credits)

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



# 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: *Construction Tech*

The Construction Tech program of study focuses on occupational and educational opportunities related to constructing, installing, and repairing structures and fixtures made of wood (including frameworks, partitions, joists, studding, rafters, and stairways). The program of study includes installing, dismantling, or moving machinery and heavy equipment according to layout plans, blueprints, or other drawings.



## Secondary Courses for High School Credit

- |         |  |
|---------|--|
| Level 1 | • Principles of Construction           |
| Level 2 | • Construction Technology I            |
| Level 3 | • Construction Technology II           |
| Level 4 | • Practicum in Construction Technology |

*Successful completion of the Carpentry program of study will fulfill requirements of the Business and Industry endorsement.*

## Aligned Advanced Academic Courses

- |                    |  |
|--------------------|--|
| <b>Dual Credit</b> | Dual credit offerings will vary by local education agency. |
|--------------------|--|

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## Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>• Intern with a carpenter to practice skills such as measuring materials and assembling structures</li> <li>• Participate in a pre-apprenticeship that includes activities like installing cabinets, drywall, and siding</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>• Shadow a construction manager to learn more about how construction teams work together to complete projects</li> <li>• Participate in SkillsUSA</li> </ul>

## Aligned Industry-Based Certifications

- HBI Pre-Apprenticeship Certificate Training (PACT), Core
- NCCER Core

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## Example Postsecondary Opportunities

### Apprenticeships

- Carpenter

### Associate Degrees

- Construction Management
- Construction Engineering Technology
- Building Construction Technology

### Bachelor's Degrees

- Construction Engineering
- Construction Science
- Construction Site Management

### Master's, Doctoral, and Professional Degrees

- Construction Engineering Technology
- Construction Engineering
- Construction Management
- Project Management



## Example Aligned Occupations

### *Drywall and Ceiling Tile Installers*

Median Wage: \$44,699  
Annual Openings: 758  
10-Year Growth: 14%

### *Carpenters*

Median Wage: \$46,272  
Annual Openings: 5,623  
10-Year Growth: 15%

### *Construction Managers*

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

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



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<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



# Architecture and Construction Career Cluster

## Statewide Program of Study: Construction Tech

### Course Information

Level 1	Course	Prerequisites   Corequisites	Local ID   Service ID
	Principles of Construction*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CAC10 A/B</b> 13004220 (1 credit)
Level 2	Course	Prerequisites   Corequisites	Local ID   Service ID
	Construction Technology I	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Construction <b>Recommended Corequisites:</b> None	<b>CAC14 A/B</b> 13005100 (2 credits)
Level 3	Course	Prerequisites   Corequisites	Local ID   Service ID
	Construction Technology II	<b>Prerequisites:</b> Construction Technology I <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Construction <b>Recommended Corequisites:</b> None	<b>CAC24 A/B</b> 13005200 (2 credits)
Level 4	Course	Prerequisites   Corequisites	Local ID   Service ID
	Practicum in Construction Technology*	<b>Prerequisites:</b> Construction Technology II <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CAC92 A/B</b> 13005250 (2 credits)

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



# 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: *Electrical Tech*

The Electrical Tech program of study focuses on occupational and educational opportunities associated with installing, maintaining, and repairing electrical wiring, equipment, and fixtures. The program of study also addresses installing and repairing telecommunications cable including fiber optics.

### Secondary Courses for High School Credit

- Level 1** • Complete High School Graduation Requirements
- Level 2** • Principles of Construction
- Level 3** • Electrical Technology I **AND** Project Based Capstone
- Level 4** • Electrical Technology II

*Successful completion of the Electrical program of study will fulfill requirements of the Business and Industry endorsement.*

### Aligned Advanced Academic Courses

**Dual Credit** Dual credit offerings will vary by local education agency.

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### Work-Based Learning and Expanded Learning Opportunities

#### Work-Based Learning Activities

- Participate in an internship with an electrical company to develop installation skills
- Join a pre-apprenticeship program that involves determining if electrical wiring is up to code
- Interview an electrician about their training and education

#### Expanded Learning Opportunities

- Participate in SkillsUSA
- Participate in trade competitions

### Aligned Industry-Based Certifications

- HBI Pre-apprenticeship Certificate Training (PACT), Core
- Level 1 Certificate – Houston City College

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### Example Postsecondary Opportunities

#### Apprenticeships

- Electrician

#### Associate Degrees

- Electrical and Power Transmission Installation
- Electrical Power and Controls
- Electromechanical Technology

#### Bachelor's Degrees

- Construction Engineering
- Electrical, Electronic, and Communications
- Engineering Electrical Engineering

#### Master's, Doctoral, and Professional Degrees

- Construction Engineering
- Construction Management

#### Additional Stackable IBCs/License

- Journeyman Electrician
- Master Electrician



### Example Aligned Occupations

#### *Electricians Helpers*

Median Wage: \$38,140  
Annual Openings: 1,632  
10-Year Growth: 20%

#### *Electricians*

Median Wage: \$54,769  
Annual Openings: 9,221  
10-Year Growth: 27%

#### *Construction Managers*

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

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



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<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



# Architecture and Construction Career Cluster

## Statewide Program of Study: *Electrical Tech*

### Course Information

Level 1

Course	Prerequisites   Corequisites	Local ID   Service ID
Complete High School Graduation Requirements		

Level 2

Course	Prerequisites   Corequisites	Local ID   Service ID
Principles of Construction	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> none <b>Recommended Corequisites:</b> None	<b>CAC10 A/B</b> 13004220 (1 credit)

Level 3

Course	Prerequisites   Corequisites	Local ID   Service ID
Electrical Technology I	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Construction <b>Recommended Corequisites:</b> None	<b>CTAC35</b> 13005600 (1 credit)
Project Based Capstone	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CTAC40</b> 12701101 (1 credit)

Level 4

Course	Prerequisites   Corequisites	Local ID   Service ID
Electrical Technology II	<b>Prerequisites:</b> Electrical Technology I <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Construction <b>Recommended Corequisites:</b> None	<b>CAC45 A/B</b> 13005700 (2 credits)

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

# Arts, Audio Visual Technology, and Communication Career Cluster

The Arts, Audio Visual Technology, and Communication (AAVTC) career cluster focuses on designing, producing, exhibiting, performing, writing, and publishing multimedia content requiring creative aptitude, fluency in computer and technology applications, and proficiency in oral and written communication. This career cluster includes occupations ranging from camera operator, audio and video technician, director, and producer to graphic designer and web and digital interface designer.

## Statewide Program of Study: 3D Animation

The Graphic Design and Interactive Media program of study focuses on occupational and educational opportunities associated with designing or creating graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. The program of study includes designing clothing and accessories and creating special effects, animation, or other visual images using film, video, computers, or other electronic tools and media for use in computer games, movies, music videos, and commercials.

### Secondary Courses for High School Credit



- |                |  |
|----------------|--|
| <b>Level 1</b> | <ul style="list-style-type: none"> <li>Principles of Arts, Audio/Video Technology, and Communications</li> </ul> |
| <b>Level 2</b> | <ul style="list-style-type: none"> <li>3-D Modeling and Animation <b>AND</b> Animation I</li> </ul>              |
| <b>Level 3</b> | <ul style="list-style-type: none"> <li>Animation II with Lab</li> </ul>  |
| <b>Level 4</b> | <ul style="list-style-type: none"> <li>Practicum in Animation</li> </ul>   |

Successful completion of the Graphic Design and Interactive Media program of study will fulfill requirements of the Business and Industry endorsement.

### Aligned Advanced Academic Courses

<b>AP or IB</b>	AP Studio Art: Two-Dimensional Design Portfolio
<b>Dual Credit</b>	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 towards concentrator/completer status for this program of study.

### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Shadow an art director at a branding firm or design agency</li> <li>Intern in the marketing and communications department of a technology company</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Participate in SkillsUSA or TSA</li> <li>Participate in Student Television Network</li> <li>Join a related co-curricular or extracurricular club such as web development or computer coding</li> </ul>

### Aligned Industry-Based Certifications

- Autodesk Associate (Certified User) 3ds MAX

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### Example Postsecondary Opportunities

#### Associate Degrees

- Graphic Design
- Digital Arts

#### Bachelor's Degrees

- Web Page, Digital/Multimedia and Information Resources Design
- Design and Visual Communications

#### Master's, Doctoral, and Professional Degrees

- Game and Interactive Media Design
- Animation, Interactive Technology, Video Graphics, and Special Effects

#### Additional Stackable IBCs/License

- Certified Textile Designer (CTD)



### Example Aligned Occupations

#### Software Developers

Median Wage: \$111,705  
Annual Openings: 15,324  
10-Year Growth: 36%

#### Graphic Designers

Median Wage: \$50,973  
Annual Openings: 1,766  
10-Year Growth: 10%

#### Art Directors

Median Wage: \$81,926  
Annual Openings: 619  
10-Year Growth: 18%

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



For more information visit:  
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# Arts, Audio Visual Technology, and Communication Career Cluster

## Statewide Program of Study: 3D Animation

### Course Information

Level	Course	Prerequisites   Corequisites	Local ID   Service ID
Level 1	Principles of Arts, Audio + Video Technology, and Communications*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CAV10 A/B</b> 13008200 (1 credit)
	3-D Modeling and Animation	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Arts, A/V Technology, and Communications <b>Recommended Corequisites:</b> None	<b>CAV20 A</b> 03580510 (1 credit)
Level 2	Animation I	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> 3D Modeling & Animation <b>Recommended Corequisites:</b> None	<b>CAV20 B</b> 13008300 (1 credit)
	Animation II with Lab	<b>Prerequisites:</b> Animation I <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CAV21 A/B</b> 13008410 (2 credits)
Level 3	Practicum in Animation	<b>Prerequisites:</b> Animation II Lab <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CAV83 A/B</b> 13008450 (2 credits)

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

# Arts, Audio Visual Technology, and Communication Career Cluster

The Arts, Audio Visual Technology, and Communication (AAVTC) career cluster focuses on designing, producing, exhibiting, performing, writing, and publishing multimedia content requiring creative aptitude, fluency in computer and technology applications, and proficiency in oral and written communication. This career cluster includes occupations ranging from camera operator, audio and video technician, director, and producer to graphic designer and web and digital interface designer.

## Statewide Program of Study: *Digital Marketing*

The Graphic Design and Interactive Media program of study focuses on occupational and educational opportunities associated with designing or creating graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. The program of study includes designing clothing and accessories and creating special effects, animation, or other visual images using film, video, computers, or other electronic tools and media for use in computer games, movies, music videos, and commercials.

