













2020-2021

CTE Handbook 2020-2021

Dr. Hafedh Azaiez, Superintendent



Mr. David Moreno, CTE Director

DISD DISCLAIMER

Donna ISD offers Career and Technical Education programs in three endorsement areas. Admissions to these programs is based on student interest. It is the policy of Donna ISD not to discriminate on the basis of race, color, national origin, sex or handicap in its vocational programs, services, or activities 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. For further information about your rights or grievance procedures, contact the Title IX Coordinator and/or the Section 504 Coordinator.

CTE COURSE OFFERINGS

NOTE: CTE courses are subject to change due to student enrollment, facilities, and/or staff availability. Also, courses may not be available on all high school campuses or may not be offered each year. If possible, DISD will transport students to and from their high school to their sister high school to participate in programs only offered at that campus.

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Mission Statement

The mission of Donna ISD is to provide a rigorous and supportive learning environment with meaningful and relevant learning experiences that inspire creativity, character development, and critical thinking that ensures educational excellence for all students.

Vision Statement

The vision of Donna ISD is to be a bold district at the forefront of educating all students to be passionate, motivated leaders who will be a powerful force for positive change in our community, state and nation.

CTE Mission Statement

The Donna ISD Career Technical Education program is dedicated to empowering all CTE students to explore, identify, select and pursue a career pathway and gain technical and high-level academic skills to confidently and successfully transition into post-secondary and 21st Century career opportunities.

CTE Objectives

- 1. Assist students to gain entry-level employment in an in-demand, high-skill, high-wage, job and/or to continue their education with a goal of student self-sufficiency.
- 2. Link CTE from elementary levels to postsecondary levels.
- 3. Collaborate with a CTE advisory industry council that provides support to Donna's CTE programs that are aligned to 21st century targeted occupations.
- 4. Provide support for local education and business partnerships, including work-related and job shadowing experiences that are related to CTE programs.
- 5. Recognize CTE student and staff achievements and CTE community partners and advisory council members.

Endorsements, Career Clusters, and Programs of Study

Per Texas Education Agency, a student must specify in writing an endorsement(s) the student intends to earn prior to entering Grade 9. Endorsements can be changed by submitting an updated form with appropriate signatures. CTE offers three endorsements-Business & Industry, Public Services, and STEM. Career Clusters and Programs of Study will support the completion of Endorsements.

Business & Industry

- Agriculture, Food, & Natural Resources
- Architecture & Construction
- Arts, A/V Technology & Communications
- Business, Marketing & Finance
- Hospitality & Tourism
- Information Technology
- Manufacturing
- Transportation, Distribution & Logistics

Public Services

- Education & Training
- Health Science
- Human Services Approved Regional Program of Study
- Law and Public Service

Science, Technology, Engineering and Mathematics

- Engineering
- Programming and Software Development



Career Clusters and Programs of Study

Effective 2020-2021 school year, Donna ISD is offering approved statewide and regional CTE Programs of Study within the following Career Clusters to give students an opportunity to enroll in a coherent sequence of courses that will prepare them for in-demand, high-skill, and high-wage careers in Texas.







Architecture & Construction



Arts, AV Technology & Communication



Business, Marketing & Finance



Education and Training



Health Science



Hospitality and Tourism



Human Services



Information Technology



Law and Public Service



Manufacturing



STEM



Transportation, Distribution, & Logistics

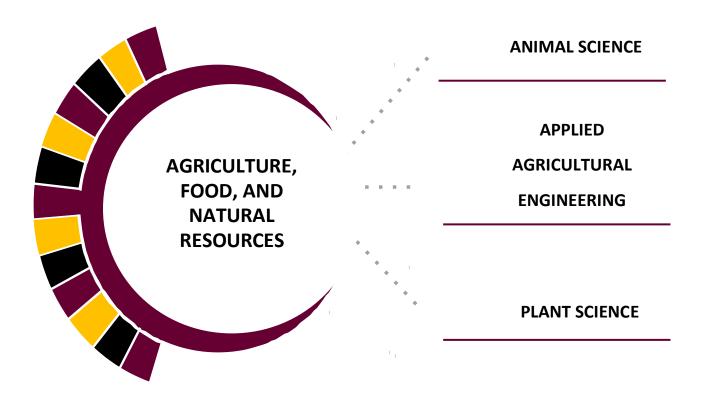
CTE Career Clusters, Programs of Study, and Endorsements

