# **CAREER & TECHNICAL EDUCATION**

# PROGRAMS **OFSTUDY** 2024-2025 TOMORROW'S WORKFORCE

STUDENTS,



# SANTA FE ISD



TODAY'S

Agriculture, Food & Natural Resources

\*Animal Science

- \*Ag Technology & Mechanical Systems
- \*Plant Science



\*Culinary Arts



Architecture & Construction

\*Carpentry



Arts, A/V Technology & Communications

\*Graphic Design & Interactive Media



Human Services

\*Cosmetology \*Family & Community Services



Marketing, & Finance \*Business, Lodging &

Tourism Management



Law, Public Safety, Corrections & Security \*Law Enforcement



\*Teaching

Health Science

\*Diagnostic &

Therapeutic Services \*Nursing Science



Manufacturing

\*Welding





Our Community. Our Legacy. OUR FUTURE.

Information

Technology

\*Computer

Science



# Annual Public Notification of Nondiscrimination

Santa Fe Independent School District (SFISD)offers career and technical education programs (CTE) in Agriculture, Food & Natural Resources; Architecture & Construction; Arts, Audio Visual Technology & Communications; Business, Marketing & Finance; Education & Training; Health Science; Hospitality & Tourism; Human Services; Information Technology; Law & Public Service; Manufacturing; and Science, Technology, Engineering & Math. Admission to these programs is based on student interest and teacher/space availability in SFISD CTE programs.

SFISD 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 as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended.

It is the policy of SFISD not to discriminate on the basis of race, color, national origin, sex, handicap, or age in its employment practices as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; the Age Discrimination Act of 1975, as amended; and Section 504 of the Rehabilitation Act of 1973, as amended.

SFISD will take steps to assure that lack of English language skills will not be a barrier to admission and participation in all educational and vocational programs.

For information about your rights or grievance procedures, contact the Title IX Coordinator at 4133 Warpath Drive, Santa Fe, TX 77510, 409-925-9010, and/or the Section 504 Coordinator at 4133 Warpath Drive, Santa Fe, TX 77510, 409-925-9050.



# BUILDING ON THE FOUNDATION GRADUATION PLAN High School Graduation Endorsements



# FOUNDATION GRADUATION REQUIREMENTS:

Development

□ Welding

English: 4 credits • Math: 3 credits • Science: 3 credits • Social Studies: 3 credits Foreign Language: 2 credits • P.E.: 1 credit • Fine Arts: 1 credit • Electives: 5 credits

•				
Arts & Humanities	<b>Business &amp; Industry</b>	Multidisciplinary	Public Services	Science, Technology, Engineering & Math
A student may earn this endorsement by completing the following:	A student may earn this endorsement by completing the following:	A student may earn this endorsement by completing the following:	A student may earn this endorsement by completing the following:	A student may earn this endorsement by completing the following:
The Foundation Graduation Requirements <b>and</b>	The Foundation Graduation Requirements <b>and</b>	The Foundation Graduation Requirements <b>and</b>	The Foundation Graduation Requirements <b>and</b>	The Foundation Graduation Requirements including Algebra II, Chemistry & Physics and
*1 additional credit in math	*1 additional credit in math	*1 additional credit in math	*1 additional credit in math	*1 additional credit in math
*1 add'l credit in science, CTE Science or approved elective	*1 additional credit in science or CTE Science	*1 additional credit in science or CTE Science	*1 additional credit in science or CTE Science	*1 additional credit in science or CTE Science
*2 additional electives	*2 additional electives	*2 additional electives	*2 additional electives	*2 additional electives
Plus one of the following options	Plus one of the following <u>options</u>	Plus one of the following options	Plus one of the following <u>options</u>	Plus one of the following options CTE Option
Fine Arts Option A coherent sequence of four (4) credits from one (1) of the following areas OR four (4) credits consisting of two (2) sequential credits from two (2) of the following areas:	CTE Option A coherent sequence of courses for four (4) or more credits in a CTE Program of Study including: • At least one Advanced Career & Technical Education (CTE) course, and • A sequence of courses from one of the following Program: • Ag Animal Science • Ag Plant Science • Ag Plant Science • Ag Tech & Mechanical Systems • Business Management • Carpentry • Culinary Arts • Graphic Design	4X4 Option Four (4) credits in each of the four foundation subject areas (English, math, science & social studies), including English IV and chemistry and/or physics Advanced CTE Course Option Four (4) Advanced CTE courses that prepare a student to enter the work-force or postsecondary education successfully without remediation from within one endorsement area or among endorsement areas that are not in a coherent sequence College Level Course Option Four (4) credits in College	CTE Option A coherent sequence of courses for four (4) or more credits in a CTE Program of Study including: • At least one Advanced CTE course, and • A sequence of coursesfrom one of the following Programs of Study: • Cosmetology • Family & Community Services • Health Care • Law Enforcement • Nursing Science • Teaching & Training	<ul> <li>A coherent sequence of courses for four (4) or more credits in a CTE Program of Study, including:</li> <li>At least one Advanced CTE course, and</li> <li>A sequence of courses from one of the following Programs of Study <ul> <li>Ag Animal Science</li> <li>Ag Plant Science</li> <li>Ag Plant Science</li> <li>Ag Tech &amp; Mechanical</li> <li>Health Care</li> <li>Nursing Science</li> <li>Information Technology</li> </ul> </li> <li>Mathematics Option <ul> <li>Five (5) math credits (total), two (2) of which have Algebra II as a prerequisite</li> </ul> </li> <li>Science Option <ul> <li>Five (5) science credits (total) including physics and chemistry</li> </ul> </li> </ul>
Five (5) social studies credits	□ Lodging & Tourism □ Programming & Software	Board Advanced Placement or dual credit courses, selected		Combination Option A coherent sequence of three (3)

from English, math, science,

foreign language or fine arts.

social studies, economics,

A coherent sequence of three (3) additional credits from no more than two of the options above



# 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 a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

# **Agricultural Technology & Mechanical Systems** Statewide Program of Study



The Agricultural Technology & Mechanical Systems program of study explores the occupations and educational opportunities associated with applying knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing agricultural products. This program of study may also include exploration into diagnosing, repairing, or overhauling farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.

# Secondary Courses for High School Credit

#### Level 1

Principles of Agriculture, Food, and Natural Resources

#### Level 2

Agricultural Mechanics and Metal Technologies

# Level 3

Agricultural Structures Design and Fabrications/Lab

#### Level 4

# Practicum in Agriculture, Food, and Natural Resources

- **Recommended Elective**
- Agricultural Leadership, Research & Communications



### Postsecondary Opportunities

#### **Associates Degrees**

- Heavy Equipment Maintenance Technology/ Technician
- Agricultural Mechanization, General
- Small Engine Mechanics and Repair Technology/ Technician
- Welding Technology/ Welder

#### **Bachelor's Degrees**

- Agricultural Engineering
- Agricultural Mechanization, General
- Agricultural Education
- **Construction Technology**

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

- Agricultural Engineering
- Agricultural Mechanization, General
- Masters of Business Administration

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

	Exploration Activities	Work-Based Learning Activities
•	Tour a farm products or machinery plant Participate in Texas FFA	<ul> <li>Earn a welding certification</li> <li>Intern at a farm products or machinery plant</li> </ul>
	THAT IS	<ul> <li>Participate in an FFA supervised agriculture experience</li> </ul>



# **Related Industry-Based Certifications**

- Agriculture Mechanics
- API 1104 Welding Pipelines and Related Facilities AWS Certified Welder
- AWS D1.1 Structural Steel
- AWS D9.1 Sheet Metal Welding
- AWS SENSE Level 1: Entry Welder
- Feedyard Technician in Machinery Operation, Repair and Maintenance
- General Welding Job Ready
- Industrial Technology Maintenance (ITM) -Maintenance Welding
- Machining Measurement, Material, and Safety Level I
- NCCER Core
- NCCER Welding Level I
- OSHA General 30\*



**Aligned Occupations** 

Occupations	Median Wage	Annual Openings	% Growth
Outdoor Power Equipment and Other Small Engine Mechanics	\$32,406	366	16%
Welders	\$41,350	6171	9%
Farm Equipment Mechanics and Service Technicians	\$39,915	304	17%
Mobile Heavy Equipment Mechanics	\$47,299	1627	16%
Agricultural Engineers	\$64,792	9	13%

Successful completion of the Applied Agricultural Engineering program of study will fulfill requirements of a Business & Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – January 5,2024



AWS

**American Welding Society** 

# AFNR- Agricultural Technology & Mechanical Systems Course Information

	KEY	COURSE NAME	SERVICE ID	PREREQUISITES	CREDIT	FEE
1	PRINAF	Principles of Agriculture, Food, and Natural Resources	13000200	None	1	\$0
To be prepared for careers in agriculture, food, and natural resources, students must attain academic skills a agriculture. This course allows students to develop knowledge and skills through hands-on activities in caree personal development, globalization, industry standards, details, practices, and expectations.						-
	AGMECH	Agricultural Mechanics and Metal Technologies	13002200	Pre- or Co-Req: Prin. AFNR	1	\$40
LEVEL 2	This course is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metal working techniques. This course will also develop a student's skills in metal equipment assembly and joining processes, install electric wiring components and fixtures, install plumbing equipment and fixtures, reinforce/place/finish and cure concrete, use basic carpentry skills, plan and install fences, perform appropriate cold and hot metal techniques, develop welding skills. <b>Certification Preparation: American Welding Society</b>					
	AGSDFL	Agricultural Structures Design and Fabrications	13002310	Ag Mech & Metal Tech	2	\$40
<b>LEVEL 3</b>	This course is a continuation of Agricultural Mechanics and Metal Technology. Students will learn how to apply appropriate technology to metal construction related to agricultural structures design and fabrication. They will also gain further knowledge in the different types of power systems used in agricultural facilities. Career opportunities, entry requirements, and industry expectations in this field will be explored. <b>Certification Preparation: American Welding Society, and/or OSHA 30 hour.</b>					
	PRACAT	Practicum in AFNR-Ag Tech & Mechanics	13002500	2 credits in AFNR; Employment or Project Proposal	2	\$40
EL 4	Students will demonstrate under supervision the practical application of knowledge and skills in agricultural mechanics, structures, fabrication and leadership. APPLICATION REQUIRED					
LEVEL	PRACAF	Practicum in AFNR- Ag Barn	13002500	1 AFNR Class; Transportation	2	\$0
Students will demonstrate under supervision the practical application of knowledge and skills of the daily ac the Ag Science Facility AND either be employed in a related job or submit an individual project proposal for the handling live animals in this class, which may lead to injury.						
Ч	AGLEAD	Ag Leadership, Research, & Com	13001500	FFA Membership	1	\$0
ELECTIVE	Agricultural Leadership, Research and Communications focuses on challenging students to use higher level thinking skills, develop leadership abilities, employ standard research principles, and communicate agricultural positions effectively with all stakeholders.					