### Secondary Courses for High School Credit



- |                |   |
|----------------|---|
| <b>Level 1</b> | <ul style="list-style-type: none"> <li>Principles of Arts, Audio/Video Technology, and Communications</li> </ul>  |
| <b>Level 2</b> | <ul style="list-style-type: none"> <li>Digital Design and Media Productions</li> </ul>  |
| <b>Level 3</b> | <ul style="list-style-type: none"> <li>Digital Art and Animation</li> </ul>   |
| <b>Level 4</b> | <ul style="list-style-type: none"> <li>Practicum in Entrepreneurship</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>Career Preparation</li> </ul> |

*Successful completion of the Graphic Design and Interactive Media program of study will fulfill requirements of the Business and Industry endorsement.*

### Aligned Advanced Academic Courses

<b>AP or IB</b>	AP Studio Art: Two-Dimensional Design Portfolio
<b>Dual Credit</b>	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 towards concentrator/completer status for this program of study.*

### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Shadow an art director at a branding firm or design agency</li> <li>Intern in the marketing and communications department of a technology company</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Participate in SkillsUSA or TSA</li> <li>Participate in Student Television Network</li> <li>Join a related co-curricular or extracurricular club such as web development or computer coding</li> </ul>

### Aligned Industry-Based Certifications

- Adobe Certified Professional in Visual Design using Adobe Photoshop
- Adobe Certified Professional in Visual Effects and Motion Graphics using Adobe After Effects

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### Example Postsecondary Opportunities

#### Associate Degrees

- Graphic Design
- Digital Arts

#### Bachelor's Degrees

- Web Page, Digital/Multimedia and Information Resources Design
- Design and Visual Communications

#### Master's, Doctoral, and Professional Degrees

- Game and Interactive Media Design
- Animation, Interactive Technology, Video Graphics, and Special Effects

#### Additional Stackable IBCs/License

- Certified Textile Designer (CTD)



### Example Aligned Occupations

#### Software Developers

Median Wage: \$111,705  
Annual Openings: 15,324  
10-Year Growth: 36%

#### Graphic Designers

Median Wage: \$50,973  
Annual Openings: 1,766  
10-Year Growth: 10%

#### Art Directors

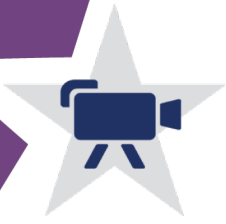
Median Wage: \$81,926  
Annual Openings: 619  
10-Year Growth: 18%

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



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# Arts, Audio Visual Technology, and Communication Career Cluster

## Statewide Program of Study: *Digital Marketing*

### Course Information

Level 1	Course	Prerequisites   Corequisites	Local ID   Service ID
		Principles of Arts, Audio + Video Technology, and Communications*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None
Level 2	Course	Prerequisites   Corequisites	Local ID   Service ID
		Digital Design and Media Production*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None
Level 3	Course	Prerequisites   Corequisites	Local ID   Service ID
		Digital Art and Animation	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Digital Design & Media Production <b>Recommended Corequisites:</b> None
Level 4	Course	Prerequisites   Corequisites	Local ID   Service ID
	Practicum in Entrepreneurship*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Successful completion of at least two courses in a CTE program of study <b>Recommended Corequisites:</b> None	<b>CMK84 A/B</b> 13011111 (2 credits)
	Career Preparation*	<b>Prerequisites:</b> At least one Level 2 or higher CTE course <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CPG81A/B</b> 12701121 -OR- <b>CPG81 C/D</b> 12701141 (3 credits)

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

# Arts, Audio Visual Technology, and Communication Career Cluster

The Arts, Audio Visual Technology, and Communication (AAVTC) career cluster focuses on designing, producing, exhibiting, performing, writing, and publishing multimedia content requiring creative aptitude, fluency in computer and technology applications, and proficiency in oral and written communication. This career cluster includes occupations ranging from camera operator, audio and video technician, director, and producer to graphic designer and web and digital interface designer.

## Statewide Program of Study: *Filmmaking*

The Digital Communications program of study focuses on occupational and educational opportunities associated with the production of audio and visual media formats for various purposes, such as TV broadcasts, advertising, video production, or motion pictures. The program of study includes operating machines and equipment such as microphones, sound speakers, video screens, projectors, video monitors, sound and mixing boards, and related electronic equipment to record sound and images.

### Secondary Courses for High School Credit



- |                |  |
|----------------|--|
| <b>Level 1</b> | • Principles of Arts, Audio/Video Technology, and Communications |
| <b>Level 2</b> | • Audio/Video Production I with Lab                              |
| <b>Level 3</b> | • Audio/Video Production II with Lab                             |
| <b>Level 4</b> | • Practicum in Audio/Video Production                            |

Successful completion of the Digital Communications program of study will fulfill requirements of the Business and Industry endorsement.

### Aligned Advanced Academic Courses

<b>AP or IB</b>	IB Film SL IB Film HL
<b>Dual Credit</b>	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 towards concentrator/completer status for this program of study.

### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Shadow a sound designer to learn how sound and foley are created for movies or podcasts</li> <li>Intern with a technical director at a sports team, recording studio, or radio station</li> <li>Shadow a technician on a live news broadcast, concert, or other event</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Participate in SkillsUSA or TSA</li> <li>Participate in Student Television Network</li> <li>Capture and edit film and audio for a podcast with a local community organization</li> </ul>

### Aligned Industry-Based Certifications

- Adobe Certified Professional in Digital Video Using Adobe Premiere Pro
- Level 1 Certificate – Houston City College

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### Example Postsecondary Opportunities

#### Apprenticeships

- Light Technician

#### Associate Degrees

- Commercial and Advertising Art
- Animation, Interactive Technology, Video Graphics, and Special Effects

#### Bachelor's Degrees

- Cinematography and Film/Video Production
- Recording Arts Technology

#### Master's, Doctoral, and Professional Degrees

- Animation, Interactive Technology, Video Graphics, and Special Effects
- Communications Technology

#### Additional Stackable IBCs/License

- CompTIA Digital Media and Entertainment Professional Certification (DMEP)



### Example Aligned Occupations

#### Camera Operators, Television, Video, and Film

Median Wage: \$48,422  
Annual Openings: 155  
10-Year Growth: 20%

#### Audio and Video Technicians

Median Wage: \$46,319  
Annual Openings: 626  
10-Year Growth: 30%

#### Producers and Directors

Median Wage: \$65,029  
Annual Openings: 522  
10-Year Growth: 12%

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



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# Arts, Audio Visual Technology, and Communication Career Cluster

## Statewide Program of Study: *Filmmaking*

### Course Information

Level	Course	Prerequisites   Corequisites	Local ID   Service ID
Level 1	Principles of Arts, Audio/Video Technology, and Communications*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CAV10 A/B</b> 13008200 (1 credit)
Level 2	Audio/Video Production I with Lab	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of AAVTC <b>Recommended Corequisites:</b> None	<b>CAV12 A/B</b> 13008510 (2 credits)
Level 3	Audio/Video Production II with Lab	<b>Prerequisites:</b> Audio/Video Production I Lab <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CAV22 A/B</b> 13008610 (2 credits)
Level 4	Practicum in Audio/Video Production	<b>Prerequisites:</b> Audio/Video Production II Lab <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CAV82 A/B</b> 13008700 (2 credits)

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

# Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance career cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations. This career cluster includes occupations ranging from business owner and entrepreneur to accountant, retail manager, and market analyst.

## Statewide Program of Study: Accounting and Financial Services

The Accounting and Financial Services program of study focuses on occupational and educational opportunities associated with examining, analyzing, and interpreting financial records. It includes exploration of financial services, preparing financial statements, auditing financial statements prepared by others, and interpreting accounting records. This program of study also introduces students to mathematical modeling tools.

### Secondary Courses for High School Credit

- Level 1** • Principles of Business, Marketing, and Finance

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- Level 2** • Entrepreneurship  
OR  
• Financial Mathematics

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- Level 3** • Accounting I

---

- Level 4** • Securities and Investments  
OR  
• Career Preparation

*Successful completion of the Accounting and Financial Services program of study will fulfill requirements of the Business and Industry endorsement.*

### Aligned Advanced Academic Courses

<b>AP or IB</b>	IB Mathematics Analysis and Approaches SL IB Mathematics Analysis and Approaches HL
<b>Dual Credit</b>	Dual credit offerings will vary by local educational agency.

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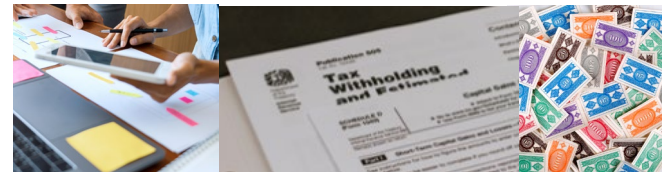
### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>• Intern with a certified public accountant (CPA) at a local business</li> <li>• Intern with a city or county auditor's office</li> <li>• Shadow a financial advisor as an intern at an investment company</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>• Participate in BPA, DECA, or FBLA</li> <li>• Explore student membership in professional organizations such as AICPA, CIMA, or TXCPA</li> </ul>

### Aligned Industry-Based Certifications

- Entrepreneurship and Small Business

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### Example Postsecondary Opportunities

#### Associate Degrees

- Accounting
- Bookkeeping

#### Bachelor's Degrees

- Accounting
- Banking and Financial Support Services

#### Master's, Doctoral, and Professional Degrees

- Business Administration and Management
- Finance

#### Additional Stackable IBCs/License

- Project Management Professional
- Property Tax Consultants Service Contract Providers

### Example Aligned Occupations

#### Tax Preparers

Median Wage: \$56,956  
Annual Openings: 898  
10-Year Growth: 14%

#### Accountants and Auditors

Median Wage: \$78,022  
Annual Openings: 12,989  
10-Year Growth: 20%

#### Personal Financial Advisors

Median Wage: \$77,605  
Annual Openings: 1,877  
10-Year Growth: 21%

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



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# Business, Marketing, and Finance Career Cluster

## Statewide Program of Study: Accounting and Financial Services

### Course Information

Level	Course	Prerequisites   Corequisites	Local ID   Service ID
Level 1	Principles of Business, Marketing, and Finance*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CBM11 A/B</b> 13011200 (1 credit)
	Entrepreneurship*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Business, Marketing, and Finance <b>Recommended Corequisites:</b> None	<b>CMK13 A/B</b> 13011101 (1 credit)
Level 2	Financial Mathematics*	<b>Prerequisites:</b> Algebra I <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CFI60 A/B</b> 13018000 (1 credit)
	Accounting I	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CFI14 A/B</b> 13016600 (1 credit)
Level 3	Securities and Investments	<b>Prerequisites:</b> Accounting I <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CFI34 A/B</b> 13016400 (1 credit)
	Career Preparation	<b>Prerequisites:</b> At least one Level 2 or higher CTE course <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CPG81 A/B</b> 12701121 (2 credits) -or- <b>CPG81 C/D</b> 12701141 (3 credits)

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

# Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance career cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations. This career cluster includes occupations ranging from business owner and entrepreneur to accountant, retail manager, and market analyst.