Career Cluster	Programs of Study	Endorsement
Agriculture, Food, and Natural Resources	Animal Science	Business & Industry
	Applied Agricultural Engineering	Business & Industry
	Plant Science	Business & Industry
Architecture and Construction	Architectural Design	Business & Industry
	Carpentry	Business & Industry
Arts, Audio Visual Technology and Communication	Design and Multimedia Arts	Business & Industry
	Digital Communications	Business & Industry
Business, Marketing, and Finance	Accounting and Financial Services	Business & Industry
	Business Management	Business & Industry
	Marketing and Sales	Business & Industry
Hospitality and Tourism	Culinary Arts	Business & Industry
Information Technology	Information Technology Support and Services	Business & Industry
	Networking Systems	Business & Industry
Manufacturing	Advanced Manufacturing and Machinery Mechanics	Business & Industry
	Manufacturing Technology	Business & Industry
	Welding	Business & Industry
Transportation, Distribution, & Logistics	Automotive	Business & Industry
Education and Training	Teaching and Training	Public Service
Health Science	Health Informatics	Public Service
	Healthcare Diagnostics	Public Service
	Healthcare Therapeutic	Public Service
Human Services	Cosmetology and Personal Care Services	Public Service
Law and Public Service	Law Enforcement	Public Service
Science, Technology, Engineering, and Mathematics	Engineering	STEM
	Programming and Software Development	STEM

Business & Industry Endorsement

CAREER CLUSTER

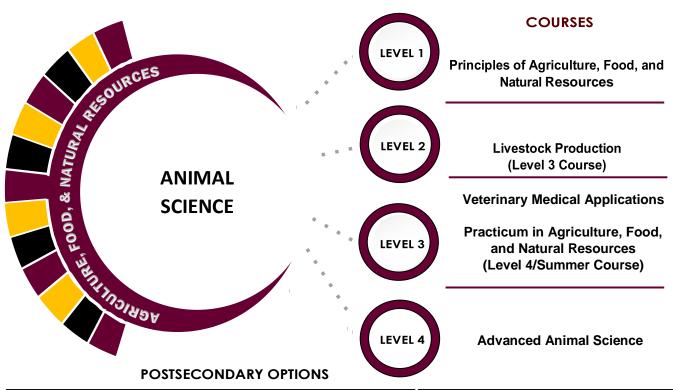
PROGRAMS OF STUDY



Students completing two or more courses for two or more credits within a program of study earn concentrator status for Perkins V federal accountability reporting.

Students finishing three or more courses for four or more credits with one course from level 3 or 4 within a program of study earn completer status for Perkins V federal accountability reporting.





HIGH SCHOOL/ *INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Licensed Veterinary Technician	Pet Groomer	Food Science and Technology	Animal Sciences	Genetics
*Certified Veterinary Assistant, Level 1	Veterinary Technician	Veterinary Studies	Agriculture	Veterinary Medicine
*Texas Beef Quality Assurance	Licensed Breeder	Biotechnology Laboratory Technician	Biology	Biological and Physical Sciences
*OSHA 30 Hour General Industry	Feedyard Technician in Cattle and Care Handling	Biology Technician	Zoology/ Animal Biology	Biological and Biomedical Sciences

*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.

For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Animal Breeders	\$39,13	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%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:
Texas FFA
Junior FFA
SkillsUSA
Rio Grande Valley
Livestock Show
Work Based Learning
Activities:
Agri-Science Fairs
4H
Clinical Rotation at
Veterinary office
Volunteer at a local farm

The Animal Science program of study focuses on the science, research, and business of animals and other living organisms. It teaches students 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.