FOR ADDITIONAL INFORMATION ON THE AGRICULTURE, FOOD, AND NATURAL RESOURCE CAREER CLUSTER, PLEASE CONTACT: <u>CTE@sfisd.org</u> or visit our webpage: <u>https://www.sfisd.org/departments/career-and-technical-education</u>

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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 a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

# **Animal Science** Statewide Program of Study



The Animal Science program of study focuses on the science, research, and business of animals and other living organisms. It teaches CTE learners how to apply 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 may also research and analyze the growth and destruction of species and research or diagnose diseases and injuries of animals.

# Secondary Courses for High School Credit

#### Level 1

Principles of Agriculture, Food, and Natural Resources

#### Level 2

- Small Animal Management (1 semester) AND
- Equine Science (1 semester)

#### Level 3

- **Livestock Production**
- Veterinary Medical Applications

#### Level 4

- Advanced Animal Science
- Practicum in Agriculture, Food, and Natural Resources-Vet Med
- Practicum in Agriculture, Food, and Natural Resources- Ag Barn

#### Recommended Electives(s)

- Wildlife, Fisheries and Ecology Management
- Agricultural Leadership, Research, and Communications

# **Postsecondary Opportunities**

#### **Associates Degrees**

# Master's, Doctoral, and

Technology **Veterinary Studies** Biotechnology Laboratory

Food Science and

- Sciences
- Technician
- Biology Technician

### **Bachelor's Degrees**

- **Animal Sciences**
- Agriculture
- Biology
- Zoology/ Animal Biology

- **Professional Degrees Biological & Physical** 

  - **Biological & Biomedical** Sciences
  - Genetics
  - Veterinary Medicine

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

Exploration Activities	Work-Based Learning Activities		
Participate in Texas	Compete in an Agri-		

- - FFA
- Science Fair 4H
- Volunteer at a local farm or with a veterinarian

# **Related Industry-Based Certifications**

- Agricultural Biotechnology
- Certified Veterinary Assistant, Level 1
- Elanco Fundamentals of Animal Science Certification
- Elanco Veterinary Medical Applications Certification
- **Equine Management & Evaluation Certification**
- Feedyard Technician in Cattle Care and Handling
- Licensed Veterinary Technician
- Production Agriculture Job Ready
- Small Animal Science and Technology







Aligned Occupations	Median Wage	Annual Openings	% Growth
Animal Breeders	\$39,139	28	9%
Animal Scientists	\$57,533	22	12%
Medical Scientists	\$63,898	435	27%
Veterinarians	\$93,496	294	24%
Zoologists and Wildlife Biologists	\$67,309	45	32%

Successful completion of the Animal Science program of study will fulfill requirements of a Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – January 5,2024





	AFNR-Animal Science - Course Information						
	KEY	COURSE NAME	SERVICE ID	PREREQUISITES	CREDIT	FEE	
с Н	PRINAF	Principles of AFNR	13000200	None	1	\$0	
LEVEL	To be prepared for careers in agriculture, food, and natural resources, students will attain academic skills and knowledge in agriculture. This course allows students to develop knowledge and skills through hands-on activities in career opportunities, personal development, globalization, industry standards, details, practices, and expectations.						
	SMAMGT	Small Animal Management	13000400	Principles of AFNR	0.5	\$0	
2	Students will enhance academic knowledge and skills, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, animal ownership, and industry expectations. Students may be handling live animals in this class, which may lead to injury.						
LEVEL	EQUINE	Equine Science	13000500	Principles of AFNR	0.5	\$0	
-	Equine Science develops knowledge and skills pertaining to the nutrition, reproduction, health, and management of the equine species, including, but not limited to horses, donkeys, and mules. Students identify breeds, colors, and markings of an equine species, evaluate conformation and performance, develop Course Feed rations, analyze internal and external anatomies, review basic grooming and health practices, and address training and handling practices. <b>Students may be handling live animals in this class, which may lead to injury.</b>						
	LIVEPR	Livestock Production	13000300	SAM & Equine Science	1	\$0	
	Animal species to be addressed in this course may include, but are not limited to, beef cattle, dairy cattle, swine, sheep, goats, and poultry. Students may be handling live animals in this class, which may lead to injury.						
/EL 3	VETMED	Veterinary Medical Applications	s 13000600	SAM, Equine, or Livest Prod	1	\$0	
LEVEL	This course provides training in the veterinary assistant field. Students develop technical skills in health, nutrition, examinations, diseases, sanitation and regulatory programs of both large and small animal species. The course includes but is not limited to, animal handling and restraint, health and safety, sanitation and surgical preparation, anatomy, physiology, medical terminology, infectious disease, instrument handling and equipment identification, vaccine preparation and injection techniques, laws and ethics and veterinary office practices. Students may be handling live animals in this class, which may lead to injury.						
	ADVANI	Advanced Animal Science	13000700Biol; Chem or IPC; Alg I; Geom; SAM, Equine, or Livestock Prod1Science		\$0		
	Advanced Animal Science examines the interrelatedness of human, scientific, and technological dimensions of livestock production. To prepare for success, students will learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. <b>Students</b> may be handling live animals in this class, which may lead to injury.						
EL 4	PRACVT	Practicum in AFNR-Veterinary	13002500	Vet Med Apps	2	\$0	
LEVEL	Students will continue training in Veterinary Medical Applications to earn their American Vet Medical Association Veterinary Assistant Certificate. Students may be handling live animals in this class, which may lead to injury.						
	PRACAF	Practicum in AFNR- Ag Barn	13002500	1 AFNR Class; Transportation	2	\$0	
	Students will demonstrate under supervision the practical application of knowledge and skills of the daily activities and maintenance of the Ag Science Facility AND either be employed in a related job or submit an individual project proposal for their practicum. Students may be handling live animals in this class, which may lead to injury.						
	WFEEGT	Wildlife, Fish & Ecology Mgmt	13001500	None	1	\$15	
ELECTIVE	related to curre	mines the management of game and ent agricultural practices. Students m I additional fee.					
ELEC	AGLEAD	Ag Leadership, Research, & Con	n 13001500	FFA Membership	1	\$TBD	
	-	adership, Research and Communica rship abilities, employ standard res	earch principles, ar	nd communicate agricultural positi	ons effectively v		
	FOR ADDITIONAL INFORMATION ON THE AGRICULTURE, FOOD, AND NATURAL RESOURCE CAREER CLUSTER.						

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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 a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

# **Plant Science** Statewide Program of Study



The Plant Science program of study focuses on the science, research, and business of plants and other living organisms. It teaches students how to apply 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**

- Level 1 Principles of Agriculture, Food, and Natural Resources Level 2
- Floral Design (TX level 3)
- Level 3
- Advanced Floral Design (TX level 4)
- Level 4

Practicum in Agriculture, Food, and Natural Resources-Floral Recommended Electives(s)

Agricultural Leadership, Research & Communications



### **Postsecondary Opportunities**

#### **Associates Degrees**

- Applied Horticulture/ Horticulture Operations, General
- **Ornamental Horticulture**
- Agricultural Business and Management, General
- Turf and Turfgrass Management

#### **Bachelor's Degrees**

- Applied Horticulture/ Horticulture Operations, General
- Agronomy and Crop Science
- Agricultural Business and Management, General
- Turf and Turfgrass Management

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

- Applied Horticulture/Horticulture Operations, General
- Agronomy and Crop Science
- Agricultural Business and Management, General
- Farm/Farm and Ranch Management

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

Exploration Activities	Work-Based Learning Activities		
Participate in Texas     FFA     FFA	<ul> <li>Work at a florist or landscaper business</li> <li>Participate in an FFA</li> </ul>		



# supervised agriculture experience

### **Industry-Based Certifications**

- Agricultural Biotechnology
- **BASF Plant Science Certification**
- Commercial/Non-Commercial Pesticide Applicator
- Commercial/Noncommercial Pesticide Applicator "Vegetation Management" License
- Horticulture Landscaping Job Ready
- Landscape Irrigator
- Principles of Floral Design Certification -Benz School
- Production Agriculture Job Ready
- Texas Certified Landscape Associate (TCLA)
- **Texas Certified Nursery Professional**
- Texas State Florist's Association Knowledge Based Floral Certification
- Texas State Florist's Association Level I Floral Certification
- Texas State Florist's Association Level II Floral Certification



Benz School of Floral Design Principles of Floral Design Certification

# **Aligned Occupations**

Occupations	Median Wage	Annual Openings	% Growth
Soil and Plant Scientists	\$54,662	116	21%
Tree Trimmers and Pruners	\$32,240	589	14%
Pesticide Handlers, Sprayers, and Applicators	\$36.733	196	22%
Landscaping Supervisors	\$44,408	807	19%
Biological Technicians	\$42,931	452	17%

Successful completion of the Plant Science program of study will fulfill requirements of a Business and Industry Endorsement or STEM Endorsement if the math and science requirements are met. Revised – January 5, 2024



# Plant Science Course information

	KEY	COURSE NAME	SERVICE ID	PREREQUISITES	CREDIT	FEE	
L 1	PRINAF	Principles of Agriculture, Food, and Natural Resources	13000200	None	1	\$0	
IEVEL	agriculture. Th	d for careers in agriculture, food, and natural reso nis course allows students to develop knowledge a lopment, globalization, industry standards, details	nd skills through	hands-on activities in		-	
	FLORAL	Floral Design (TX LEVEL 3)	13001800	None	1 Fine Art	\$50	
LEVEL 2	This course is designed to develop students' ability to identify and demonstrate the principles and techniques related to floral design, as well as develop an understanding of the management of floral enterprises. Through the analysis of artistic floral styles and historical periods, students develop respect for the traditions and contributions of diverse cultures. Students will create and analyze floral designs, thus contributing to the development of lifelong skills of making informed judgements and evaluations.						
	FLORAD	Advanced Floral Design (TX LEVEL 4)	N1300270	Floral Design	1	\$35	
Students build on the knowledge from Floral Design and are introduced to more advanced floral design concepts, with an emphasis on specialty designs and specific occasion planning. This course focuses on building skills in advanced floral design and providing students with a thorough understanding of the design elements and planning techniques used to produce unique specialty floral designs that support the goals and objectives of a specific occasion or event. Through the analysis are evaluation of various occasion and event types, students explore the design needs and expectations of clients and propose and evaluate appropriate creations. From conception to evaluation, students are challenged to create and design appropriate specialty floral designs that meet the needs of the client. Furthermore, an emphasis on budgetary adherence and entrepreneurship equips students with many of the necessary skills needed for success in floral enterprises.						al design oduce alysis and propose	
	PRACFL	Practicum in Agriculture, Food, and Natural Resources-Floral Design	13002500	Pre- or Co-Req: Adv. Floral Des.	2	\$0	
LEVEL 4	In this course, students build on the knowledge from the Floral Design course and are introduced to the SFHS entrepreneurship program, Indian Blooms. This program is geared for students who have an interest in more advanced floral design concepts, with an emphasis on specialty designs and specific occasion planning. Students should have an interest in the floral design process from start to finish including customer service.						
	PRACAF	Practicum in AFNR- Ag Barn	13002500	1 AFNR Class; Transportation	2	\$0	
	Students will demonstrate under supervision the practical application of knowledge and skills of the daily activities and maintenance of the Ag Science Facility AND either be employed in a related job or submit an individual project proposal for their practicum. <b>Students may be</b> handling live animals in this class, which may lead to injury.						
	AGLEAD	Ag Leadership, Research, & Communication	13001500	FFA Membership	1	\$0	
ELECTIVE		adership, Research and Communications focuses on o ities, employ standard research principles, and comm					

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# Architecture and Construction Career Cluster



The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment.