## Statewide Program of Study: *Business Management and Entrepreneurship*

The Business Management program of study focuses on occupational and educational opportunities associated with planning, directing, and coordinating the administrative services and operations of an organization. It includes formulating policies, managing daily operations, and allocating the use of materials and human resources. This program of study also introduces students to mathematical modeling tools and organizational evaluation methods.



### Secondary Courses for High School Credit

**Level 1** • Principles of Business, Marketing, and Finance

**Level 2** • Entrepreneurship

**Level 3** • Virtual Business **AND** Global Business

**Level 4** • Statistics and Business Decision Making

**OR**

• Business Management

**OR**

• Career Preparation

*Successful completion of the Business Management program of study will fulfill requirements of the Business and Industry endorsement.*

### Aligned Advanced Academic Courses

<b>AP or IB</b>	AP Microeconomics AP Statistics IB Economics SL IB Economics HL
<b>Dual Credit</b>	Dual credit offerings will vary by local education agency.

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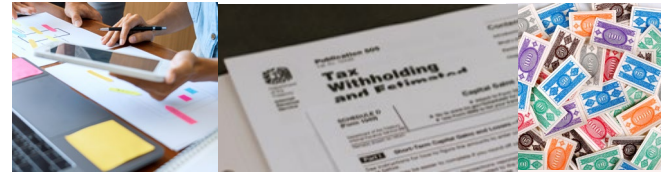
### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Intern at local business in the HR department</li> <li>Shadow the COO of a local business or chamber of commerce</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Participate in BPA, DECA, FBLA, or related UIL events</li> <li>Explore student membership in related professional organizations</li> </ul>

### Aligned Industry-Based Certifications

- Entrepreneurship and Small Business
- Project Management Institute (PMI) Project Management Ready

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### Example Postsecondary Opportunities

#### Associate Degrees

- Business Administration and Management
- Human Resources Management

#### Bachelor's Degrees

- Business Analytics
- Accounting and Business

#### Master's, Doctoral, and Professional Degrees

- Business Administration and Management
- Organizational Leadership

#### Additional Stackable IBCs/License

- Professional Certificate in Team Leadership
- Property Tax Professionals



### Example Aligned Occupations

#### First-Line Supervisors of Administrative Support Workers

Median Wage: \$59,585  
Annual Openings: 13,885  
10-Year Growth: 9%

#### Human Resources Specialists

Median Wage: \$61,278  
Annual Openings: 6,239  
10-Year Growth: 23%

#### General and Operations Managers

Median Wage: \$83,220  
Annual Openings: 25,450  
10-Year Growth: 23%

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/programs-of-study-additional-resources>

# Business, Marketing, and Finance Career Cluster

## Statewide Program of Study: *Business Management & Entrepreneurship*

### Course Information

Level 1	Course	Prerequisites   Corequisites	Local ID   Service ID
	Principles of Business, Marketing, and Finance*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CBM11 A/B</b> 13011200 (1 credit)
Level 2	Course	Prerequisites   Corequisites	Local ID   Service ID
	Entrepreneurship*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Business, Marketing, and Finance <b>Recommended Corequisites:</b> None	<b>CMK13 A/B</b> 13011101 (1 credit)
Level 3	Course	Prerequisites   Corequisites	Local ID   Service ID
	Global Business	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Business, Marketing, and Finance or Entrepreneurship <b>Recommended Corequisites:</b> None	<b>CTBM15</b> 13011800 (0.5 credit)
	Virtual Business*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Business, Marketing, and Finance or Entrepreneurship <b>Recommended Corequisites:</b> None	<b>CTBM16</b> 13012000 (0.5 credit)
Level 4	Course	Prerequisites   Corequisites	Local ID   Service ID
	Statistics and Business Decision Making*	<b>Prerequisites:</b> Algebra II <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CBM30 A/B</b> 13016900 (1 credit)
	Business Management	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Global Business and Virtual Business <b>Recommended Corequisites:</b> None	<b>CBM15 A/B</b> 13012100 (1 credit)
	Career Preparation I	<b>Prerequisites:</b> At least one Level 2 or higher CTE course <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CPG81 A/B</b> 12701121 (2 credits) -or- <b>CPG81 C/D</b> 12701141 (3 credits)

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

# Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance career cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations. This career cluster includes occupations ranging from business owner and entrepreneur to accountant, retail manager, and market analyst.

## Statewide Program of Study: *Marketing and Real Estate*

The Marketing and Sales program of study focuses on occupational and educational opportunities associated with collecting information to estimate potential sales of a product or service and create campaigns to market or distribute goods and services. It includes applying data related to customer demographics, preferences, needs, and buying habits.

### Secondary Courses for High School Credit



- Level 1** • Principles of Business, Marketing, and Finance

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  - Level 2** • Entrepreneurship

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  - Level 3** • Sports and Entertainment Marketing **AND** Advertising

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  - Level 4** • Fundamentals of Real Estate
- OR**
- Statistics and Business Decision Making
- OR**
- Career Preparation

*Successful completion of the Marketing and Sales program of study will fulfill requirements of the Business and Industry endorsement.*

### Aligned Advanced Academic Courses

<b>AP or IB</b>	AP Statistics
<b>Dual Credit</b>	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 towards concentrator/completer status for this program of study.*

### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>• Intern at a marketing and advertising company</li> <li>• Job shadow a pharmaceutical sales representative</li> <li>• Intern at a local retail company</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>• Job shadow an account representative at a marketing firm</li> <li>• Participate in BPA, DECA, FBLA, or related UIL events</li> </ul>

### Aligned Industry-Based Certifications

- Entrepreneurship and Small Business
- Real Estate Sales Agent License

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### Example Postsecondary Opportunities

#### Associate Degrees

- Marketing/Marketing Management
- Retail Management

#### Bachelor's Degrees

- Business Administration
- Marketing/Marketing Management
- Fashion Merchandising

#### Master's, Doctoral, and Professional Degrees

- Business Administration
- Applied Economics
- Business Analytics

#### Additional Stackable IBCs/License

- Salesforce
- Service Contract Providers



### Example Aligned Occupations

#### Retail Salespersons

Median Wage: \$28,356  
Annual Openings: 56,132  
10-Year Growth: 15%

#### Market Research Analysts

Median Wage: \$60,926  
Annual Openings: 5,688  
10-Year Growth: 35%

#### Sales Managers

Median Wage: \$123,729  
Annual Openings: 3,368  
10-Year Growth: 21%

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



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# Business, Marketing, and Finance Career Cluster

## Statewide Program of Study: *Marketing and Real Estate*

### Course Information

Level	Course	Prerequisites   Corequisites	Local ID   Service ID
Level 1	Principles of Business, Marketing, and Finance*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CBM11 A/B</b> 13011200 (1 credit)
	Entrepreneurship*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Business, Marketing and Finance <b>Recommended Corequisites:</b> None	<b>CMK13 A/B</b> 13011101 (1 credit)
Level 3	Sports and Entertainment Marketing	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Business, Marketing and Finance <b>Recommended Corequisites:</b> None	<b>CTMK15</b> 13034600 (0.5 credit)
	Advertising*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Business, Marketing, and Finance <b>Recommended Corequisites:</b> None	<b>CTMK16</b> 13034200 (0.5 credit)
Level 4	Fundamentals of Real Estate	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CMK74 A/B</b> N1301120 (2 credits)
	Statistics and Business Decision Making*	<b>Prerequisites:</b> Algebra II <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CBM30 A/B</b> 13016900 (1 credit)
	Career Preparation*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> At least one Level 2 or higher CTE course <b>Recommended Corequisites:</b> None	<b>CPG81 A/B</b> 12701121 (2 credits) -OR- <b>CPG81 C/D</b> 12701141 (3 credits)

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

# Education and Training Career Cluster

The Education and Training career cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training career cluster. This career cluster includes a diverse spectrum of occupations, ranging from teaching assistant, classroom teacher, to school administrator.

## Statewide Program of Study: Teaching and Training

The Teaching and Training program of study focuses on occupational and educational opportunities associated with careers related to teaching, instructing, and creating instructional and enrichment materials. The program of study includes recognizing a variety of student groups and their corresponding needs, identifying processes for developing curriculum and coordinating educational content, and coaching groups and individuals.

### Secondary Courses for High School Credit

- Level 1** • Principles of Education and Training
- Level 2** • Human Growth and Development
- Level 3** • Instructional Practices
- Level 4** • Practicum in Education and Training

*Successful completion of the Teaching and Training program of study will fulfill requirements of the Public Service endorsement.*

### Aligned Advanced Academic Courses

**Dual Credit** Dual credit offerings will vary by local educational 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 towards concentrator/completer status for this program of study.*

### Work-Based Learning and Expanded Learning Opportunities

#### Work-Based Learning Activities

- Serve as a camp counselor to learn mentoring, facilitation, and lesson planning skills
- Volunteer in a tutoring center to learn lesson planning and skills assessment

#### Expanded Learning Opportunities

- Participate in FCCLA
- Participate in TAFE

### Aligned Industry-Based Certifications

- Educational Aide I

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### Example Postsecondary Opportunities

#### Apprenticeships

- Teacher Apprentice

#### Associate Degrees

- Adult and Continuing Education and Teaching
- Educational/Instructional Technology

#### Bachelor's Degrees

- Elementary Education and Teaching
- Secondary Education and Teaching

#### Master's, Doctoral, and Professional Degrees

- Educational Leadership and Administration, General
- Curriculum and Instruction

#### Additional Stackable IBCs/License

- Generalist, Grades EC-4

### Example Aligned Occupations

#### Teaching Assistants, Except Postsecondary

Median Wage: \$28,066  
Annual Openings: 10,000  
10-Year Growth: 15%

#### Secondary School Teachers, Except Special Education and CTE

Median Wage: \$61,035  
Annual Openings: 8,288  
10-Year Growth: 14%

#### Education Administrators, Kindergarten through Secondary

Median Wage: \$81,976  
Annual Openings: 2,676  
10-Year Growth: 14%

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



For more information visit:

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# Education and Training Career Cluster

## Statewide Program of Study: Teaching and Training

### Course Information

Level	Course	Prerequisites   Corequisites	Local ID   Service ID
Level 1	Principles of Education and Training*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CET10 A/B</b> 13014200 (1 credit)
Level 2	Human Growth and Development	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Education and Training <b>Recommended Corequisites:</b> None	<b>CET11 A/B</b> 13014300 (1 credit)
Level 3	Instructional Practices	<b>Prerequisites:</b> One credit from Education and Training career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Education and Training, Human Growth and Development, or Child Development <b>Recommended Corequisites:</b> None	<b>CET12 A/B</b> 13014400 (2 credits)
Level 4	Practicum in Education and Training	<b>Prerequisites:</b> Instructional Practices <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Education and Training, Human Growth and Development, and Child Development <b>Recommended Corequisites:</b> None	<b>CET82 A/B</b> 13014500 (2 credits)

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

# Engineering Career Cluster

The Engineering career cluster focuses on planning, designing, testing, building, and maintaining of machines, structures, materials, systems, and processes using empirical evidence and science, technology, and math principles. This career cluster includes occupations ranging from mechanical engineer and drafter to electrical engineer and to mapping technician.