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.

Successful completion of the Animal Science program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.

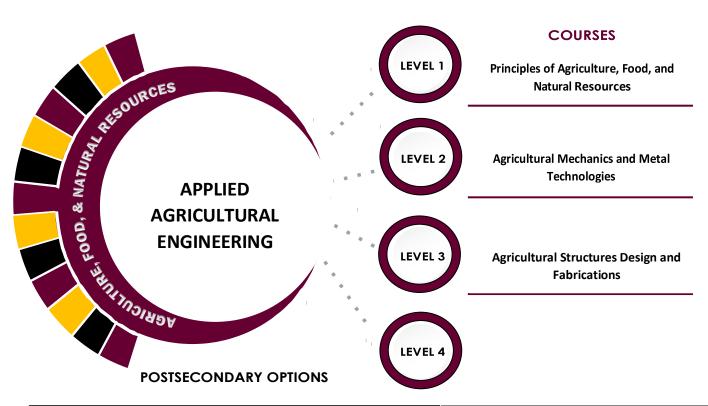


COURSE NAME	SERVICE ID PREREQUISITES (PREQ)		GRADE
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12
Livestock Production	13000300 (1 credit)	None	10-12
Veterinary Medical Applications	13000600 (1 credit)	PREQ: Equine Science, Small Animal Management, or Livestock Production	11-12
Practicum in Agriculture, Food, and Natural Resources	13002500 (2 credits)	None	11-12
Advanced Animal Science	13000700 (1 credit)	PREQ: Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production	11-12

FOR ADDITIONAL INFORMATION ON THE AGRICULTURE, FOOD, AND NATURAL RESOURCES CAREER CLUSTER, PLEASE CONTACT:

Amanda Brantley/Amana.Brantley@tea.texas.gov

https://tea.texas.gov/cte

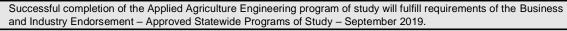


HIGH SCHOOL/	CERTIFICATE/	FICATE / ASSOCIATE'S BACHELOR'S DOCTORAL		OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH	
*INDUSTRY CERTIFICATION	LICENSE DEGREE DEGREE		PROFESSIONAL DEGREE	Outdoor Power Equipment & Other	\$32,406	366	16%	
*OSHA 30 Hour General Industry	Certified Professional Agronomist	Heavy Equipment Technology/	Agricultura	al Engineering	Small Engine Mechanics			
,	Ü	Technician			Welders	\$41,350	6,171	9%
*AWS D1.1 and/or D9.1 Certification	Fluid Power Mobile Hydraulic	Welding Technology/ Welding			Agricultural Engineers	\$64,792	9	13%
	Mechanic				Mobile Heavy	\$47,299	1,627	16%
*NIMS Materials, Measurement	Certified Reliability Engineer	Agricultural Mechanization, General			Equipment Mechanics			
and Safety AWS SENSE	Certified	0 "			WORK BASE			
Welding, Level 1	Irrigation	Small Engine			LEARI	NING OPP	ORTUNITIES	5
	Designer	Mechanics & Repair Technology			Exploration Activ Texas FFA Junior FFA Skills USA	A E	Vork Based Activities: Earn a welding Certificate	J
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.					SKIIIS USA	V	olunteer/Inte ocal farm	ern at a
	For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.							

The Applied Agricultural Engineering program of study explores the occupations 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.



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.