# **Carpentry** Statewide Program of Study



The Carpentry program of study explores the occupations and educational opportunities related to constructing, installing, or repairing structures and fixtures made of wood, such as concrete forms (including frameworks, partitions, joists, studding, rafters, and stairways). This program of study may also include exploration into 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

#### AND/OR

Career Preparation I

# **Postsecondary Opportunities**

#### **Associates Degrees**

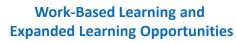
- Carpentry/Carpenter
- Industrial Mechanics and Maintenance Technology

### **Bachelor's Degrees**

Construction Science

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

Construction Management



Exploration Activities	Work-Based Learning Activities
<ul> <li>Shadow a carpenter or millwright</li> <li>Participate in</li> </ul>	<ul> <li>Obtain an NCCER certification in Carpentry Level 1</li> </ul>
SkillsUSA	



# **Industry-Based Certifications**

- NCCER Carpentry Level I
- NCCER Carpentry Level II
- NCCER Construction Technology Certification Level I
- NCCER Core
- NCCER Painting: Commercial and Residential Level I
- OSHA 30 Hour Construction
- OSHA 30 Hour General





# **Aligned Occupations**

Occupations	Median Wage	Annual Openings	% Growth
Carpenters	\$35,922	5,031	26%
Cost Estimators	\$63,939	2,239	21%



# Carpentry Course Information

	KEY         COURSE         SERVICE ID         PREREQUISITES         CREDIT         FEE									
	PRINCO	Principles of Construction	13004220	None	1	\$25				
Level 1	Principles of Construction provides an introduction and lays a solid foundation for those students entering the construction or craft-skilled areas. The course provides a strong knowledge of construction safety, construction mathematics, and common hand and power tools. This course also provides communication and occupation skills to assist the student in obtaining and maintaining employment.									
2	CNTEC1	Construction Technology I	13005100	Pre- or Coreq: Princ of Construction;	2	\$25				
In Construction Technology I, students gain knowledge and skills needed to enter the workforce as carpenters or buildi maintenance supervisors or to prepare for a postsecondary degree in carpentry, construction management, architectu or engineering. Students will expand knowledge and skills in safety, tool usage, building materials, codes, and framing.										
	CNTEC2	Construction Technology II	13005200	Construction Tech I; NCCER Core	2	\$25				
Level 3	In Construction Technology II, students will gain advanced knowledge and skills needed to enter the workforce as carpenters, building maintenance technicians, or supervisors or to increase preparedness for a postsecondary degree in carpentry, construction management, architecture, or engineering. Students will build on the knowledge base from Construction Technology I and are introduced to exterior and interior finish out skills.									
	PRACCT	Practicum in Construction Technology	13005250	Construction Tech II	2	\$25				
	In Practicum in Construction Technology, students will be challenged with the application of knowledge and skills gained in previous construction-related coursework. In many cases students will be allowed to work at a job (paid or unpaid) outside of school or be involved in local projects the school has approved for this class.									
Level 4	EXCAR1	Extended Career Preparation I	12701305	16 or older, Con Tech I; Employment in CT field	3	\$0				
	THIS CLASS IS FOR STUDENTS EMPLOYED IN A JOB RELATED TO THEIR PROGRAM OF STUDY. Students learn general employability skills as a group and receive individual training that will address their job specific knowledge and skills. The curriculum is designed to enhance communication and interpersonal skills. Students are required to work a minimum of 15 hours per week at an approved training site. This course is designed to assist students seeking career experience in a vast array of careers. Students must provide their own transportation and may have early release for 2 periods.									

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# Arts, Audio/Video Technology, and Communications Career Cluster

The Arts, A/V Technology and Communications (AAVTC) Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in the AAVTC career cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication.

# **Graphic Design & Interactive Media** Statewide Program of Study



The Graphic Design and Interactive Media program of study explores the occupations and educational opportunities associated with designing or creating graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. This program of study may also include exploration into 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

#### Level 1

Digital Media

#### Level 2

- Graphic Design and Illustration I
- Graphic Design and Illustration I-Yearbook
- Commercial Photography I (Elective)

#### Level 3

Graphic Design and Illustration II

#### OR

Graphic Design and Illustration II-Yearbook

#### Level 4

- Practicum in Graphic Design and Illustration AND/OR
- **Career Preparation I**







# Postsecondary Opportunities

#### Associates Degrees

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

#### **Bachelor's Degrees**

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

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

- Animation, Interactive Technology, Video Graphics and Special Effects
- Graphic Design
- Intermedia/Multimedia

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

Exploration Activities	Work-Based Learning Activities
Join a website	<ul> <li>Intern with a</li></ul>
development or	multimedia or

- coding club Participate in SkillsUSA or TSA
- animation studio
- Obtain a certificate or certification in graphic design

### **Industry-Based Certifications**

- Adobe Certified Professional Animate\*
- Adobe Certified Professional in Digital Video Using Adobe Premiere Pro
- Adobe Certified Professional in Graphic Design and Illustration Using Adobe Illustrator
- Adobe Certified Professional in Print and Digital Media Publication Using Adobe InDesign
- Adobe Certified Professional in Visual Design
- Adobe Certified Professional in Visual Design Using Adobe Photoshop
- Adobe Certified Professional In Visual Effects and Motion Graphics Using Adobe After Effects
- Audio-Visual Communications Job Ready
- Autodesk Associate (Certified User) 3ds MAX
- **Certified Professional Photographer**
- Graphic Production Technology Job Ready



# Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Graphic Designers	\$44,824	1,433	15%
Multimedia Artists and Animators	\$67,392	186	21%



# **AAVT&C – GRAPHIC DESIGN & INTERACTIVE MEDIA**

# **COURSE INFORMATION**

	KEY	COURSE	SERVICE ID	PREREQUISITES	CREDIT	FEE		
	DIMEDI	Digital Media	13027800	None	1	\$10		
Level 1	address custon	Students will analyze and assess current and emerging technologies, while designing and creating multimedia projects that address customer needs. Students will develop proficiencies in photography, designing, importing, and manipulating text, graphics, audio, video, and animation while developing digital and interactive projects.						
	GRAPHD YRBK1	Graphic Design and Illustration I OR Yearbook	13008800	Pre- or Co-Req: Dig Media	1	\$10		
Level 2	this context, in be expected to and design. Yea	hic design and illustration span all as addition to developing knowledge a develop an understanding of the inc arbook students will apply graphic de ead of campus projects.	nd skills needed f dustry with a focu	for success in the AAVT&C Ca is on fundamental elements	areer Cluste and princip	er, students will les of visual art		
	CPHOT1	Commercial Photography I	13009100	None	1	\$10		
		ve in this program of study, students cial photography industry with a focu			develop an	understanding		
m	GRAPH2 YRBK2	Graphic Design and Illustration II OR -Yearbook II	13008910	Graphic Design and Illustration I	2	\$10		
Level 3	This 2-period class expands on the knowledge and skills learned in Graphic Design & Illustration I. Students will develop an advanced understanding of the industry with a focus on mastery of content knowledge and skills. Yearbook students will apply graphic design knowledge and skills into the production of current year's yearbook instead of campus projects.							
	PRACGD	Practicum in Graphic Design & Illustration	13009000	Graphic Design & Illustration I	2	\$10		
	Students learn general employability and technical skills required for success in the graphic design industry. Students may have a paid or unpaid internship as part of this course but must provide their own transportation.							
Level 4	EXCAR1	Extended Career Preparation I	12701305	16 or older, GDI II; Employment in GD field	3	\$0		
-	THIS CLASS IS FOR STUDENTS EMPLOYED IN A JOB RELATED TO THEIR PROGRAM OF STUDY. Students learn general employability skills as a group and receive individual training that will address their job specific knowledge and skills. The curriculum is designed to enhance communication and interpersonal skills. Students are required to work a minimum of 15 hours per week at an approved training site. This course is designed to assist students seeking career experience in a vast array of careers. Students must provide their own transportation and may have early release for 2 periods.							
Stud prov com be us resp copy	PARENT DISCLOSURE STATEMENT: ADOBE CREATIVE CLOUD (ACC) Students enrolled in these classes will be assigned access to ACC as part of their educational experience. ACC provides a suite of powerful digital tools used for creative projects, design, and multimedia production. Adobe complies with data a privacy regulations and ensures that student information is protected. While in class, it will be used for educational purposes only and use will be monitored by teachers. We teach and encourage only responsible use of these tools, and students are required to adhere to SFISD and Adobe acceptable use policies and copyright guidelines. Parent approval of a student's schedule implies acceptance of the student's use of Adobe Creative Cloud.							

FOR ADDITIONAL INFORMATION ON THE ARTS, AUDIO/VIDEO TECHNOLOGY, AND COMMUNICATIONS CAREER CLUSTER, PLEASE CONTACT: <u>CTE@sfisd.org</u> or visit our webpage: <u>https://www.sfisd.org/departments/career-and-technical-education</u>

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# **Business & Hospitality 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.

# Business, Lodging & Tourism Management Statewide Program of Study



The Business, Lodging & Tourism Management program of study blends the general business and tourism industry. Students are introduced to occupations and educational opportunities related to the marketing or sales of travel and tourism businesses and services. This program of study allows students to learn how to plan, direct, and coordinate marketing or business policies and programs, including identifying potential customers and determining demand and promotional strategies for products and services. Work-Based Learning and

# Secondary Courses for High School Credit

### Class of 2025 & 2026

#### Level 1

 Principles of Business (retiring)

### Level 2

Business Information Mgmt

#### Level 3

- Business Management
   Level 4
- Practicum in Entrepreneurship
- Career Preparation I

#### Recommended Elective

- Business English (4<sup>th</sup> English()
- Statistics & Business Decision Making

#### Class of 2027 & 2028 Level 1

# Principles of Hospitality & Tourism Level 2

- Travel & Tourism Mgmt (2025-26)
   Level 3
- Intro to Event/Meeting Planning
- Tourism Marketing Concepts & Applications (2026-2027)

### Level 4

- Practicum in Entrepreneurship
- Career Preparation I
- Recommended Elective
- Business English (4<sup>th</sup> English credit)
- Statistics & Business Decision Making

# **Postsecondary Opportunities**

### **Associates Degrees**

- Business Administration
- Business/Commerce
- Public Administration
- Business Management

### **Bachelor's Degrees**

- Business Administration
- Business/Commerce
- Public Administration
- Management Science

# Master's, Doctoral, and Professional Degrees

- Business Administration
- Business Management
- Public Administration
- Management Science

- Associates Degrees •Hotel/Motel Administration/
- Management
- •Tourism and Travel Services Management

# Bachelor's Degrees

- •Hospitality Administration/
- Management, General
- •Hotel and Restaurant Management
- •Marketing/ Management, General Master's, Doctoral, and