## Statewide Program of Study: Engineering Foundations

The Engineering Foundations program of study focuses on occupational and educational opportunities associated with a wide range of skills applied in the Engineering industry. Students will design, test, and evaluate projects related to engines, machines, and structures. This program of study includes applying scientific, mathematical, and empirical evidence to solve problems through innovation, design, construction, operation, and maintenance of different engineering systems.



## Secondary Courses for High School Credit

- |         |  |
|---------|--|
| Level 1 | • Engineering Design Process             |
| Level 2 | • Engineering Science                    |
| Level 3 | • Robotics I                             |
|         | <b>OR</b>                                |
|         | • Aerospace Design I                     |
| Level 4 | • Engineering Design and Problem Solving |

Successful completion of the Engineering Foundations program of study will fulfill requirements of the STEM endorsement if the math and science requirements are met or the Business and Industry endorsement.

## Aligned Advanced Academic Courses

AP or IB	AP Calculus AB	AP Physics 1	IB Physics SL
	AP Computer Science A	AP Physics 2	IB Physics HL
		AP Statistics	IB Computer Science SL
			IB Computer Science HL
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 towards concentrator/completer status for this program of study.

## Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> <li>• Intern at an engineering, robotics, or aerospace company.</li> <li>• Visit an engineering firm and shadow multiple types of engineers.</li> </ul>
Expanded Learning Opportunities	<ul style="list-style-type: none"> <li>• Participate in SkillsUSA or TSA</li> <li>• Join a local engineering association and attend meetings.</li> </ul>

## Aligned Industry-Based Certifications

- Autodesk Associate (Certified User) Fusion 360

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## Example Postsecondary Opportunities

### Apprenticeships

- Industrial Engineering Technician Apprenticeship

### Associate Degrees

- Manufacturing Engineering Technology/Technician
- Robotics Technology/Technician

### Bachelor's Degrees

- Electrical and Electronics Engineering
- Engineering, General

### Master's, Doctoral, and Professional Degrees

- Electrical and Electronics Engineering
- Engineering, General

### Additional Stackable IBCs/Licensures

- Professional Engineer (PE License)
- Engineer in Training Certification (EIT)



## Example Aligned Occupations

### Civil Engineering Technologists and Technicians

Median Wage: \$61,138

Annual Openings: 765

10-Year Growth: 11%

### Aerospace Engineers

Median Wage: \$115,694

Annual Openings: 483

10-Year Growth: 18%

### Mechanical Engineers

Median Wage: \$99,937

Annual Openings: 1,755

10-Year Growth: 19%

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



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# Engineering Career Cluster

## Statewide Program of Study: Engineering Foundations

### Course Information

#### Level 1

Course	Prerequisites   Corequisites	Local ID   Service ID
Engineering Design Process	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CST51 A/B</b> 12756001 (1 credit)

#### Level 2

Course	Prerequisites   Corequisites	Local ID   Service ID
Engineering Science*	<b>Prerequisites:</b> Algebra I, Biology, and Engineering Design Process <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Geometry, Chemistry, IPC, or Physics <b>Recommended Corequisites:</b> None	<b>CST52 A/B</b> 13037500 (1 credit)

#### Level 3

Course	Prerequisites   Corequisites	Local ID   Service ID
Aerospace Design I	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CST71 A/B</b> 12756040 (1 credit)
Robotics I*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CMF14 A/B</b> 13037000 (1 credit)

#### Level 4

Course	Prerequisites   Corequisites	Local ID   Service ID
Engineering Design and Problem Solving*	<b>Prerequisites:</b> Algebra I and Geometry, Introduction to Engineering Design or Engineering Science <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CST59 A/B</b> 13037300 (1 credit)

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



# Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

## Statewide Program of Study: *Dental Assistant*

The Diagnostic and Therapeutic Services program of study focuses on occupational and educational opportunities associated with diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study includes exploration of patient treatment and rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

### Secondary Courses for High School Credit

- Level 1** • Principles of Health Science
- Level 2** • Medical Terminology
- Level 3** • Health Science Theory with Clinicals
- Level 4** • Practicum in Health Science: Dental Assistant

*Successful completion of the Diagnostic and Therapeutic Services program of study will fulfill requirements of the Public Services endorsement.*

### Aligned Advanced Academic Courses

AP or IB	AP Biology	AP Chemistry
	IB Biology SL	IB Chemistry SL
	IB Biology HL	IB Chemistry HL
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 towards concentrator/completer status for this program of study.*

### Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> <li>• Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility</li> <li>• Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job</li> </ul>
Expanded Learning Opportunities	<ul style="list-style-type: none"> <li>• Participate in Health Occupation Students of America (HOSA) or SkillsUSA</li> <li>• Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event</li> </ul>

### Aligned Industry-Based Certifications

- Certified Clinical Medical Assistant
- Registered Dental Assistant X-Ray Certification

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### Example Postsecondary Opportunities

#### Apprenticeships

- Medical Assistant

#### Associate Degrees

- Emergency Medical Technology
- Radiologic Technology/Science

#### Bachelor's Degrees

- Emergency Medical Technology
- Medical Insurance Coding

#### Master's, Doctoral, and Professional Degrees

- Medicine
- Occupational Therapy

#### Additional Stackable IBCs/License

- Registered Diagnostic Medical Sonographer



### Example Aligned Occupations

#### Medical Assistants

Median Wage: \$36,834  
Annual Openings: 11,638  
10-Year Growth: 29%

#### Dental Hygienists

Median Wage: \$79,663  
Annual Openings: 1,352  
10-Year Growth: 32%

#### Physician Assistants

Median Wage: \$127,332  
Annual Openings: 974  
10-Year Growth: 41%

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/programs-of-study-additional-resources>



# Health Science Career Cluster

## Statewide Program of Study: *Dental Assistant*

### Course Information

Level	Course	Prerequisites   Corequisites	Local ID   Service ID
Level 1	Principles of Health Science*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHS10 A/B</b> 13020200 (1 credit)
Level 2	Medical Terminology*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Health Science <b>Recommended Corequisites:</b> None	<b>CHS11 A/B</b> 13020300 (1 credit)
Level 3	Health Science Theory with Clinicals*	<b>Prerequisites:</b> One credit in Biology and at least one credit in a course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHS12 A/B</b> 13020410 (2 credits)
Level 4	Practicum in Health Science: Dental Assistant	<b>Prerequisites:</b> Health Science Theory and Biology <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHS84 A/B</b> 13020500 (2 credits)

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



# Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

## Statewide Program of Study: *Healthcare Practitioner*

The Diagnostic and Therapeutic Services program of study focuses on occupational and educational opportunities associated with diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study includes exploration of patient treatment and rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.



### Secondary Courses for High School Credit

**Level 1** • Principles of Health Science

**Level 2** • Medical Terminology

**Level 3** • Anatomy and Physiology

**Level 4** • Health Science Theory with Clinicals

OR

• Medical Microbiology AND Pathophysiology

*Successful completion of the Diagnostic and Therapeutic Services program of study will fulfill requirements of the Public Services endorsement.*

### Aligned Advanced Academic Courses

<b>AP or IB</b>	AP Biology IB Biology SL IB Biology HL	AP Chemistry IB Chemistry SL IB Chemistry HL
<b>Dual Credit</b>	Dual credit offerings will vary by local education agency.	

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### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility</li> <li>Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Participate in Health Occupation Students of America (HOSA) or SkillsUSA</li> <li>Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event</li> </ul>

### Aligned Industry-Based Certifications

- Certified Clinical Medical Assistant

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### Example Postsecondary Opportunities

#### Apprenticeships

- Medical Assistant

#### Associate Degrees

- Emergency Medical Technology
- Radiologic Technology/Science

#### Bachelor's Degrees

- Emergency Medical Technology
- Medical Insurance Coding

#### Master's, Doctoral, and Professional Degrees

- Medicine
- Occupational Therapy

#### Additional Stackable IBCs/License

- Registered Diagnostic Medical Sonographer



### Example Aligned Occupations

#### Medical Assistants

Median Wage: \$36,834  
Annual Openings: 11,638  
10-Year Growth: 29%

#### Dental Hygienists

Median Wage: \$79,663  
Annual Openings: 1,352  
10-Year Growth: 32%

#### Physician Assistants

Median Wage: \$127,332  
Annual Openings: 974  
10-Year Growth: 41%

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



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# Health Science Career Cluster

## Statewide Program of Study: *Healthcare Practitioner*

### Course Information

Level 1	Course	Prerequisites   Corequisites	Local ID   Service ID
	Principles of Health Science*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHS10 A/B</b> 13020200 (1 credit)
Level 2	Course	Prerequisites   Corequisites	Local ID   Service ID
	Medical Terminology*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Health Science <b>Recommended Corequisites:</b> None	<b>CHS11 A/B</b> 13020300 (1 credit)
Level 3	Course	Prerequisites   Corequisites	Local ID   Service ID
	Anatomy and Physiology*	<b>Prerequisites:</b> One credit in Biology and one credit in Chemistry, Integrated Physics and Chemistry, or Physics <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> A course from the Health Science career cluster <b>Recommended Corequisites:</b> None	<b>CHS70 A/B</b> 13020600 (1 credit)
	Course	Prerequisites   Corequisites	Local ID   Service ID
	Health Science Theory with Clinicals*	<b>Prerequisites:</b> One credit in Biology and at least one credit in a course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHS12 A/B</b> 13020410 (2 credits)
Level 4	Course	Prerequisites   Corequisites	Local ID   Service ID
	Medical Microbiology*	<b>Prerequisites:</b> One credit in Biology, one credit in Chemistry, and at least one credit in a course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CTHS71</b> 13020700 (1 credit)
	Pathophysiology*	<b>Prerequisites:</b> One credit in Biology, one credit in Chemistry, and at least one credit in a Level 2 or higher course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Anatomy and Physiology <b>Recommended Corequisites:</b> None	<b>CTHS72</b> 13020800 (1 credit)

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



# Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

## Statewide Program of Study: *Patient Care Technician*

The Diagnostic and Therapeutic Services program of study focuses on occupational and educational opportunities associated with diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study includes exploration of patient treatment and rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

### Secondary Courses for High School Credit

- Level 1 • Principles of Health Science
- Level 2 • Medical Terminology
- Level 3 • Health Science Theory with Clinicals
- Level 4 • Practicum in Health Science: Patient Care Technician