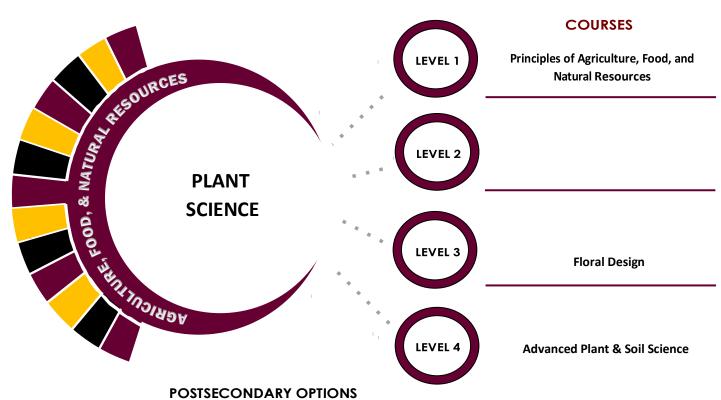


COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12
Agricultural Mechanics and Metal Technologies	13002200 (1 credit)	None	10-12
Agricultural Structures Design and Fabrications	13002300 (1 credit)	PREQ: Agricultural Mechanics and Metal Technologies	11-12

FOR ADDITIONAL INFORMATION ON THE AGRICULTURE, FOOD, AND NATURAL RESOURCES CAREER CLUSTER, PLEASE CONTACT:

Amanda Brantley/Amana.Brantley@tea.texas.gov

https://tea.texas.gov/cte



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HIGH SCHOOL/	TO THE CEPTIFIC ATE / I ASSOCIATE'S I BACHELOP'S I DOCTORAL	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH		
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Soil and Plant Scientists	\$54,662	116	21%
*OSHA 30 Hour General Industry	Landscape Industry Certified Technician	Turf and Turfgrass Management	Farm/Farm and Ranch Management		Tree Trimmers And Pruners	\$32,240	589	14%
*Commercial/ Noncommercial Pesticide Applicator	Pesticide Applicator	Ornamental Horticulture	Agronomy and Crop Science		Pesticide Handlers, Sprayers, and Applicators	\$36,733	196	22%
*Texas State	Certified Floral	Member of	Agricultura	I Business and	Landscaping Supervisors	\$44,408	807	19%
Floral Association, Level One	Designer	AIFD	9	nent, General	Biological Technicians	\$42,931	452	17%
*Landscape Irrigation Technician	Certified Irrigation Designer	Applied Horticulture/		e Operations,	WORK BASEI LEARN		IG AND EXPA	ANDED
License	Designer	Landscape Designer			Exploration Activ		ork Based Le	arning
	*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.				Texas FFA Junior FFA SkillsUSA	Ea Co	ctivities: arn a Floral De ertificate	Ü
	For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.					In	tern/Work at a	•
	•	•		iit		In	ork at a Floral tern/Work at a andscaping Bu	

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.



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.

Successful completion of the Plant Science program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12
Floral Design	13001800 (1 credit)	None	9-12
Advanced Plant and Soil Science	13002100 (1 credit)	None	11-12

FOR ADDITIONAL INFORMATION ON THE AGRICULTURE, FOOD, AND NATURAL RESOURCES CAREER CLUSTER, PLEASE CONTACT:

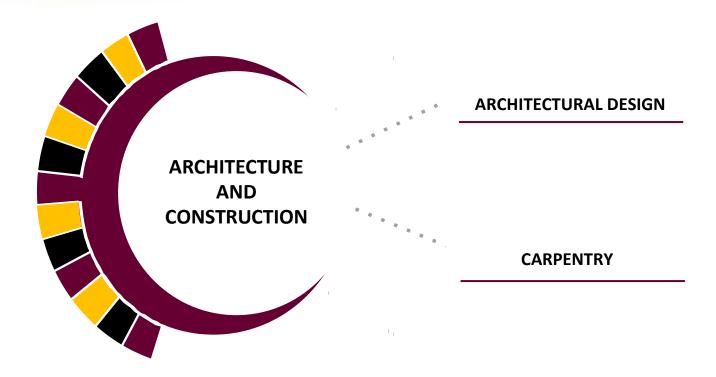
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Business & Industry Endorsement