# Professional Degrees

- •Hospitality Administration/
- Management, General
- Hospitality Administration
- •Marketing/ Management, General

# Work-Based Learning and Expanded Learning Opportunities

# Exploration Activities Work-Based Learning Activities

- Participate in Business Professional of America (BPA) or Family, Career & Community Leaders of America (FCCLA)
- Intern with a local hotel or theme park or in a business office
- Work in the School Store





# **Related Industry-Based Certifications**

- Microsoft Office Specialist: Microsoft Excel Expert (Excel and Excel 2019)
- Microsoft Office Specialist: Microsoft Word Expert (Word and Word 2019)
- Project Management Institute (PMI) Project Management Ready
- Certified Hospitality & Tourism Management
- General Management
- Hospitality Management Lodging-Job Ready
- ManageFirst Professional

# Microsoft

**Aligned Occupations** 

Occupations	Median Wage	Annual Openings	% Growth
Administrative Service Managers	\$96,138	2,277	21%
Management Analysts	\$87,651	4,706	32%
General and Operations Managers	\$107,640	18,679	20%
Meeting, Convention & Event Planners	\$47,446	1,083	21%

Successful completion of the Business Management program of study will fulfill requirements of the Business and Industry endorsement. Revised – January 19, 2024



# Business, Lodging & Tourism Management 2024-2025 Course Information

	KEY	COURSE NAME	SERVICE ID	PREREQ	CREDIT	FEE		
	PRINHT	Principles of Hospitality & Tourism	13022200	None	1	\$0		
LEVEL 1	amusements, a management,	ospitality and Tourism introduces students to an attractions, and food/beverage operations. Stude and customer service that meet industry standal haracteristics needed for success in that industry.	ents learn knowled rds. Students will e	ge and skills focusing on co	mmunication, 1	ime		
	BUSIM1	Business Information Management I	13011400	Pre/Co: Prin H&T	1	\$10		
LEVEL 2	Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, create word-processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software. Note: Certification Preparation: MOS Certification – WORD, Excel, Access, and PowerPoint							
	2025-26	Travel & Tourism Management	13022500	Pre/Co: Prin H&T	1	\$0		
2	Travel and Tourism Management incorporates management principles and procedures of the travel and tourism industry as well as destination geography, airlines, international travel, cruising, travel by rail, lodging, recreation, amusements, attractions, and resorts. Employment qualifications and opportunities are also included in this course.							
	BUSMGT         Business Management         13012100         Bus Info Mgmt.         1         \$0							
	Students recognize, evaluate, and prepare for a rapidly evolving global business environment that requires flexibility and adaptability. Students analyze the primary functions of management and leadership: planning, organizing, staffing, directing / leading, and controlling. Topics will social responsibility of business and industry; the economic, financial, technological, international, and ethical aspects of business; and the legal, managerial, marketing, financial, ethical, and international dimensions of business.							
E	EVENT	Intro to Event & Meeting Planning	N1302269	None	1	\$25		
	This course will introduce students to the concepts and topics necessary for the comprehensive understanding of the fundamentals of the meetings, conventions, events, and exposition industries. The course will review the roles of the organizations and people involved in the businesses that comprise the Meetings, Events, Expositions and Convention (MEEC) industry.							
-	PRACEN	Practicum in Entrepreneurship	N1303425	Pre/Co: Bus Mgmt .	2	\$0		
	Students will apply classroom learnings and experiences to real-world business problems and opportunities, while expanding their skill sets and professional relationships as a real or simulated business owner versus the experience one would have as an employee. Practicum experiences occur in a paid or unpaid arrangement or the school store appropriate to the student's need for work-based learning experience. Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and to make a successful transition to the workforce or postsecondary education.							
LEVE	EXCAR1	Extended Career Preparation I	12701305	16⁺YO; Bus Mgmt; Job in BMF field	3	\$0		
	THIS CLASS IS FOR STUDENTS EMPLOYED IN A JOB RELATED TO THEIR PROGRAM OF STUDY. Students learn general employability skills as a group and individual training that will address their job specific knowledge and skills for running the school store or being successful in their job. The curriculum is designed to enhance communication and interpersonal skills. Students are required to work a minimum of 15 hours per week at an approved training site. This course is designed to assist students seeking career experience in a vast array of careers. Students must provide their own transportation.							
LEVEL 4	BUSENG	Business English	13011600	English III	1 (English)	\$0		
		glish, students enhance communication and rese ormation and producing properly formatted bus		-	nvironment, in	addition to		
E.E	STABDM	Statistics and Business Decision Making	13016900	Algebra I & Geometry; 11 <sup>th</sup> grade	1 (Math)	\$0		
R	Students will u	Business Decision Making is an introduction to st ise statistics to make business decisions. Student sions are valid. R ADDITIONAL INFORMATION ON THE BUSINESS, MAR	s will determine th	e appropriateness of metho	ods used to col	ect data to		
		or visit our webpage: <u>https://www.s</u>	fisd.org/departments	/career-and-technical-education	on			

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# **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.



# **Teaching and Training** *Statewide Program of Study*





The Teaching and Training program of study prepares CTE learners for careers related to teaching, instruction, and creation of instructional and enrichment materials. The program of study introduces CTE learners to a wide variety of student groups and their corresponding needs. It familiarizes them with the processes for developing curriculum, coordinating educational content, and coaching groups and individuals.

### Secondary Courses for High School Credit

#### Level 1

• Principles of Human Service

#### Level 2

- Human Growth and Development
- Level 3
- Instructional Practices TRIBE

#### Level 4

- Practicum in Education and Training TRIBE 2 AND/OR
- Career Preparation I

### **Postsecondary Opportunities**

#### Associates Degrees

- Teacher Education
- Education, General (or specific subject area)
- Special Education
- Health and Physical Education/Fitness

#### **Bachelor's Degrees**

- Bilingual and Multilingual Education
- Education, General (or specific subject area)
- Special Education
- Health and Physical Education/Fitness

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

- Instruction and Learning
- Educational Leadership and Administration, General
- Special Education
- Social and Philosophical Foundations of Education

# Work-Based Learning and Expanded Learning Opportunities

<ul> <li>Participate in the Texas Association of Future Educators</li> <li>Teach a community education class</li> <li>Intern as a teaching assistant or tutor</li> <li>Serve as a camp counselor</li> </ul>	Ex	ploration Activities	Work-Based Learning Activities
Recruits Recruits Becoming		Texas Association	<ul><li>education class</li><li>Intern as a teaching assistant or tutor</li><li>Serve as a camp</li></ul>

# **Related Industry-Based Certifications**

Educational Aide I



# Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Adult Basic and Secondary Education and Literacy Teachers and Instructors	\$48,069	862	17%
Middle School Teachers, Except Special and Career/Technical Education	\$54,510	6,407	15%
Career and Technical Education Teachers, Secondary School	\$56,360	719	9%
Special Education Teachers, Secondary School	\$56,720	980	18%

Successful completion of the Teaching and Training program of study will fulfill requirements of the Public Service endorsement. Revised – January 5, 2024



# E&T- Teaching and Training Course Information

	KEY	COURSE NAME	SERVICE ID	PREREQUISITES	CREDIT	FEE		
	PRINHU	Principles of Human Services	13024200	None	1	\$0		
LEVEL 1	Principles of Human Services is a laboratory course that will enable students to investigate careers in the Education & Training and the Human Services Career Clusters, including teaching, counseling and mental health, early childhood development, family and community, personal care, and consumer services. Each student is expected to complete the knowledge and skills essential for success in high-skill, high-wage, or high-demand human services careers.							
2	HUMGRO	Human Growth and Development	13014300	Pre- or Corequisite: Prin Hum Services	1	\$0		
LEVEL	research, th course cove	wth and Development is an examination o ecoretical perspectives, and common phys ers material that is generally taught in a po or human development.	ical, cognitive, em	otional, and social deve	lopmental miles	stones. The		
	IPEDTR	Instructional Practices- TRIBE	13014400	11 <sup>th</sup> grade Human Growth	2	\$0		
<b>LEVEL 3</b>	Instructional Practices is a field-based (practicum) internship that provides students with background knowledge of child and adolescent development as well as principles of effective teaching and training practices. Students work under the joint direction and supervision of both a teacher with knowledge of early childhood, middle childhood, and adolescence education and exemplary educators or trainers in direct instructional roles with elementary-, middle school-, and high school-aged students. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, develop materials for educational environments, assist with record keeping, and complete other responsibilities of teachers, trainers, paraprofessionals, or other educational personnel.							
	PRACED	Practicum in Education and Training – TRIBE 2	13014500	Instructional Practices	2	\$0		
	Practicum in Education and Training is a field-based internship that expands on the knowledge and skills developed in Instructional Practices. The role of the intern increases by adding engagement with their mentor's professional learning community, staff development, and increased responsibility for arrangements for instruction.							
LEVEL 4	EXCAR1	Extended Career Preparation I	12701305	16 or older, Inst Prac; Employment in E&T field	3	\$0		
	THIS CLASS IS FOR STUDENTS EMPLOYED IN A JOB RELATED TO THEIR PROGRAM OF STUDY. Students learn general employability skills as a group and individual training that will address their job specific knowledge and skills. Curriculum is designed to enhance communication and interpersonal skills. Students are required to work a minimum of 15 hours per week at an approved training site. This course is designed to assist students seeking career experience in a vast array of careers. Students must provide their own transportation and may have early release for 2 periods.							

# FOR ADDITIONAL INFORMATION ON THE EDUCATION AND TRAINING CAREER CLUSTER, PLEASE CONTACT: <u>CTE@sfisd.org</u> or visit our webpage: <u>https://www.sfisd.org/departments/career-and-technical-education</u>

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# **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.



# Cosmetology and Personal Care Services Regional Program of Study





The Cosmetology and Personal Care Services regional program of study introduces CTE learners to knowledge and skills related to providing beauty and personal care services. CTE concentrators may learn about or practice managing personal care facilities and coordinating or supervising personal service workers.