*Successful completion of the Diagnostic and Therapeutic Services program of study will fulfill requirements of the Public Services endorsement.*

### Aligned Advanced Academic Courses

<b>AP or IB</b>	AP Biology IB Biology SL IB Biology HL	AP Chemistry IB Chemistry SL IB Chemistry HL
<b>Dual Credit</b>	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 towards concentrator/completer status for this program of study.*

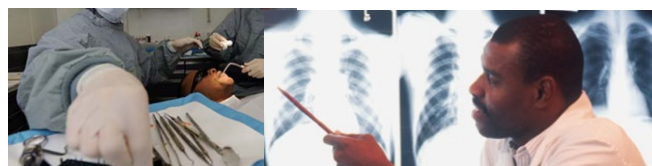
### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>• Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility</li> <li>• Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>• Participate in Health Occupation Students of America (HOSA) or SkillsUSA</li> <li>• Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event</li> </ul>

### Aligned Industry-Based Certifications

- Certified Clinical Medical Assistant
- Patient Care Technician
- Phlebotomy Technician

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### Example Postsecondary Opportunities

#### Apprenticeships

- Medical Assistant

#### Associate Degrees

- Emergency Medical Technology
- Radiologic Technology/Science

#### Bachelor's Degrees

- Emergency Medical Technology
- Medical Insurance Coding

#### Master's, Doctoral, and Professional Degrees

- Medicine
- Occupational Therapy

#### Additional Stackable IBCs/License

- Registered Diagnostic Medical Sonographer



### Example Aligned Occupations

#### Medical Assistants

Median Wage: \$36,834  
Annual Openings: 11,638  
10-Year Growth: 29%

#### Dental Hygienists

Median Wage: \$79,663  
Annual Openings: 1,352  
10-Year Growth: 32%

#### Physician Assistants

Median Wage: \$127,332  
Annual Openings: 974  
10-Year Growth: 41%

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/programs-of-study-additional-resources>



# Health Science Career Cluster

## Statewide Program of Study: *Patient Care Technician*

### Course Information

Level 1	Course	Prerequisites   Corequisites	Local ID   Service ID
	Principles of Health Science*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHS10 A/B</b> 13020200 (1 credit)
Level 2	Course	Prerequisites   Corequisites	Local ID   Service ID
	Medical Terminology*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Health Science <b>Recommended Corequisites:</b> None	<b>CHS11 A/B</b> 13020300 (1 credit)
Level 3	Course	Prerequisites   Corequisites	Local ID   Service ID
	Health Science Theory with Clinicals*	<b>Prerequisites:</b> One credit in Biology and at least one credit in a course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHS12 A/B</b> 13020410 (2 credits)
Level 4	Course	Prerequisites   Corequisites	Local ID   Service ID
	Practicum in Health Science: Patient Care Technician	<b>Prerequisites:</b> Health Science Theory and Biology <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHS82 A/B</b> 13020500 (2 credits)

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



# Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

## Statewide Program of Study: *Pharmacy Technician*

The Diagnostic and Therapeutic Services program of study focuses on occupational and educational opportunities associated with diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study includes exploration of patient treatment and rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

### Secondary Courses for High School Credit

- Level 1 • Principles of Health Science
- Level 2 • Medical Terminology
- Level 3 • Health Science Theory with Clinicals
- Level 4 • Practicum in Health Science: Pharmacy Technician

*Successful completion of the Diagnostic and Therapeutic Services program of study will fulfill requirements of the Public Services endorsement.*

### Aligned Advanced Academic Courses

AP or IB	AP Biology	AP Chemistry
	IB Biology SL IB Biology HL	IB Chemistry SL IB Chemistry HL
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 towards concentrator/completer status for this program of study.*

### Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> <li>• Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility</li> <li>• Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job</li> </ul>
Expanded Learning Opportunities	<ul style="list-style-type: none"> <li>• Participate in Health Occupation Students of America (HOSA) or SkillsUSA</li> <li>• Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event</li> </ul>

### Aligned Industry-Based Certifications

- Certified Clinical Medical Assistant
- Pharmacy Technician

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### Example Postsecondary Opportunities

#### Apprenticeships

- Medical Assistant

#### Associate Degrees

- Emergency Medical Technology
- Radiologic Technology/Science

#### Bachelor's Degrees

- Emergency Medical Technology
- Medical Insurance Coding

#### Master's, Doctoral, and Professional Degrees

- Medicine
- Occupational Therapy

#### Additional Stackable IBCs/License

- Registered Diagnostic Medical Sonographer



### Example Aligned Occupations

#### Medical Assistants

Median Wage: \$36,834  
Annual Openings: 11,638  
10-Year Growth: 29%

#### Dental Hygienists

Median Wage: \$79,663  
Annual Openings: 1,352  
10-Year Growth: 32%

#### Physician Assistants

Median Wage: \$127,332  
Annual Openings: 974  
10-Year Growth: 41%

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



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# Health Science Career Cluster

## Statewide Program of Study: *Pharmacy Technician*

### Course Information

Level	Course	Prerequisites   Corequisites	Local ID   Service ID
Level 1	Principles of Health Science*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHS10 A/B</b> 13020200 (1 credit)
Level 2	Medical Terminology*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Health Science <b>Recommended Corequisites:</b> None	<b>CHS11 A/B</b> 13020300 (1 credit)
Level 3	Health Science Theory with Clinicals*	<b>Prerequisites:</b> One credit in Biology and at least one credit in a course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHS12 A/B</b> 13020410 (2 credits)
Level 4	Practicum in Health Science: Pharmacy Technician	<b>Prerequisites:</b> Health Science Theory and Biology <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHS92 A/B</b> 13020500 (2 credits)

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



# Hospitality and Tourism Career Cluster

The Hospitality and Tourism career cluster focuses on the management, marketing, and operations of restaurants, lodging, attractions, recreation events, and travel-related services. This career cluster includes occupations ranging from reservation and transportation ticket agent to event planner and general manager.

## Statewide Program of Study: Culinary Arts

The Culinary Arts program of study focuses on occupational and educational opportunities associated with the planning, directing, or coordinating activities of a food and beverage organization or department. This program of study includes opportunities involved in directing and participating in the preparation of food.

### Secondary Courses for High School Credit

- Level 1** • Introduction to Culinary Arts
  - Level 2** • Culinary Arts
  - Level 3** • Advanced Culinary Arts
  - Level 4** • Practicum in Café Operations
- OR
- Practicum in Chef Training

Successful completion of the Culinary Arts program of study will fulfill requirements of the Business and Industry endorsement.

### Aligned Advanced Academic Courses

<b>AP or IB</b>	AP Chemistry IB Chemistry SL
<b>Dual Credit</b>	Dual credit offerings will vary by local educational 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 towards concentrator/completer status for this program of study.

### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>• Shadow a director of a non-profit that produces and delivers food for communities in need</li> <li>• Intern at a catering company and learn about food production for large-scale events</li> <li>• Work part-time in a restaurant as a line cook or chef</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>• Participate in FCCLA</li> <li>• Participate in SkillsUSA</li> <li>• Participate in American Culinary Association or the Texas Restaurant Association</li> </ul>

### Aligned Industry-Based Certifications

- ServSafe Manager

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### Example Postsecondary Opportunities

#### Associate Degrees

- Culinary Arts
- Baking and Pastry Arts

#### Bachelor's Degrees

- Hotel/Motel Administration/Management
- Culinary Science

#### Master's, Doctoral, and Professional Degrees

- Organizational Leadership
- Foodservice Systems Administration/Management

#### Additional Stackable IBCs/License

- Food Manager License

### Example Aligned Occupations

#### Bakers

Median Wage: \$29,466  
Annual Openings: 2,942  
10-Year Growth: 26%

#### Chefs and Head Cooks

Median Wage: \$44,761  
Annual Openings: 950  
10-Year Growth: 37%

#### General and Operations Managers

Median Wage: \$83,220  
Annual Openings: 25,450  
10-Year Growth: 23%

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



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# Hospitality and Tourism Career Cluster

## Statewide Program of Study: Culinary Arts

### Course Information

Level	Course	Prerequisites   Corequisites	Local ID   Service ID
Level 1	Introduction to Culinary Arts*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHT04 A/B</b> 13022550 (1 credit)
	Culinary Arts	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Introduction to Culinary Arts <b>Recommended Corequisites:</b> None	<b>CHT14 A/B</b> 13022600 (2 credits)
Level 3	Advanced Culinary Arts	<b>Prerequisites:</b> Culinary Arts <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHT24 A/B</b> 13022650 (2 credits)
	Practicum in Café Operations	<b>Prerequisites:</b> Culinary Arts <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHT94 A/B</b> 13022710 (2 credits)
Level 4	Practicum in Chef Training	<b>Prerequisites:</b> Culinary Arts <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CHT84 A/B</b> 13022700 (2 credits)

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



# Human Services Career Cluster

The Human Services career cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs, such as counseling and mental health services, family and community services, personal care services, and consumer services. This career cluster includes occupations ranging from community health workers to cosmetologists and nutritionists.

## Regional Program of Study: *Barbering*

The Barbering regional program of study focuses on occupational and educational opportunities associated with providing beauty and personal care services. This program of study includes managing personal care facilities and coordinating or supervising personal service workers.



### Secondary Courses for High School Credit

- |                |   |
|----------------|---|
| <b>Level 1</b> | • Complete High School Graduation Requirements                    |
| <b>Level 2</b> | • Principles of Cosmetology and Barbering Design and Color Theory |
| <b>AND</b>     |   |
|                | • Introduction to Cosmetology & Barbering                         |
| <b>Level 3</b> | • Barbering I (26-27 School Year)                                 |
| <b>Level 4</b> | • Barbering II (27-28 School Year)                                |

*Successful completion of the Cosmetology and Personal Care Services regional program of study will fulfill requirements of the Public Service endorsement.*

### Aligned Advanced Academic Courses

#### Dual Credit

Dual credit offerings will vary by local educational 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 towards concentrator/completer status for this program of study.*

### Work-Based Learning and Expanded Learning Opportunities

#### Work-Based Learning Activities

- Work part-time in a salon, spa, or barbershop
- Participate in an apprenticeship at a salon to become an apprentice stylist

#### Expanded Learning Opportunities

- Tour a salon, spa, or barbershop
- Participate in SkillsUSA

### Aligned Industry-Based Certifications

- Barber Operator License (2027-2028 School year)

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### Example Postsecondary Opportunities

#### Apprenticeships

- Apprentice Stylist

#### Associate Degrees

- Cosmetology Operator
- Esthetics and Skin Care

#### Additional Stackable IBCs/License

- Class A Barber
- Eyelash Extension Specialist
- Hair Weaving Specialist



### Example Aligned Occupations

#### Hairdressers, Hairstylists, and Cosmetologists

Median Wage: \$27,286  
Annual Openings: 8,014  
10-Year Growth: 25%

#### Skincare Specialists

Median Wage: \$35,112  
Annual Openings: 778  
10-Year Growth: 38%

#### First-Line Supervisors of Personal Service Workers

Median Wage: \$36,795  
Annual Openings: 2,253  
10-Year Growth: 29%

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



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# Human Services Career Cluster

## Regional Program of Study: *Barbering*

### Course Information

#### Level 1

#### Course

Complete High School Graduation Requirements

#### Level 2

#### Course

Principles of Cosmetology and Barbering Design and Color Theory

#### Prerequisites | Corequisites

**Prerequisites:** None  
**Corequisites:** None  
**Recommended Prerequisites:** None  
**Recommended Corequisites:** None

#### Local ID | Service ID

**CTHU20**  
 13025050 (1 credit)

Introduction to Cosmetology & Barbering

**Prerequisites:** None  
**Corequisites:** None  
**Recommended Prerequisites:** None  
**Recommended Corequisites:** None

**CTHU21**  
 13025100 (1 credit)

#### Level 3

#### Course

Barbering I

#### Prerequisites | Corequisites

**Prerequisites:** Introduction to Cosmetology and Barbering  
**Corequisites:** None  
**Recommended Prerequisites:** None  
**Recommended Corequisites:** None

#### Local ID | Service ID

TBD

#### Level 4

#### Course

Barbering II

#### Prerequisites | Corequisites

**Prerequisites:** Barbering I  
**Corequisites:** None  
**Recommended Prerequisites:** None  
**Recommended Corequisites:** None

#### Local ID | Service ID

TBD

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



# Human Services Career Cluster

The Human Services career cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs, such as counseling and mental health services, family and community services, personal care services, and consumer services. This career cluster includes occupations ranging from community health workers to cosmetologists and nutritionists.

## Regional Program of Study: *Cosmetology and Personal Care Services*

The Cosmetology and Personal Care Services regional program of study focuses on occupational and educational opportunities associated with providing beauty and personal care services. This program of study includes managing personal care facilities and coordinating or supervising personal service workers.

### Secondary Courses for High School Credit

- |                |  |
|----------------|--|
| <b>Level 1</b> | • Complete High School Graduation Requirements   |
| <b>Level 2</b> | • Principles of Cosmetology and Barbering Design and Color Theory<br><b>AND</b><br>• Introduction to Cosmetology and Barbering |
| <b>Level 3</b> | • Cosmetology I  |
| <b>Level 4</b> | • Cosmetology II   |

*Successful completion of the Cosmetology and Personal Care Services regional program of study will fulfill requirements of the Public Service endorsement.*

### Aligned Advanced Academic Courses

**Dual Credit** Dual credit offerings will vary by local educational 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 towards concentrator/completer status for this program of study.*

### Work-Based Learning and Expanded Learning Opportunities

- |  |  |
|--|--|
| <b>Work-Based Learning Activities</b>  | <ul style="list-style-type: none"> <li>• Work part-time in a salon, spa, or barbershop</li> <li>• Participate in an apprenticeship at a salon to become an apprentice stylist</li> </ul> |
| <b>Expanded Learning Opportunities</b> | <ul style="list-style-type: none"> <li>• Tour a salon, spa, or barbershop</li> <li>• Participate in SkillsUSA</li> </ul>   |

### Aligned Industry-Based Certifications

- Cosmetology Operator License

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### Example Postsecondary Opportunities

#### Apprenticeships

- Apprentice Stylist

#### Associate Degrees

- Cosmetology Operator
- Esthetics and Skin Care

#### Additional Stackable IBCs/License

- Class A Barber
- Eyelash Extension Specialist
- Hair Weaving Specialist

### Example Aligned Occupations

#### **Hairdressers, Hairstylists, and Cosmetologists**

Median Wage: \$27,286  
Annual Openings: 8,014  
10-Year Growth: 25%

#### **Skincare Specialists**

Median Wage: \$35,112  
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#### **First-Line Supervisors of Personal Service Workers**

Median Wage: \$36,795  
Annual Openings: 2,253  
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Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



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<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



# Human Services Career Cluster

## Regional Program of Study: Cosmetology and Personal Care Services

### Course Information

Level 1

#### Course

Complete High School Graduation Requirements

Level 2

#### Course

Principles of Cosmetology and Barbering Design and Color Theory

#### Prerequisites | Corequisites

Prerequisites: None  
Corequisites: None  
Recommended Prerequisites: None  
Recommended Corequisites: None

#### Local ID | Service ID

**CTHU20**  
13025050 (1 credit)

Introduction to Cosmetology and Barbering

Prerequisites: None  
Corequisites: None  
Recommended Prerequisites: None  
Recommended Corequisites: None

**CTHU21**  
13025100 (1 credit)

Level 3

#### Course

Cosmetology I

#### Prerequisites | Corequisites

Prerequisites: Introduction to Cosmetology and Barbering  
Corequisites: Cosmetology I Lab  
Recommended Prerequisites: None  
Recommended Corequisites: None

#### Local ID | Service ID

**CHU19 A/B**  
13025200 (2 credits)

Level 4

#### Course

Cosmetology II

#### Prerequisites | Corequisites

Prerequisites: Cosmetology I  
Corequisites: None  
Recommended Prerequisites: None  
Recommended Corequisites: None

#### Local ID | Service ID

**CHU29 A/B**  
13025300 (2 credits)

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



# Information Technology Career Cluster

The Information Technology (IT) career cluster focuses on the design, development, support, and management of hardware, software, multimedia, and systems integration services. This career cluster includes occupations ranging from Software Developer and Programmer to Cybersecurity Specialists and Network Analysts.

## Statewide Program of Study: Cybersecurity

The Cybersecurity program of study focuses on occupational and educational opportunities associated with planning, implementing, upgrading, or monitoring security measures for the protection of computer networks and information. This program of study includes responding to computer security breaches and viruses and administering network security measures.



### Secondary Courses for High School Credit

- |         |  |
|---------|--|
| Level 1 | <ul style="list-style-type: none"> <li>Computer Science I</li> </ul>   |
| Level 2 | <ul style="list-style-type: none"> <li>Computer Maintenance <b>AND</b> IT Troubleshooting</li> <li><b>OR</b></li> <li>AP Computer Science A</li> </ul> |
| Level 3 | <ul style="list-style-type: none"> <li>Networking with Lab (<b>AP Cyber: Networking</b>)</li> </ul>  |
| Level 4 | <ul style="list-style-type: none"> <li>Foundations of Cybersecurity</li> <li><b>AND</b></li> <li>Cybersecurity Capstone</li> </ul>                     |

Successful completion of the Cybersecurity program of study will fulfill requirements of the STEM endorsement if the math and science requirements are met or the Business and Industry endorsement.

### Aligned Advanced Academic Courses

<b>AP or IB</b>	AP Computer Science Principles AP Computer Science A
<b>Dual Credit</b>	Dual credit offerings will vary by local education agency.

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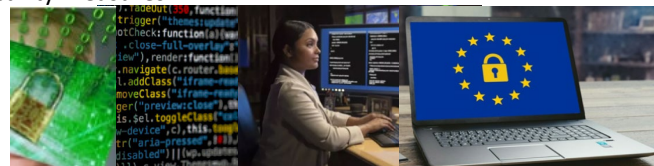
### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Intern at a local bank, hospital, or government office to develop skills in implementing security measures</li> <li>Interview with an information security analyst to learn how they plan for, monitor, and upgrade security measures at their organization</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Participate in a Hackathon</li> <li>Participate in TSA or SkillsUSA</li> </ul>

### Aligned Industry-Based Certifications

- CompTIA Network+
- CompTIA Security+

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### Examples Postsecondary Opportunities

#### Associate Degrees

- Computer and Information Systems Security
- Computer Programming

#### Bachelor's Degrees

- Computer Science
- Computer Software Engineering

#### Master's, Doctoral, and Professional Degrees

- Computer and Information Systems Security/Auditing/Information Assurance
- Computer Software Engineering

#### Additional Stackable IBCs/License

- Certified Ethical Hacker (CEH)



### Example Aligned Occupations

#### Computer User Support Specialists

Median Wage: \$51,411  
Annual Openings: 5,757  
10-Year Growth: 21%

#### Software Developers

Median Wage: \$111,705  
Annual Openings: 15,324  
10-Year Growth: 36%

#### Information Security Analysts

Median Wage: \$110,268  
Annual Openings: 1,719  
10-Year Growth: 49%

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/programs-of-study-additional-resources>



# Information Technology Career Cluster

## Statewide Program of Study: Cybersecurity

### Course Information

#### Level 1

Course	Prerequisites   Corequisites	Local ID   Service ID
Computer Science I	<b>Prerequisites:</b> Algebra I <b>Corequisites:</b> Algebra I <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>TA312 A/B</b> 03580200 (1 credit)

#### Level 2

Course	Prerequisites   Corequisites	Local ID   Service ID
Computer Maintenance*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Information Technology <b>Recommended Corequisites:</b> None	<b>CIT20 A/B</b> 13027300 (1 credit)
IT Troubleshooting*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Information Technology, Computer Maintenance <b>Recommended Corequisites:</b> None	<b>CIT20 A/B</b> 13027535 (1 credit)
AP Computer Science A*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Algebra I <b>Recommended Corequisites:</b> None	<b>TA319 A/B</b> A3580110 (2 credits)

#### Level 3

Course	Prerequisites   Corequisites	Local ID   Service ID
Networking with Lab (AP Cyber: Networking)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Information Technology, Computer Maintenance <b>Recommended Corequisites:</b> None	<b>CIT12 A/B</b> 13027410 (2 credits)

#### Level 4

Course	Prerequisites   Corequisites	Local ID   Service ID
Foundations of Cybersecurity	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CST34 A</b> 03580850 (1 credit)
Cybersecurity Capstone	<b>Prerequisites:</b> Foundations of Cybersecurity <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CST34 B</b> 03580855 (1 credit)

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



# Information Technology Career Cluster

The Information Technology (IT) career cluster focuses on the design, development, support, and management of hardware, software, multimedia, and systems integration services. This career cluster includes occupations ranging from Software Developer and Programmer to Cybersecurity Specialists and Network Analysts.

## Statewide Program of Study: Information Technology Support and Services

The Information Technology Support and Services program of study focuses on occupational and educational opportunities associated with administering, testing, and implementing computer databases and applying knowledge of database management systems. This program of study includes analyzing user requirements, automating or improving existing systems, and reviewing computer system capabilities. It also includes research, design, and testing of computer or computer-related equipment for commercial, industrial, military, or scientific use.