# **Secondary Courses for High School Credit**

This is a dual credit partnership with College of the Mainland. Courses may vary. College tuition / fees apply Level 1

- Principles of Human Services (Recommended, Elective credit)
   Level 2
- Human Growth and Development (Recommended, Elective credit)

#### Level 3

- Principles of Cosmetology Design and Color Theory
- Introduction to Cosmetology
- Cosmetology I/Lab

#### OR

Barbering I

#### Level 4

- Nail Care, Enhancements, and Spa Services
- Esthetics
- Cosmetology II/Lab

#### OR

Barbering II

### **Postsecondary Opportunities**

#### Certificate/License

- Certified Aesthetic Laser Operator
- Cosmetologist
- Certified Spa Supervisor
- Nail Technician/Specialist and Manicurist

#### Associates Degrees

- Cosmetology/Cosmetologist, General
- Aesthetician/Esthetician and Skin Care Specialist
- Salon/Beauty Salon Management/Manager
- Cosmetology, Barber/Styling, and Nail Instructor

# Work-Based Learning and Expanded Learning Opportunities

Exploration	Work-Based
Activities	Learning Activities
Particinate in	Ioh shadow a

- Participate in TIVA or SkillsUSA
- Job shadow a cosmetologist
- Work part-time at a salon, spa, or barbershop

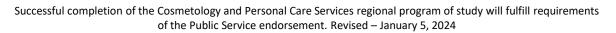


# Related Industry-Based Certifications

- Cosmetology Operator License
- Cosmetology Esthetician Specialty License
- Cosmetology Manicurist Specialty License
- Barber Operating License

# **Aligned Occupations**

Occupations	Median Wage	Annual Openings	% Growth
First-Line Supervisors of Personal Service Workers	\$36,941	1,634	24%
Barbers	\$28,267	348	14%
Hairdressers, Hairstylists, and Cosmetologists	\$21,507	3,489	22%
Manicurists and Pedicurists	\$21,715	418	45%
Shampooers	\$18,720	139	24%
Skincare Specialists	\$26,437	637	22%





# Cosmetology and Personal Care Services Course Information

# \*DUAL CREDIT ONLY - See COM website for more information

	КЕҮ	COURSE	SERVICE ID	PREREQ	CREDIT	FEE		
	SFJS-HUMSEV SFHS- PRINHU	Principles of Human Services	13024200	None	1	\$0		
LEVEL 1	enable students to in counseling and ment	ELECTIVE CREDIT ONLY, NOT INCLUDED IN THE TEA PROGRAM OF STUDY. Principles of Human Services is a laboratory course that will enable students to investigate careers in the Education & Training and the Human Services Career Clusters, including teaching, counseling and mental health, early childhood development, family and community, personal care, and consumer services. Each student is expected to complete the knowledge and skills essential for success in high-skill, high-wage, or high-demand human services careers.						
1.2	HUMGRO	Human Growth & Development	13014300	Pre- or Corequisite: Prin Hum Serv	1	\$0		
LEVEL 2	theoretical perspective material that is gener	Development is an examination of human develop ves, and common physical, cognitive, emotional, a rally taught in a postsecondary, one-semester intro IVE CREDIT ONLY, NOT INCLUDED IN THE TEA PROC	nd social developm oductory course in	iental milestones. The	course covers			
	DCCOPR	Principles of Cosmetology Design and Color Theory	13025050		1			
	DCCOIN	Introduction to Cosmetology	13025100 CSME 1401	See College of	1			
LEVEL 3	DCCM1A	Cosmetology I/Lab	13025200 CSME 1451	the Mainland Webpage	1 of 2	ies		
	DCCM1A	Cosmetology I/Lab	13025200 CSME 1410	<u>www.com.edu</u>	2 of 2	lq suppli		
	TBD	Barbering I	N1302534 BARB 1404		3	College tuition, fees, and supplies		
	DCCOES	Esthetics	N1302533 DC1348		1 of 2	uition,		
LEVEL 4	DCCONC	Nail Care, Enhancements, & Spa Services	N1302531 CSME 1443	See College of the Mainland	2	college t		
	DCCO2A	Cosmetology II/Lab	13025300 CSME 1453	Webpage	1 OF 2	0		
	DCCO2B	Cosmetology II/Lab	13025300 CSME 2441	<u>www.com.edu</u>	2 OF 2			

#### **ADDITIONAL NOTES**

\*Courses sequence, credit and schedule varies based on COM's schedule of classes

\*Transportation to College of the Mainland may be provided

\*Courses extend beyond the school day (1:30-6:30 in 2022-2023)

\*Kits are provided but students are encouraged to purchase their own so they are equipped to begin working when their license is earned.

FOR ADDITIONAL INFORMATION ON THE HUMAN SERVICES CAREER CLUSTER, PLEASE CONTACT: <u>CTE@sfisd.org</u> or the COM Enrollment Coach

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# **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.

# Family and Community Services - CHAMPs Statewide Program of Study





The Family and Community Services program of study introduces students to knowledge and skills related to social services, including child and human development and consumer sciences. CTE learners may learn about or practice managing social and community services or teaching family and consumer sciences. Students may follow career paths in social work or therapy for children, families, or school communities.

### **Secondary Courses for High School Credit**

#### JUNIOR HIGH

- Principles of Human Services
- Professional Communications

#### Level 1

Principles of Human Services

#### Level 2

Human Growth and Development

#### Level 3

Family and Community Services – CHAMP

#### Level 4

Practicum in Human Services- CHAMP2

#### Additional Courses related to this POS

- Interpersonal Studies
- Dollars and Sense
- Lifetime Nutrition & Wellness
- Career Preparation I

# **Postsecondary Opportunities**

#### Associates Degrees

- Human Development and Family Studies
- Human Services/Sciences, General
- Family and Consumer Sciences
- Community Health Services

#### **Bachelor's Degrees**

- Human Development and Family Studies
- Human Services/Sciences, General
- Family and Consumer Sciences
- Child and Family Services

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

- Human Development and Family Studies
- Marriage and Family Therapy/Counseling
- Human Services/Sciences
- Family Studies



### Work-Based Learning and Expanded Learning Opportunities

Exploration	Work-Based
Activities	Learning Activities
<ul> <li>Participate in Family, Career and Community Leaders of America (FCCLA)</li> </ul>	<ul> <li>Volunteer at a community center</li> <li>Intern for a community non-profit organization</li> </ul>



# **Related Industry-Based Certifications**

Community Health Workers



Texas Department of State Health Services

# **Aligned Occupations**

Occupations	Median Wage	Annual Openings	% Growth
Child, Family, and School Social Workers	\$41,350	2,221	17%
Social and Community Services Managers	\$65,146	608	33%
Marriage and Family Therapists	\$42,266	217	35%
Social and Human Service Assistants	\$32,448	2,822	25%

Successful completion of the Family and Community Services program of study January 5, 2024



# HS- Family and Community Services - Course Information

	KEY	COURSE	SERVICE ID	PREREQ	CREDIT	FEE		
	PROFJ7/ PROFJ8	Professional Communications	13009900	None	0.5	\$0		
HGH	SANTA FE JH ONLY: Careers in the global economy require individuals to be creative and have a strong background in computer and technology applications, a strong and solid academic foundation, and a proficiency in professional oral and written communication. Within this context, students will be expected to develop and expand the ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics, and conduct Internet research.							
	SFJS-HUMSEV SFHS- PRINHU	Principles of Human Services	13024200	None	1	\$0		
& JUNIOR HIGH	mental health, early c	ite careers in the Education & Training a hildhood development, family and comr ge and skills essential for success in high	nunity, personal c	are, and consumer services.	Each student is e			
-	INTSTU	Interpersonal Studies	13024400	None	0.5	\$0		
LEVEL	life. Students use know	examines how the relationships betwee wledge and skills in family studies and hu e wellness of family members, manage r	uman developmen	t to enhance personal devel	opment, foster o	quality		
	SFHS- DOLLAR	Dollars and Sense	13024300	None	0.5	\$0		
		uses on consumer practices and responsi aration for human services careers.	ibilities, money-m	anagement processes, decisi	on-making skills	, impact of		
	HUMGRO	Human Growth & Development	13014300	Pre- or Corequisite: Prin Human Services	1	\$0		
/EL 2	Students will examine human development across the lifespan with emphasis on research, theoretical perspectives, and common physical, cognitive, emotional, and social developmental milestones. The course covers material that is generally taught in a postsecondary, one-semester introductory course in developmental psychology or human development.							
LEVEL	LIFENW	Lifetime Nutrition & Wellness	13014500	None	0.5	\$0		
	Lifetime Nutrition and Wellness is a laboratory course that allows students to use principles of lifetime wellness and nutrition to help them make informed choices that promote wellness as well as pursue careers related to hospitality and tourism, education and training, human services, and health sciences.							
m	FAMCOS	Family & Community Services- CHAMPs	13024900	Human Growth	1	\$0		
(TEVEL	CHAMPs is a laboratory-based course designed to involve students in realistic and meaningful community-based activities through direct service or service-learning experiences. Students are provided opportunities to interact with and provide services to individuals, families, and the community through community or volunteer services. Students will earn hours towards the Community Health Worker certification.							
	PRACHU	Practicum in Human Services - CHAMPs2	13025000	12 <sup>th</sup> Gr.; CHAMPs	2	\$0		
L 4	CHAMPs2 is a continuation of CHAMPs that adds building relationships and mentoring students who attend SFISD elementary and junior schools. Students will complete their CHW certification if not completed in CHAMPs, assist in planning Candyfest and other community service events and activities. Note: Travel to/from other SFISD campuses is required.							
LEVEL 4	EXCAR1	Extended Career Preparation I	12701305	FC&S 16 +YO, Job in HS field	3	\$ <b>0</b>		
	THIS CLASS IS FOR STUDENTS EMPLOYED IN A JOB RELATED TO THEIR PROGRAM OF STUDY. Students learn general employability skills that address job specific knowledge and skills. The curriculum is designed to enhance communication and interpersonal skills. Students are required to work a minimum of 15 hours per week at an approved training site. This course is designed to assist students seeking career experience in a vast array of careers. Students must provide their own transportation and may be released for 2 periods.							
	FOR ADDITIONAL INFORMATION ON THE HUMAN SERVICES CAREER CLUSTER, PLEASE CONTACT: <u>CTE@sfisd.org</u> or visit our webpage: <u>https://www.sfisd.org/departments/career-and-technical-education</u>							

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# **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. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.



# Healthcare Diagnostic & Therapeutic/Nursing Statewide Program of Study-2025

NURSING Level 1

Level 2

Level 3

Level 4

Nursing

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The Diagnostic & Therapeutic program of study introduces students to occupations and educational opportunities related to diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study also includes an introduction to the opportunities associated with providing treatment and counsel to patients as well as rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

# Secondary Courses for High School Credit

### **DIAGNOSTIC & THERAPEUTIC**

# Level 1

Principles of Health Science

#### Level 2

- Medical Terminology
- **Disaster Response**

#### Level 3

- Anatomy and Physiology (science cr)
- **Health Science Theory**

#### Level 4

- Pract. in Health Science-Pharmacy Tech
- Mathematics for Medical Professionals (math credit)
- Medical Microbiology (science credit)

#### **Recommended Elective(s)**

Leadership & Management in Nursing





# Postsecondary Opportunities

### **Associates Degrees**

**Dental Hygienist** Medical/Clinical Assistant

### **Bachelor's Degrees**

**Dental Hygienist** 

- Master's, Doctoral, and Professional Degrees
- Dentist
- **Physician Assistant**
- Family and General Practitioners
- Pharmacist

- Associates Degrees
- **Registered Nurse**

#### **Bachelor's Degrees**

Informatics Nurse Specialists Master's, Doctoral, and Profes-

### sional Degrees

- **Nurse Practitioner**
- Nursing Administration
- Nurse Anesthetist

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

Exploration Activities	Work-Based Learning Activities
Participate in Health     Occupation Students of     America	<ul> <li>Volunteer at a community wellness center, hospital, assisted living, or nursing home</li> </ul>