### Secondary Courses for High School Credit

- Level 1 • Complete High School Graduation Requirements
- Level 2 • Computer Maintenance **AND** IT Troubleshooting
- Level 3 • Computer Technician Practicum
- Level 4 • Computer Technician Practicum (2<sup>nd</sup> time taken)

*Successful completion of the Information Technology Support and Services program of study will fulfill requirements of the Business and Industry endorsement.*

### Aligned Advanced Academic Courses

#### AP or IB

AP Computer Science A  
AP Computer Science Principles  
IB Computer Science SL  
IB Computer Science HL

#### 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 towards concentrator/completer status for this program of study.*

### Work-Based Learning and Expanded Learning Opportunities

#### Work-Based Learning Activities

- Intern at a local IT company to develop skills in computer system maintenance and setting up computer equipment
- Shadow a database administrator or computer software or hardware engineer to learn about their day-to-day responsibilities

#### Expanded Learning Opportunities

- Participate in SkillsUSA or TSA
- Subscribe to industry journals

### Aligned Industry-Based Certifications

- CompTIA A+ Certification
- CompTIA IT Fundamentals+

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### Example Postsecondary Opportunities

#### Apprenticeships

- Coding Apprenticeship

#### Associate Degrees

- Computer Science
- Network and System Administration

#### Bachelor's Degrees

- Computer and Information Systems Security/Auditing/Information Assurance
- Computer Engineering

#### Master's, Doctoral, and Professional Degrees

- Information Science/Studies
- Electrical and Electronics Engineering



### Example Aligned Occupations

#### Computer User Support Specialists

Median Wage: \$51,411  
Annual Openings: 5,757  
10-Year Growth: 21%

#### Computer Network Support Specialists

Median Wage: \$65,646  
Annual Openings: 1,634  
10-Year Growth: 19%

#### Computer Hardware Engineers

Median Wage: \$119,662  
Annual Openings: 377  
10-Year Growth: 14%

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/programs-of-study-additional-resources>



# Information Technology Career Cluster

## Statewide Program of Study: Information Technology Support and Services

### Course Information

#### Level 1

Course	Prerequisites   Corequisites	Local ID   Service ID
Complete High School Graduation Requirements		

#### Level 2

Course	Prerequisites   Corequisites	Local ID   Service ID
Computer Maintenance*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Information Technology <b>Recommended Corequisites:</b> None	<b>CIT20 A</b> 13027300 (1 credit)
IT Troubleshooting	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Information and Computer Maintenance/Lab <b>Recommended Corequisites:</b> None	<b>CIT20 B</b> 13027535 (1 credit)

#### Level 3

Course	Prerequisites   Corequisites	Local ID   Service ID
Computer Technician Practicum	<b>Prerequisites:</b> Computer Maintenance <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CIT81 A/B</b> 13027500 (2 credits)

#### Level 4

Course	Prerequisites   Corequisites	Local ID   Service ID
Computer Technician Practicum (2 <sup>nd</sup> time taken)	<b>Prerequisites:</b> Computer Technician Practicum <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CIT92 A/B</b> 13027510 (2 credits)

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



# Information Technology Career Cluster

The Information Technology (IT) career cluster focuses on the design, development, support, and management of hardware, software, multimedia, and systems integration services. This career cluster includes occupations ranging from Software Developer and Programmer to Cybersecurity Specialists and Network Analysts.

## Statewide Program of Study: Programming and Software Development

The Programming and Software Development program of study focuses on occupational and educational opportunities associated with researching, designing, developing, testing, and operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computer applications. This program of study includes creating, modifying, and testing the codes, forms, and script that allow computer applications to run.

### Secondary Courses for High School Credit

- |         |   |
|---------|---|
| Level 1 | <ul style="list-style-type: none"> <li>Computer Science I</li> </ul>  |
| Level 2 | <ul style="list-style-type: none"> <li>Computer Science II</li> <li>OR</li> <li>AP Computer Science A</li> </ul>  |
| Level 3 | <ul style="list-style-type: none"> <li>AP Computer Science A</li> <li>OR</li> <li>Computer Science III</li> <li>OR</li> <li>IB Computer Science SL Year 1</li> </ul>                        |
| Level 4 | <ul style="list-style-type: none"> <li>Computer Science III</li> <li>OR</li> <li>Independent Study in Technology Applications</li> <li>OR</li> <li>IB Computer Science SL Year 2</li> </ul> |

Successful completion of the Programming and Software Development program of study will fulfill requirements of the STEM endorsement if the math and science requirements are met or the Business and Industry endorsement.

### Aligned Advanced Academic Courses

AP or IB	<ul style="list-style-type: none"> <li>AP Calculus AB</li> <li>AP Statistics</li> <li>IB Mathematics Applications and Interpretation SL</li> </ul>
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 towards concentrator/completer status for this program of study.

### Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> <li>Intern at a local IT company to develop skills in programming and coding</li> <li>Shadow a software developer to learn how they create and improve software to support efficient processes at their company</li> </ul>
Expanded Learning Opportunities	<ul style="list-style-type: none"> <li>Program and create a game</li> <li>Participate in SkillsUSA or TSA</li> </ul>

### Aligned Industry-Based Certifications

- Certified Entry-Level Python Programmer (PCEP)

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### Example Postsecondary Opportunities

#### Apprenticeships

- Computer Programmer Apprenticeship

#### Associate Degrees

- Computer Programming
- Web Page, Digital/Multimedia and Information Resources Design

#### Bachelor's Degrees

- Data Science
- Computer Engineering

#### Master's, Doctoral, and Professional Degrees

- Management Science
- Computer Software Engineering

#### Additional Stackable IBCs/License

- AWS Certified Developer Associate

### Example Aligned Occupations

#### Computer User Support Specialists

Median Wage: \$51,411  
Annual Openings: 5,757  
10-Year Growth: 21%

#### Software Developers

Median Wage: \$111,705  
Annual Openings: 15,324  
10-Year Growth: 36%

#### Computer Programmers

Median Wage: \$87,997  
Annual Openings: 1,176  
10-Year Growth: 4%

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/programs-of-study-additional-resources>

# Information Technology Career Cluster

## Statewide Program of Study: Programming & Software Development



### Course Information

#### Level 1

Course	Prerequisites   Corequisites	Local ID   Service ID
Computer Science I	<b>Prerequisites:</b> Algebra I or <b>Corequisites:</b> Algebra I <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>TA312 A/B</b> 03580200 (1 credit)

#### Level 2

Course	Prerequisites   Corequisites	Local ID   Service ID
Computer Science II	<b>Prerequisites:</b> Algebra I and either Computer Science I or Fundamentals of Computer Science (MS) <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>TA322 A/B</b> 03580300 (1 credit)
AP Computer Science A	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Algebra I <b>Recommended Corequisites:</b> None	<b>TA319 A/B</b> A3580110 (2 credits)

#### Level 3

Course	Prerequisites   Corequisites	Local ID   Service ID
AP Computer Science A	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Algebra I <b>Recommended Corequisites:</b> None	<b>TA319 A/B</b> A3580110 (2 credits)
Computer Science III	<b>Prerequisites:</b> Computer Science II, AP Computer Science A, or IB Computer Science SL <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>TA332 A/B</b> 03580350 (1 credit)
IB Computer Science SL	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Computer Science I, Algebra II <b>Recommended Corequisites:</b> None	<b>TA361 A/B</b> I3580200 (1 credit)

#### Level 4

Course	Prerequisites   Corequisites	Local ID   Service ID
Computer Science III	<b>Prerequisites:</b> Computer Science II, AP Computer Science A, or IB Computer Science SL <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>TA332 A/B</b> 03580350 (1 credit)
Independent Study in Technology Applications	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> A minimum of one credit from the courses in the Information Technology career cluster <b>Recommended Corequisites:</b> None	<b>TA712 A/B</b> 03580900 (1 credit)
IB Computer Science SL Year 2	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Computer Science I, Algebra II <b>Recommended Corequisites:</b> None	<b>TA371 A/B</b> I3580320 (1 credit)

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



# Law and Public Service Career Cluster

The Law and Public Service career cluster focuses on planning, managing, and providing legal services, public safety, protective services, and homeland security, including professional and technical support services. This career cluster includes occupations ranging from police officer and firefighter to political scientist and lawyer.

## Statewide Program of Study: Law Enforcement

The Law Enforcement program of study focuses on occupational and educational opportunities associated with the development and enforcement of laws by various branches of law enforcement. This program of study includes the history, organization, and functions of local, state, and federal law enforcement. Students will understand the role of constitutional law at local, state, and federal levels; the U.S. legal system; criminal law; and law enforcement terminology and the classification and elements of crime.

### Secondary Courses for High School Credit

- Level 1** • Complete High School Graduation Requirements
- Level 2** • Law Enforcement I **AND** Criminal Investigation
- Level 3** • Law Enforcement II **AND** Forensic Science
- Level 4** • Practicum in Law, Public Safety, Corrections, and Security

Successful completion of the Law and Public Service program of study will fulfill requirements of the Public Services endorsement.

### 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 towards concentrator/completer status for this program of study.

### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>• Shadow a detective to learn about investigations and the role of detectives in law enforcement</li> <li>• Intern in dispatch at a local law enforcement agency to learn about first responder roles and processes</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>• Visit a police department</li> <li>• Participate in TSA or SkillsUSA</li> </ul>

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### Example Postsecondary Opportunities

#### Apprenticeships

- Security Specialist

#### Associate Degrees

- Criminal Justice
- Law Enforcement

#### Bachelor's Degrees

- Forensic Science
- Criminal Justice

#### Master's, Doctoral, and Professional Degrees

- Criminal Justice
- Criminology and Criminal Justice

#### Additional Stackable IBCs/Licensures

- Jailer – Basic County Corrections
- Basic Telecommunicator



### Example Aligned Occupations

#### Police and Sheriff's Patrol Officers

Median Wage: \$64,373  
Annual Openings: 5,424  
10-Year Growth: 13%

#### Detectives and Criminal Investigators

Median Wage: \$82,090  
Annual Openings: 1,536  
10-Year Growth: 8%

#### First-Line Supervisors of Police and Detectives

Median Wage: \$97,571  
Annual Openings: 5,461  
10-Year Growth: 12%

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/programs-of-study-additional-resources>



# Law and Public Service Career Cluster

## Statewide Program of Study: Law Enforcement

### Course Information

#### Level 1

Course	Prerequisites   Corequisites	Local ID   Service ID
Complete High School Graduation Requirements		

#### Level 2

Course	Prerequisites   Corequisites	Local ID   Service ID
Law Enforcement I	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Law, Public Safety, Corrections, and Security <b>Recommended Corequisites:</b> None	<b>CTLW11</b> 13029300 (1 credit)
Criminal Investigation	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Law, Public Safety, Corrections, and Security <b>Recommended Corequisites:</b> None	<b>CTLW22</b> 13029550 (1 credit)

#### Level 3

Course	Prerequisites   Corequisites	Local ID   Service ID
Law Enforcement II	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Law Enforcement I <b>Recommended Corequisites:</b> None	<b>CTLW21</b> 13029400 (1 credit)
Forensic Science*	<b>Prerequisites:</b> One credit in Biology, one credit in Chemistry, Integrated Chemistry and Physics (IPC), or Physics <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CTL50 A/B (MHS)</b> <b>CTLW50 (Guthrie)</b> 13029500 (1 credit)

#### Level 4

Course	Prerequisites   Corequisites	Local ID   Service ID
Practicum in Law, Public Safety, Corrections, and Security*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>CLW82 A/B or CLW82 C/D</b> 13030100 (2 credits) 13030105 (3 credits)

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

# Manufacturing Career Cluster

The Manufacturing career cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and process engineering. This career cluster includes occupations ranging from welder and machinist to industrial engineering technician and semi-conductor processing technician.

## Statewide Program of Study: Welding

The Welding Program of Study focuses on the development and use of automatic and computer-controlled machines, tools, and robots that perform work on metal or plastic. CTE learners will learn how to modify parts to make or repair machine tools or maintain individual machines and how to use hand-welding or flame-cutting equipment.

### Secondary Courses for High School Credit

- Level 1** • Occupational Safety and Environmental Technology I
- Level 2** • Welding I
- Level 3** • Welding II
- Level 4** • Practicum in Manufacturing

*Successful completion of the Welding program of study will fulfill requirements of the Business and Industry endorsement.*

### 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 towards concentrator/completer status for this program of study.*

### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>• Job shadow a welder</li> <li>• Intern for a local welding company</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>• Tour a welding shop</li> <li>• Participate in SkillsUSA or TSA</li> <li>• Participate in a welding project that benefits the community</li> </ul>

### Aligned Industry-Based Certifications

- AWS D1.1 Structural Steel
- AWS D9.1 Sheet Metal Welding

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### Example Postsecondary Opportunities

#### Apprenticeships

- Welding

#### Associate Degrees

- Welding Technology
- Building/Construction Site Management
- Operations Management and Supervision

#### Bachelor's Degrees

- Welding Technology
- Construction Management
- Project Management
- Building/Construction Site Management

#### Master's, Doctoral, and Professional Degrees

- Engineering
- Engineering/Industrial Management
- Manufacturing Engineering
- Construction Engineering



### Example Aligned Occupations

#### **Welders, Cutters, Solderers, and Brazers**

Median Wage: \$48,177  
Annual Openings: 6,792  
10-Year Growth: 23%

#### **First-Line Supervisors of Production and Operating Workers**

Median Wage: \$62,584  
Annual Openings: 5,926  
10-Year Growth: 17%

#### **Industrial Production Managers**

Median Wage: \$119,691  
Annual Openings: 1,296  
10-Year Growth: 19%

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/programs-of-study-additional-resources>

# Manufacturing Career Cluster

## Statewide Program of Study: Welding

### Course Information

	Course	Prerequisites   Corequisites	Local ID   Service ID
Level 1	Occupational Safety and Environmental Technology I*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Manufacturing <b>Recommended Corequisites:</b> None	<b>CMF11 A/B</b> N1303680 (1 credit)
Level 2	Welding I*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Algebra I, Principles of Manufacturing, Occupational Safety and Environmental Technology I <b>Recommended Corequisites:</b> None	<b>CMF13 A/B</b> 13032300 (2 credits)
Level 3	Welding II	<b>Prerequisites:</b> Welding I <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Algebra I or Geometry <b>Recommended Corequisites:</b> None	<b>CMF23 A/B</b> 13032400 (2 credits)
Level 4	Practicum in Manufacturing*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Welding II <b>Recommended Corequisites:</b> None	<b>CMF82 A/B</b> 13033000 (2 credits)

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



# Transportation, Distribution, and Logistics Career Cluster

The Transportation, Distribution, and Logistics career cluster focuses on planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes transportation infrastructure planning and management, logistics services, and mobile equipment and facility maintenance. This career cluster includes occupations ranging from automotive mechanic, avionics technician, and automotive entrepreneur to pilots and logistics planning professionals.

## Statewide Program of Study: Automotive and Collision Repair

The Automotive and Collision Repair program of study focuses on the occupational and educational opportunities associated with servicing, repairing, and refinishing various types of vehicles. This program of study includes diagnosing and servicing vehicles and learning about processes, technologies, and materials used in reconstructing vehicles.

### Secondary Courses for High School Credit

- Level 1** • Occupational Safety & Environmental Technology I
- Level 2** • Automotive Technology I: Maintenance and Light Repair (Coming 2026-2027)
- Level 3** • Automotive Technology II: Automotive Service (Coming in 2027-2028)
- Level 4** • Practicum in Transportation Systems

Successful completion of the Automotive and Collision Repair program of study will fulfill requirements of the Business and Industry endorsement.

### Aligned Advanced Academic Courses

<b>Dual Credit</b>	Dual credit offerings will vary by local education agency.
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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 towards concentrator/completer status for this program of study.

### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>• Shadow an automotive technician at a car dealership</li> <li>• Intern at a rental car company and assist technicians with vehicle maintenance</li> <li>• Work at a local automotive repair shop and hold both customer service duties and automatic repair duties</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>• Join a related automotive association and attend events</li> <li>• Participate in SkillsUSA</li> </ul>

Spring Branch ISD does not discriminate 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 groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: Karen Heeth, Associate Superintendent for Talent/Administration, Wayne F. Schaper, Sr. Leadership Center, 955 Campbell Road, Houston TX 77024, 713-251-2346, [Karen.Heeth@springbranchisd.com](mailto:Karen.Heeth@springbranchisd.com). Further nondiscrimination information can be found at <https://online.springbranchisd.com/cte/index.html>



### Example Postsecondary Opportunities

#### Apprenticeships

- Automotive Technician Apprenticeship

#### Associate Degrees

- Automobile/Automotive Mechanics Technology
- Autobody/Collision and Repair Technology

#### Bachelor's Degrees

- Autobody/Collision and Repair Technology
- Heavy Equipment Maintenance Technology

#### Additional Stackable IBCs/License

- Automobile and Light Truck Certification (A1 – A9)



### Example Aligned Occupations

#### Automotive Service Technicians and Mechanics

Median Wage: \$44,809  
Annual Openings: 6,285  
10-Year Growth: 10%

#### Bus and Truck Mechanics and Diesel Engine Specialists

Median Wage: \$50,967  
Annual Openings: 3,096  
10-Year Growth: 19%

#### First-Line Supervisors of Mechanics, Installers, and Repairers

Median Wage: \$66,535  
Annual Openings: 5,019  
10-Year Growth: 19%

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/programs-of-study-additional-resources>

# Transportation, Distribution, and Logistics Career Cluster

## Statewide Program of Study: Auto Technician



### Course Information

Level	Course	Prerequisites   Corequisites	Local ID   Service ID
Level 1	Occupational Safety and Environmental Technology I*	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Manufacturing <b>Recommended Corequisites:</b> None	<b>CMF11 A/B</b> <b>N1303680 (1 credit)</b>
Level 2	Automotive Technology I: Maintenance and Light Repair	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Occupational Safety and Environmental Technology I <b>Recommended Corequisites:</b> None	<b>TBD</b> <b>13039600 (2 credits)</b>
Level 3	Automotive Technology II: Automotive Service	<b>Prerequisites:</b> Automotive Technology I: Maintenance and Light Repair <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>TBD</b> <b>13039700 (2 credits)</b>
Level 4	Practicum in Transportation Systems*	<b>Prerequisites:</b> Automotive Technology II: Automotive Service <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	<b>TBD</b> <b>13040450 (2 credits)</b>

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



**Level 1** Naval Science I and  
Lifetime Fitness and Wellness Pursuits

**Level 2** Naval Science II and  
Student Leadership

**Level 3** Naval Science III

**Level 4** Naval Science IV

The NJROTC accredited curriculum emphasizes citizenship and leadership development, as well as our maritime heritage, the significance of sea power, and naval topics such as the fundamentals of naval operations, seamanship, navigation and meteorology. Classroom instruction is augmented throughout the year by extra-curricular activities of community service, academic, athletic, drill and orienteering competitions, field meets, flights, visits to naval bases and other activities, marksmanship sports training, and physical fitness training.

### NAVAL SCIENCE I AND LIFETIME FITNESS AND WELLNESS PURSUITS

Grades: 9-12

Students receive an introduction to the NJROTC and US Navy including leadership; citizenship and the American government; wellness, fitness, and first aid to include diet, exercise and drug awareness; introduction to geography, orienteering, survival and map reading skills.

School: Guthrie

Credit/Course ID: 1 / 03160100 / NS102A/B AND AD393 A/B (if PE is needed)

1 / 03820101 / NS102 C/D AND AD393 A/B (if PE is not needed)

### NAVAL SCIENCE II AND STUDENT LEADERSHIP

Grades: 10-12

Students have ongoing instruction about maritime history and naval sciences including maritime geography, oceanography, meteorology, astronomy and physical sciences.

School: Guthrie

Credit/Course ID: 1 / 03160200 / NS202A/B AND 1 / N1290010 / ADNS2A/B

### NAVAL SCIENCE III

Grades: 11-12

Students explore sea power and national security, Naval operations and support functions, Military law and international law, and the sea. Additionally, an understanding of basic seamanship, navigation, Naval weapons and aircraft.

School: Guthrie

Credit/Course ID: 1 / 03160300 / NS302 A/B AND 1 / 85000XXX / AD342 C/D

### NAVAL SCIENCE IV

Grade: 12

Students gain an understanding of theoretical and applied aspects of leadership, training, and evaluation of performance. Students learn techniques to create motivation, develop goals and activities for a work group, and proper ways to set a leadership example. School:

Guthrie

Credit/Course ID: 1 / 03160400 / NS402 A/B AND 1 / 85000XXX / AD342 C/D



- District and Campus leadership supports and has a deep understanding of CTE programs
- Knowledgeable counselors
- Administration understands sequenced programming MS through HS



- Facilities that meet current industry relevant standards
- Enterprise Opportunities
- Quality equipment that is accessed and inventoried
- Program accreditation



- Quality, engaging classroom learning experiences for students
- Educators equipped with current industry knowledge via industry certifications and/or Job Shadowing/Externship opportunities

2025



2026



- Teachers collaboration through PLCs
- Curriculum aligned to industry standards/skills
- Professional growth opportunities for teachers
- Implementation of TEA programs of study
- Industry standard certifications

- Student leadership opportunities through CTSO participation
- Authentic opportunities for student engagement with Business & Industry Partners
- Implemented Business Partner Framework
- CTE Advisory Board

- Equity for all students
- K-12 Career Exploration
- 1:1 post-secondary planning conversations MS through HS
- Recruitment and Marketing that informs and engages students about CTE programming
- Academic content integrated into CTE