# **Related Industry-Based Certifications**

- Certified Clinical Medical Assistant
- Certified Dental Assistant
- Certified EKG Technician
- Certified Nurse Aide (CNA)
- Certified Occupational Therapy Assistant
- Certified Patient Care Technician (CPCT)
- **FCG** Technician
- Medical Assistant
- Medical Laboratory Assistant
- Nationally Registered Certified EKG Technician
- Patient Care Technician
- **Pharmacy Technician**
- Phlebotomy Technician
- **Registered Dental Assistant X-Ray Certification** •
- Certified Ophthalmic Technician\* •
- Certified Surgical Technologist\* •
- Licensed Dental Hygienist\*
- **Orthopedic Technologist\***

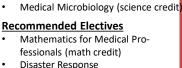


OGNI

Aligned Occupations	Median Wage	Annual Openings	% Growth
Medical Assistants	\$29,598	8,862	30%
Surgical Technologists	\$45,032	1,150	20%
Registered Nurses	\$68,682	17,493	26%
Physicians and Surgeons	\$213,071	1,151	30%

Successful completion of the Healthcare Diagnostic & Therapeutic or Nursing program of study will fulfill requirements of a Public Service endorsement or STEM endorsement if the math and science requirements are met. Revised – January 5,





Principles of Health Science

Medical Terminology

Anatomy and Physiology

Pract in Health Science/ Nursing

Leadership & Management in

Health Science Theory



# Healthcare Diagnostic & Therapeutic/ Nursing - Course Information

	KEY	COURSE NAME	SERVICE ID	PREREQ	CREDIT	FEE	
	PRINHL	Principles of Health Science	13020200	None	1	\$0	
	This course pro	ovides an overview of the therapeutic, dia	gnostic, health inf	ormatics, support services, and bi	otechnology res	earch	
LEVEL		ent systems of the health care industry. St					
"		rs, and that professional integrity in the he	ealth science indus	stry is dependent on acceptance o	of ethical and leg	al	
	responsibilities						
2	MEDTER	Medical Terminology	13020300	Pre/CoReq: Pri. Health Sci	1	\$0	
Ę١		roduces students to the structure of medi			-		
LEVEL		ural forms, plus medical abbreviations and				of	
_		ulary appropriate to medical procedures, I				4.0	
g	DISAST	Disaster Response	N1303011	Rec: Prin Health Sci	1	\$0	
Electiv	Basic training c	of students in disaster survival / rescue ski					
Ē	Students received	ve education, training, and volunteer servi			r prepared to re	spond to	
_		terrorism, crime, public health issues and			1 Science	¢0	
	ANATPH	Anatomy and Physiology (A&P)	1302060	Bio, + Chem, IPC, or Physics	1 Science	\$0	
		ep course for students interested in sports harmacy, and other allied health science c					
		rch, lab activities, and field investigation b					
m	-	her illnesses impact body systems and ma		-		<i>.</i> ,	
Ľ		descriptive, and/or comparative to illustra					
LEVEL	HLTHSC	Health Science Theory (HST)	13020400	Biology; Pre/Co: Med Term		\$0	
		Theory is designed to provide for the dev				-	
		health careers. Students have hands-on e					
	local hospital a	nd shadow medical personnel in a variety	of hospital depar	tments, such as Physical Therapy,	Radiology, Nurs	ing	
	Care, Pharmac	y and Emergency Room, to Surgery, ICU, N	Medical Records, L	ab and others.		1	
	PRACHS	Practicum in Health Science-PCT	13020500	HST and Biology	2	Scrubs	
	This course provides the development of advanced knowledge and skills related to Patient Care Technician certification and general						
		ustry. Students must be able to provide th	eir own transport	ation to clinical settings, if applica	ble. Enrollment	is	
		cal site availability.			-		
	HSC-PT	Pract in Health Sci-Pharm Tech	13020500	HST and Biology	2	Scrubs	
		ovide the development of advanced know	-	-		ble to	
	MATHMP	wn transportation to clinical settings, if ap Math for Medical Professionals	13020970	HST and Biology	1 Math	\$0	
4		math to problems arising in healthcare us					
						-	
LEVEL	plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Students effectively communicate mathematical ideas, reasoning, and their implications using multiple						
-		is such as symbols, diagrams, graphs, and				and	
		ons and predictions. (This course is an ele					
	MICRO	Medical Microbiology	13020700	Bio, Chem, + 1 H Sci	1 Science	\$0	
	Medical Micro	biology provides students with an unde	erstanding of the	amazing world of microorganisr	ns! This course	covers	
	the study of b	the study of bacteria, viruses, fungi, and other microscopic life forms. Students will learn about the structure, function,					
	diversity, and	ecological roles of microbial life on Eart	h. Through a com	bination of lectures, laboratory	exercises, and		
	interactive dis	cussions, students will gain valuable ins	ights into how m	icroorganisms affect various asp	ects of life, incl	uding	
	health, indust	ry, the environment and emerging disea	ases.				
H ا	HOSA-I	Leadership & Mgmt in Nursing	13021225	Bio, Chem, 1 H Sci, HOSA	1	Dues	
LECTIVE	Explore leader	ship and management in nursing, studying	g topics such as et	hics, educational levels. career pa	ths, regulatory t	odies.	
Ë	•	nd professional leadership skills, including				<b>,</b>	

FOR ADDITIONAL INFORMATION ON THE HEALTH SCIENCE CAREER CLUSTER, PLEASE CONTACT: CTE@sfisd.org

or visit our webpage: <a href="https://www.sfisd.org/departments/career-and-technical-education">https://www.sfisd.org/departments/career-and-technical-education</a>

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# **Hospitality and Tourism Career Cluster**

The Hospitality and Tourism Career Cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services, lodging, attractions, recreation events, and travel-related services. Students acquire knowledge and skills focusing on communication, time management, and customer service that meet industry standards. Students will explore the history of the hospitality and tourism industry and examine characteristics needed for success.

# **Culinary Arts** Statewide Program of Study





The Culinary Arts program of study introduces CTE learners to occupations and educational opportunities related to the planning, directing, or coordinating activities of a food and beverage organization or department. This program of study also explores opportunities involved in directing and participating in the preparation and cooking of food.

# **Secondary Courses for High School Credit**

### Level 1

- Introduction to Culinary Arts
- Principles of Hospitality & Tourism

### Level 2

Culinary Arts

#### Level 3

- Advanced Culinary Arts
- Introduction to Event & Meeting Planning

#### Level 4

- Food Science
- Practicum in Culinary Arts
- Career Preparation I

# **Postsecondary Opportunities**

#### **Associates Degrees**

- Hotel and Restaurant Management
- Restaurant Culinary and Catering Management
- Hospitality Administration/ Management, General
- Culinary Arts/ Chef Training

### **Bachelor's Degrees**

- Hotel and Restaurant Management
- Food Service Systems Administration/ Management
- Hospitality Administration/ Management, General
- Culinary Science and Food Service Management

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

- Hotel and Restaurant Management
- Food Service Systems Administration/ Management
- Hospitality Administration/ Management, General
- Business Administration Management, General

# Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
Deuticiaeta in Feasily	

Participate in Family, Career, and Community Leaders of America, SkillsUSA, American Culinary Federation, or the Texas Restaurant Association

- Plan a catering event or work for a catering company
- Participate in a cooking course
- Work in a restaurant

### **Industry-Based Certifications**

- Certified Fundamentals Cook
- Certified Fundamentals Pastry Cook
- Certified Hospitality & Tourism Management Professional
- Commercial Foods
- Culinary Meat Selection & Cookery Certification
- Food Protection Manager Certification
- Food Safety & Science Certification
- ManageFirst Professional
- Pre-Professional Certification in Culinary Arts
- Pre-Professional Certification in Food Science Fundamentals
- ServSafe Manager





American Meat Science Association Food Safety & Science Certification

American Meat Science Association Culinary Meat Selection & Cookery Certification

# Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Food and Beverage Managers	\$55,619	1,561	28%
Chef and Head Cooks	\$43,285	1,366	25%
Food Science Technicians	\$34,382	236	11%



Successful completion of the Culinary Arts program of study will fulfill requirements of the Business and Industry endorsement. Revised – January 5, 2024

# **Culinary Arts - Course Information**

	KEY	COURSE	SERVICE ID	PREREQ	CREDIT	FEE	
	INTCUL	Introduction to Culinary Arts	13022550	None	1	<b>\$25</b>	
	This lab-based course is the introduction to the art of cooking and the science of baking and includes management and production skills and techniques. Students can pursue a national sanitation certificate [ServSafe]. This course will be offered as a laboratory-based course. Students will be trained in culinary procedures, reading and writing standard recipes, identifying global cultures, and traditions related to food. Students will demonstrate prep skills in all commonly used food areas. All students will be required to develop a comprehensive culinary arts portfolio.						
5	PRINHT	Principles of Hospitality & Tourism	13022200	None	1	\$0	
	amusements, att management, an	pitality and Tourism introduces students ractions, and food/beverage operations d customer service that meet industry s mine characteristics needed for success	. Students learn know tandards. Students w	vledge and skills focusing on com	munication, t	ime	
2	CULART	Culinary Arts	13022600	Pre- or Corequisite: Intro to Culinary Arts	2	\$25	
LEVEL .	Culinary Arts continues with the principles of the art of cooking and the science of baking and includes management and production skills and techniques. Students can pursue a national sanitation certification, a Texas culinary specialist certification, or any other appropriate industry certification. Students will continue to be trained in culinary procedures, reading and writing standard recipes, identifying global cultures, and traditions related to food and develop a culinary arts portfolio.						
	ADCULA	Advanced Culinary Arts	13022650	Culinary Arts	2	\$25	
VEL 3	This is an advanced course in the art of cooking and the science of baking and includes management and production skills and techniques. This course will be offered as a laboratory-based course or internship course. All students will be required to develop a comprehensive culinary arts portfolio. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.						
5	EVENT	Intro to Event/Meeting Planning	N1302269	None	1	\$0	
	This course will introduce students to the concepts and topics necessary for the comprehensive understanding of the fundamentals of the meetings, conventions, events, and exposition industries. The course will review the roles of the organizations and people involved in the businesses that comprise the Meetings, Events, Expositions and Convention (MEEC) industry.						
	FOODSC	Food Science	13023000	Biology, Chemistry and 1 add'l science	1 Science	\$25	
	This course explores the nature and improvement of foods for consumers. Students study nutrition and wellness, food technology, world food supply, diet-related disorders, chemical and physical changes that affect food product quality., technologies used in food processing, and food safety. Investigation of the properties of food and how it affects the human body will also be covered.						
	PRACUL	Practicum in Culinary Arts	13022700	Culinary Arts	2	\$25	
LEVEL 4	combines classro career and techn	Practicum in Culinary Arts provides occupationally specific opportunities for students to participate in a learning experience that combines classroom instruction with actual business and industry career experiences. Practicum in Culinary Arts integrates academic and career and technical education; provides more interdisciplinary instruction; and supports strong partnerships among schools, businesses, and community institutions with the goal of preparing students with a variety of skills in a fast-changing workplace.					
	EXCAR1	Career Preparation I	12701305	Adv. Culinary Arts; 16 <sup>+</sup> YO, Job in culinary	3	\$0	
	Curriculum is des week at an appro	eneral employability skills as a group and signed to enhance communication and in oved training site. This course is designed eir own transportation and may have up	nterpersonal skills. St d to assist students so	udents are required to work a mi eeking career experience in a vast	nimum of 15	hours per	

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# **Information Technology**



The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

# Programming and Software Development



The Programming and Software Development program of study explores the occupations and education opportunities associated with researching, designing, developing, and testing 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 may also include exploration into creating, modifying, and testing the codes, forms, and script that allow computer applications to run.

# **Secondary Courses for High School Credit**

### Level 1 – Junior High

- Fundamentals of Computer Science
- Principles of Information Technology

### Level 1 - High School

Computer Science I

### Level 2

Computer Science II

### Level 3

Computer Science III

#### Level 4

- Independent Study in Technology Applications
- Practicum in Information Technology
- Career Preparation I



# **Postsecondary Opportunities**

#### Associates Degrees

- Computer Programming/Programmer General
- Computer Software Engineer
- Computer Science
- Certified Software Analyst

#### **Bachelor's Degrees**

- Management Information Systems, General
- Computer Software Engineer
- Computer Science
- Information Science/ Studies

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

- Computer Software Engineer
- Computer Science
- Information Science/ Studies

# Work-Based Learning and Expanded Learning Opportunities

Exploration	Work-Based
Activities	Learning Activities

- Join TSA
   Participate in a coding club at school
- Obtain a programming IBC

# **Industry-Based Certifications**

- C++ Certified Associate Programmer
- Certified Entry-Level Python Programmer (PCEP)
- Certified Professional Programmer
- CompTIA Linux+
- Oracle Certified Associate Java SE 8
   Programmer
- Oracle Database SQL Certified Associate



# **Aligned Occupations**

Occupations	Median Wage	Annual Openings	% Growth
Software Developer, Systems Software	\$103,334	2,985	25%
Software Developers, Application	\$104,499	6,311	30%
Computer Programmers	\$79,893	1,454	9%

Successful completion of the Programming and Software Development program of study will fulfill requirements of the Business and Industry endorsement and STEM endorsement if the math and science requirements are met. Revised – January 5, 2024





# **Programming and Software Development - Course Information**

-	КЕҮ	COURSE NAME	SERVICE ID	PREREQUISITES	CREDIT	FEE		
	FCS	Principles of Info Tech	13027200	None	1	\$0		
1 (JH)	Students will develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students will enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment.							
LEVEL 1	FCS (JH)	Fund of Computer Science	03580140	Rec: Prin IT	1	\$0		
9	principles of creativity an	l learn about the computing tools the computer science through the study d innovation; communication and co ring, and decision making; digital citiz	of technology of technology of technology of technology of the second second second second second second second	perations and concepts. Tearch and information flue	The six strands ency; critical th	include		
	TACS1	Computer Science I	03580200	None	1-LOTE	\$10		
LEVEL 1 (HS)	Computer Science I fosters students' creativity and innovation with opportunities to design, implement, and present meaningful programs through a variety of media. Students collaborate with peers, their instructor, and various electronic communities to solve problems presented in the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems.							
2	TACS2	Computer Science II <sup>A</sup>	03580300	Alg I, CS I	1-LOTE	\$10		
LEVEL 2	Computer Science II will continue and expand on the knowledge and skills learned in Computer Science I. Students will gain an understanding of computer science through the study of technology operations, systems, and concepts							
~	TACS3	Computer Science III <sup>A</sup>	03580350	Computer Science II	1	\$10		
LEVEL 3	Computer Science III will continue and expand on the knowledge and skills learned in Computer Science II. Students will gain an understanding of advanced computer science through the study of technology operations, systems, and concepts.							
	INSTTA	Ind Study in Tech Apps	03580900	Computer Science III	1	\$10		
	Students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a tech-driven society.							
	PRACIT	Pract in Information Tech (IT) <sup>A</sup>	13028000	Computer Science III	2	\$10		
LEVEL 4	By using technology as a tool that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts							
	EXCAR1	Career Preparation I	12701305	16 YO, CSII & Job in CS field	3	\$0		
	Students learn general employability skills as a group and individual training that will address their job specific knowledge and skills. Curriculum is designed to enhance communication and interpersonal skills. Students are required to work a minimum of 15 hours per week at an approved training site. This course is designed to assist students seeking career experience in a vast array of careers. Students must provide their own transportation and may have early release for 2 periods							

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# 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. Students will examine the roles and responsibilities of police, courts, corrections, private security, and fire and emergency services.

# Law Enforcement Statewide Program of Study



The Law Enforcement program of study teaches CTE learners about the development of, adherence to, and protection of various branches of law. Students will learn how to appropriately and legally respond to breaches in the law according to statutory rules and regulations as well as investigate how and why the breaches occurred.

# Secondary Courses for High School Credit

#### Level 1

Principles of Law, Public Safety, Corrections, and Security

#### Level 2

Law Enforcement I

#### Level 3

Law Enforcement II

#### Level 4

- **Forensic Science**
- Practicum in Law, Public Safety Corrections, and Security

### **Postsecondary Opportunities**

#### **Associates Degrees**

- Criminal Justice/Safety Studies/Law
- **Enforcement Administration**
- Criminal Justice/Police Science
- Corrections
- Criminalistics and Criminal Science

#### Bachelor's Degrees

- Criminal Justice/Safety Studies/Law
- **Enforcement Administration**
- Criminal Justice/Police Science
- Juvenile Corrections
- Cyber/Computer Forensics and Counterterrorism

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

- Criminal Justice/Safety Studies/Law
- **Enforcement Administration**
- Natural Resources
- Law Enforcement and Protective Services



#### Work-Based Learning and Expanded Learning Opportunities

Exploration	Work-Based		
Activities	Learning Activities		

- Join Skills USA
- Attend court hearings and other legal procedures









# **Related Industry-Based Certifications**

- Non-Commissioned Security Officer Level II
- Dispatcher



Texas Department of Public Safety



International Academies of Emergency Dispatch.

# **Aligned Occupations**

Occupations	Median Wage	Annual Openings	% Growth
Police and Sheriff's Patrol Officers	\$60,112	5,241	13%
Probation Officers and Correctional Treatment Officers	\$44,054	793	9%
Correctional Officers and Jailers	\$40,186	4,683	9%
Immigration and Customs Inspectors	\$78,104	1,236	9%
First-Line Supervisors of Police and Detectives	\$91,312	253	25%

Successful completion of the Law and Public Service program of study will fulfill requirements of the Public Service endorsement. Revised - January 5, 2024



Champions at Work

# Law Enforcement Course Information

	КЕҮ	COURSE NAME	SERVICE ID	PREREQ	CREDITS	FEE
1	PRINLP	Principles of Law, Public Safety, Corrections, and Security	13029200	None	1	\$0
: TEVEL :	This course introduces students to careers in law enforcement, fire and emergency management services, security, and corrections. Students will explore the roles and responsibilities of police, courts, corrections, private security, and protective agencies of fire and emergency services. The course provides students with an overview of the skills necessary for careers in law enforcement, fire service, security, and corrections.					
2	LAWEN1	Law Enforcement I	13029300	Pre/Co: Princ of Law	1	\$0
<b>LEVEL</b>	Law Enforcement I is an overview of 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.					
З	LAWEN2	Law Enforcement II	13029400	Law Enforcement I	1	\$0
LEVEL	Law Enforcement II provides the knowledge and skills necessary to prepare for a career in law enforcement. Students will understand ethical and legal responsibilities, patrol procedures, first responder roles, telecommunications, emergency equipment operations, and courtroom testimony.					
	FORENS	Forensic Science	13029500	Biology and Chemistry	1-Science	\$0
LEVEL 4	Forensic Science uses a structured and scientific approach to the investigation of crimes of assault, abuse and neglect, domestic violence, accidental death, homicide, and the psychology of criminal behavior. Students will learn terminology and investigative procedures related to crime scene, questioning, interviewing, criminal behavior characteristics, truth detection, and scientific procedures used to solve crimes. Using scientific methods, students collect and analyze evidence through case studies and simulated crime scenes such as fingerprint analysis, ballistics, and blood spatter analysis, plus learning the history, legal aspects, and career options for forensic science.					
	PRACLP	Practicum in Law, Public Safety, Corrections, and Security	13030100	Pre- or Corequisite: Law Enforcement II	2	Uniform Costs
	The practicum course is designed to give students supervised practical application of previously studied knowledge and skills in law, public safety, corrections, and security. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.					

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# **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 manufacturing/process engineering.

# Welding Statewide Program of Study





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**

#### **Required Electives**

Principles of Construction

#### AND/OR

Principles of Agriculture, Food & Natural Resources

#### <u>Level 1</u>

Introduction to Welding

#### OR

Dual Credit Option (courses may vary, COM fees apply)

#### Level 2

Welding I

#### OR

Dual Credit Option (courses may vary, COM fees apply)

#### Level 3

Welding II

#### OR

- Dual Credit Option (courses may vary, COM fees apply)
  AND/OR
- Career Preparation I

# **Postsecondary Opportunities**

#### **Associates Degrees**

- Certified Welder or Welder Inspector
- Machine Shop Technology/Assistant
- Operations Management and Supervision
- Occupational Safety and Health Technology/Technician

#### **Bachelor's Degrees**

- Welding Engineering Technology/Technician
- Biomedical Technology/Technician
- Operations Management and Supervision
- Environmental Health

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

- Welding Engineering Technology/Technician
- Occupational Health and Industrial Hygiene
- Operations Management and Supervision
- Environmental Health



# Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul> <li>Participate and compete in SkillsUSA</li> <li>Job shadow a machinist</li> </ul>	<ul> <li>Work in a local business or industry apprenticeship</li> <li>Join the American Welding Society</li> </ul>



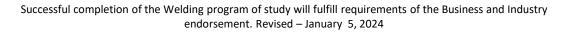
### **Related Industry-Based Certifications**

- API 1104 Welding Pipelines and Related Facilities
- AWS Certified Welder
- AWS D1.1 Structural Steel
- AWS D9.1 Sheet Metal Welding
- AWS Sense Level 1: Entry Welder
- Industrial Technology Maintenance (ITM) -Maintenance Welding
- NCCER Construction Technology Certification Level I
- NCCER Core
- NCCER Welding Level I
- Welding Job Ready



# **Aligned Occupations**

Occupations	Median Wage	Annual Openings	% Growth
Welders, Cutters, Solderers, and Brazers	\$41,350	6,171	9%
Welding Soldering and Brazing Machine Setters, Operators and Tenders	\$40,040	280	9%





# Welding Course Information

	KEY	COURSE NAME	SERVICE ID	PREREQ	CREDIT	FEE
	PRINCO	Principles of Construction	13004220	None	1	\$25
LEVEL 1 (Electives only)	Principles of Construction provides an introduction and lays a solid foundation for those students entering the construction or craft-skilled areas. The course provides a strong knowledge of construction safety, construction mathematics, and common hand and power tools. This course also provides communication and occupation skills to assist the student in obtaining and maintaining employment.					
EL 1 (Ele	PRINAF	Principles of Agriculture, Food, and Natural Resources	13000200	None	1	\$0
LEV	agriculture. This	for careers in agriculture, food, and na course allows students to develop kno pment, globalization, industry standar	owledge and skills t	hrough hands-on activitie		
	WLG-IN	Introduction to Welding	13032250	Prin Construction or Prin AFNR; 10 <sup>th</sup> Grade	1	\$40
Introduction to Welding will introduce welding technology with an emphasis on basic welding laboratory prino operating procedures. Students will be introduced to the three basic welding processes. Topics include indust health practices, hand tool and power machine use, measurement, lab operating procedures, welding power welding career potentials, and introduction to welding codes and standards. Students will gain the knowledge technologies required for employment in welding and apply them to personal career development. This cour integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowl to a variety of settings and problems.					clude industria ding power so knowledge, s t. This course	al safety and urces, kills, and supports
	WELD-I	Welding I	13032300	Intro Weld	2	\$40
<b>LEVEL 3</b>	Welding I provides the knowledge, skills, and technologies required for employment in metal technology systems. Students will develop knowledge and skills related to this system and apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for future success.					
	WELDII	Welding II	13032400	Welding I	2	\$40
	Welding II builds on the knowledge and skills developed in Welding I. Students will develop advanced welding concepts and skills as related to personal and career development. Students will integrate academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.					
LEVEL 4	EXCAR1	Extended Career Preparation I	12701305	WELDII; 16+ YO, Employment in Welding field	3	\$0
	THIS CLASS IS FOR STUDENTS EMPLOYED IN A JOB RELATED TO THEIR PROGRAM OF STUDY. Students learn general employability skills as a group and individual training that will address their job specific knowledge and skills. The curriculum is designed to enhance communication and interpersonal skills. Students are required to work a minimum of 15 hours per week at an approved training site. This course is designed to assist students seeking career experience in a vast array of careers. Students must provide their own transportation and may have early release for 2 periods.					

#### FOR ADDITIONAL INFORMATION ON THE MANUFACTURINGCAREER CLUSTER,

PLEASE CONTACT: CTE@sfisd.org or visit our webpage: https://www.sfisd.org/departments/career-and-technical-education

SFISD does not discriminate on the basis of race, color, national origin, sex, disability or age 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: Title IX Coordinator, Sara Ryan, at 409-925-9010.

# **2024-2025 CTE Course Electives**

	KEY	COURSE NAME	SERVICE ID	PREREQ	CREDIT	FEE	
	BUSIM1	Business Information Management I	13011400	Pre/Co: Prin H&T	1	\$10	
	Students imp	plement personal and interpersonal skills to stree	ngthen individual p	erformance in the workpla	ce and in societ	y and make a	
		ansition to the workforce and postsecondary edu					
		chnologies, create word-processing documents, o					
		using appropriate software. Note: Certification					
	DIMEDI	Digital Media	13027800	None	1	\$10	
		I analyze and assess current and emerging technological and a statement and emerging technological and a statement and a statem					
		eds. Students will develop proficiencies in photo		importing, and manipulatir	ig text, graphics	s, audio, video,	
	DOLLAR	on while developing digital and interactive project Dollars and Sense	13024300	None	0.5	\$0	
		Sense focuses on consumer practices and response					
		and preparation for human services careers.		0 1 ,	0	<i>,</i>	
	PRINAF	Principles of Agriculture, Food, and Natur	al Resources	13000200	None	1	
	To be prepar	ed for careers in agriculture, food, and natural re	esources, students	must attain academic skills	and knowledge	in agriculture.	
		allows students to develop knowledge and skills t			-	-	
	globalization	, industry standards, details, practices, and expe	ctations.				
	PRINCO	Principles of Construction	13004220	None	1	\$25	
		Construction provides an introduction and lays a					
		. The course provides a strong knowledge of cons				•	
		ourse also provides communication and occupati					
	INTSTU	Interpersonal Studies	13024400	None	0.5	\$0	
		al Studies examines how the relationships betwee					
		s use knowledge and skills in family studies and h	•	•	•		
1	health servic	s, promote wellness of family members, manage	multiple adult role	es, and pursue careers relation	ed to counseling	g and mental	
LEVEL	INTCUL		13022550	None	1	\$25	
-		Introduction to Culinary Arts					
	This lab-based course is the introduction to the art of cooking and the science of baking and includes management and production skills and techniques. Students can pursue a national sanitation certificate [ServSafe]. Students will be trained in culinary procedures, reading						
	and writing standard recipes, identifying global cultures, and traditions related to food. Students will demonstrate prep skills in all						
	-	ommonly used food areas. All students will be required to develop a comprehensive culinary arts portfolio.					
[	PRINHL	Principles of Health Science	13020200	None	1	\$0	
	This course p	provides an overview of the therapeutic, diagnos	tic, health informa	tics, support services, and b	viotechnology re	esearch and	
	development systems of the health care industry. Students will realize that quality health care depends on the ability to work well with						
	others, and that professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities.						
	PRINHU	Principles of Human Services	13024200	None	1	\$0	
	•	Human Services is a laboratory course that will e		-		-	
	Human Services Career Clusters, including teaching, counseling and mental health, early childhood development, family and community,						
	personal care, and consumer services. Each student is expected to complete the knowledge and skills essential for success in high-skill,						
		or high-demand human services careers.	12022200	Neue	1	ćo.	
	PRINHT	Principles of Hospitality & Tourism	13022200	None	1	\$0	
	Principles of Hospitality and Tourism introduces students to an industry that encompasses lodging, travel and tourism, recreation, amusements, attractions, and food/beverage operations. Students learn knowledge and skills focusing on communication, time						
	management, and customer service that meet industry standards. Students will explore the history of the hospitality and tourism						
	-	examine characteristics needed for success in th					
	PRINLP	Principles of Law, Public Safety,	13029200	None	1	\$0	
		Corrections, and Security					
		ntroduces students to careers in law enforcemer	· •		•		
	Students will explore the roles and responsibilities of police, courts, corrections, private security, and protective agencies of fire and						
	emergency services. The course provides students with an overview of the skills necessary for careers in law enforcement, fire service, security, and corrections.						
SFISE		criminate on the basis of race, color, national orig	gin, sex, disability o	or age in its programs or act	ivities and prov	ides equal	
		couts and other designated youth groups. The fo					
		policies: Title IX Coordinator, Sara Ryan, at 409-9					

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# **2024-2025 CTE Course Electives**

LEVEL 2

LEVEL 3

LEVEL 4

KEY	COURSE NAME	SERVICE ID	PREREQ	CREDIT	FEE	
CPHOT1	Commercial Photography I	13009100	None	1	\$10	
				-		
An extra elective in this program of study, students in Commercial Photography are expected to develop an understanding of the commercial photography industry with a focus on creating quality photographs.						
TACS1	Computer Science I	03580200	None	1-LOTE	\$10	
	ce I fosters students' creativity and innovation w				•	
	y of media. Students collaborate with peers, the					
-	rough data analysis, students will identify task r				•	
	and evaluate information needed to solve proble				2 001100pt0 to	
DISAST	Disaster Response	N1303011	None (Prin H Sci rec.)	1	\$ <b>0</b>	
	students in disaster survival / rescue skills that i					
-	n, training, and volunteer service to make comn			•		
	, public health issues and disasters of all kinds.	· · · · · · , · · ·				
LIFENW	Lifetime Nutrition & Wellness	13014500	None	0.5	\$0	
Lifetime Nutritio	n and Wellness is a laboratory course that allow	s students to use p	rinciples of lifetime wellnes	s and nutrition	to help them	
	choices that promote wellness as well as pursue					
services, and hea			. , ,		0,	
WFEEGT	Wildlife, Fish & Ecology Mgmt	13001500	None	1	\$15	
This course exan	nines the management of game and non-game v	vildlife species, fish	and aqua crops and their e	cological needs	as related to	
	ral practices. Students may complete the state			-		
AGLEAD	Ag Leadership, Research, & Com	13001500	FFA Membership	1	\$TBD	
Agricultural Lead	lership, Research and Communications focuses of	on challenging stud	ents to use higher level thin	king skills, deve	lop leadership	
abilities, employ	standard research principles, and communicate	e agricultural position	ons effectively with all stake	holders.		
FLORAL	Floral Design (TX LEVEL 3)	13001800	None	1 (Fine Art)	\$50	
This course deve	lops students' ability to identify and demonstra	te the principles ar	d techniques related to flor	al design, as we	ll as develop an	
understanding o	f the management of floral enterprises. Through	n the analysis artist	ic floral styles and historical	periods, studer	its develop	
	raditions and contributions of diverse cultures. S					
development of	lifelong skills of making informed judgements a	nd evaluations.				
EVENT	Introd. to Event & Meeting Planning	N1302269	None	1	\$25	
This course will i	ntroduce students to the concepts and topics ne	ecessary for the cor	mprehensive understanding	of the fundame	ntals of the	
meetings, conve	ntions, events, and exposition industries. The co	ourse will review th	e roles of the organizations	and people invo	olved in the	
businesses that o	comprise the Meetings, Events, Expositions and	Convention (MEEC	) industry.			
HOSA-I	Leadership & Mgmt in Nursing	13021225	Bio, Chem, 1 HSci, HOSA	1	Dues	
Explore leadersh	ip and management in nursing, studying topics	such as ethics, edu	cational levels, career paths	, regulatory bod	lies, and personal	
and professional	leadership skills, including fundraising and othe	er HOSA activities.				
MICRO	Medical Microbiology	13020700	Bio, Chem, 1 HSci,	1	\$0	
	ology provides students with an understanding o					
	, fungi, and other microscopic life forms. Studen					
	Earth. Through a combination of lectures, labor			-	valuable insights	
	rganisms affect various aspects of life, including					
CAREER1	Career Preparation I	12701300	Employment	2	\$0	
	WHO ARE EMPLOYED IN A POSITION NOT RELATI					
	idual training addresses job specific knowledge					
	ills. Students are required to work a minimum of	•		e. Students mus	st provide their	
	ion and may have Work-based Learning (WBL) e				40-	
FOODSC	Food Science	13023000	Bio, Chem + 1 add'l sci	1 Science	\$25	
	pres the nature and improvement of foods for co					
	ted disorders, chemical and physical changes that			ed in food proce	ssing, and food	
	tion of the properties of food and how it affects			4	40	
FORENS	Forensic Science	13029500	Biology and Chemistry	1	\$0	
	is a structured, scientific approach to the invest					
	, and the psychology of criminal behavior. Stude					
	erviewing, criminal behavior characteristics, trut					
	nts collect and analyze evidence through case stu			i print analysis,	Jailistics, and	
	alysis, plus learning the history, legal aspects, ar			1	ćo.	
STABDM	Statistics and Business Decision Making	13016900	Alg I & Geom; 11 <sup>th</sup> gr.	1	\$0	
MAUSURS AND BU				cc docicion mol	ing Studants	
	siness Decision Making is an introduction to stat to make business decisions. Students will deter				-	

# EARN YOUR ENTRY-LEVEL INDUSTRY CREDENTIALS THROUGH THESE PARTNERING AGENCIES

\* industry certification may vary due to local workforce partner recommendations, teacher approvals, funding and other circumstances out of the district's control.