CAREER CLUSTER

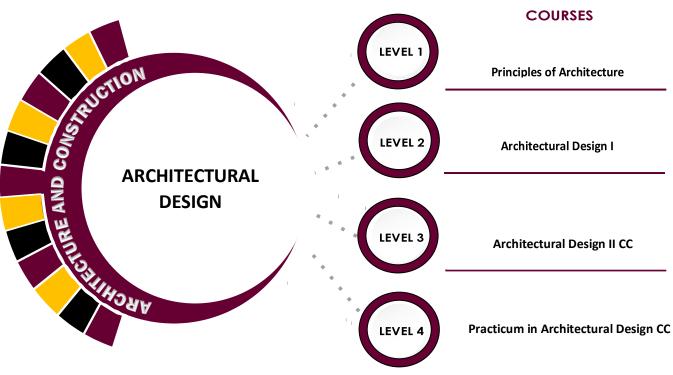
PROGRAMS OF STUDY



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POSTSECONDARY OPTIONS

HIGH SCHOOL/	CERTIFIC ATE/ ASSOCIATE'S RACHELOR'S		MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH	
*INDUSTRY CERTIFICATION	I LICENSE I DECEMBE I DECEMBE	PROFESSIONAL DEGREE	Architects	\$77,043	808	16%		
*Autodesk Certified Professional or	*Architectural and Civil Engineering	Architecture and Civil	Architecture		Geographic	\$58,906	162	22%
User in AutoCAD	Technology Certificate – STC Dual Enrollment	Engineering Design Technology			Architectural/ Civil Drafters	\$50,170	1,068	9%
Autodesk Certified Professional or User in AutoCAD Civil 3D	Certified Development Design & Construction	Interior Design Interior Architecture		Construction Managers	\$87,402	2,401	14%	
	Professional				WORK BASEI		G AND EXPA	NDED
Autodesk Certified Professional or User in Revit Architecture	National Council Certified Interior Designer	Civ	Civil Engineering, General			A	ork Based Leactivities: tern at an arch	
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.					college or firm Shadow an Archite or Civil Engineer			
	For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.							

The Architectural Design program of study explores the occupations and educational opportunities associated with developing, engineering and designing building structures and facilities. This program of study may also include exploration into collecting and interpreting geographic information, researching and preparing maps, and interior design.



The Architecture and Construction Career Cluster® focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architectures, interior design, and construction management.

Successful completion of the Architectural Design program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.

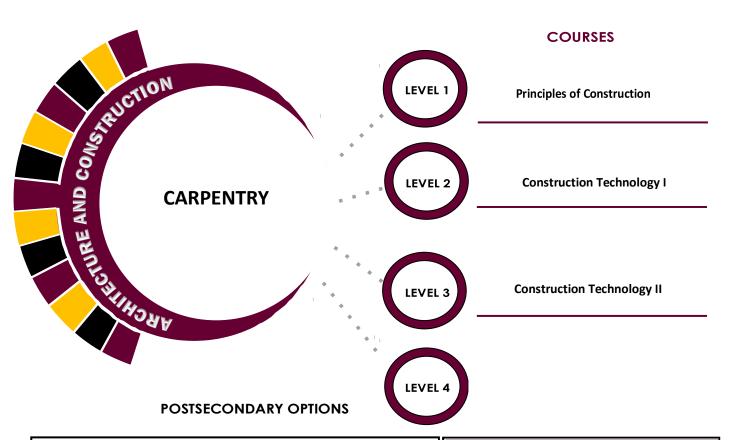


COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Architecture	13004210 (1 credit)	None	9-12
Architectural Design I	13004600 (1 credit)	PREQ: Algebra I and English I	10-12
Architectural Design II CC	13004700 (2 credits)	PREQ: Architectural Design I	11-12
Practicum in Architectural Design CC	13004800 (2 credits)	PREQ: Architectural Design II CC	12

FOR ADDITIONAL INFORMATION ON THE ARCHITECTURE AND CONSTRUCTION CAREER CLUSTER, PLEASE CONTACT:

 $Les\ Hudson/Les. Hudson@tea.texas.gov$

https://tea.texas.gov/cte



HIGH SCHOOL/	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	ī	PROFESSIONAL DEGREE	Carpenters	\$35,922	5,031	26%
NCCER Carpentry Fundamentals, Level 1	Certified Lead Carpenter	Carpentry/ Carpenter	Construction Science	Construction Management				
NCCER Core Curriculum	Certified Installer	Industrial Mechanics and Maintenance Technology			Cost Estimators	\$63,939	2,239	21%
*OSHA 30 Hour	Certified Door Consultant							
Construction							IG AND EXP	ANDED
NCCER Construction	Fluid Power Connector and				LEAR		ORTUNITIES	
Technology	Conductor				Exploration Acti	villes.	Vork Based Lo	earning
	*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.				SkillsUSA	Ir	activities: Intern at a cons Ompany	truction
	For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.				Shadow a Carper	_	Obtain a certific	ation

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, posts, 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.



The Architecture and Construction Career Cluster® focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architectures, interior design, and construction management.

Successful completion of the Carpentry program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Construction	13004220 (1 credit)	None	9-12
Construction Technology I	13005100 (2 credits)	None	10-12
Construction Technology II	13005200 (2 credits)	PREQ: Construction Technology I	11-12

FOR ADDITIONAL INFORMATION ON THE ARCHITECTURE AND CONSTRUCTION CAREER CLUSTER, PLEASE CONTACT:

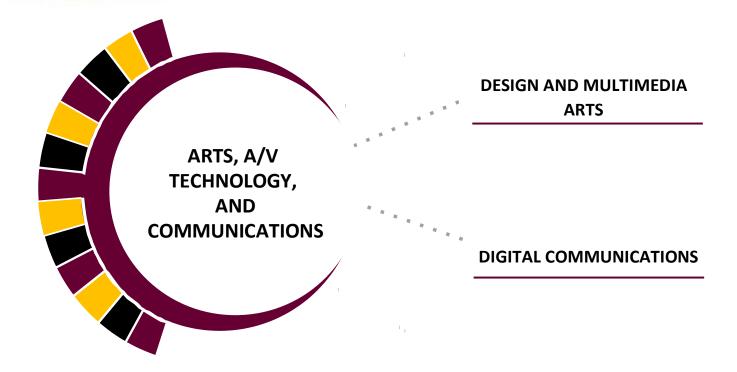
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Business & Industry Endorsement

CAREER CLUSTER

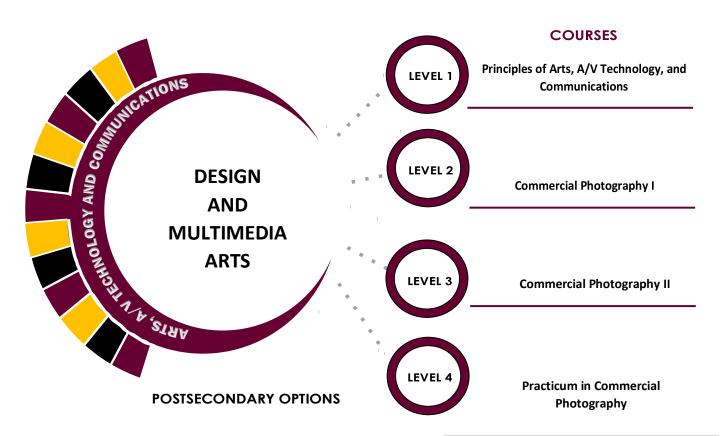
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HIGH SCHOOL/	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Graphic Designers Technicians	\$44,824	1,433	15%
*Adobe Certified Associate Certifications— Photoshop, Premiere Pro, Visual Design Specialist	Certified Digital Designer	Animation, Interactive Technology, Video Graphics and Special Effects		Multimedia Artists Equipment Technicians	\$67,392	186	21%	
Adobe Certified Expert Certifications	WOW Certified Web Designer	Graphic Design			Cartographers and Photogrammetrists		170	28%
Apple Logic Pro X	Adobe Suite Certifications	Game and Interactive Media Intermedia/ Design Multimedia			WORK BASE LEARI		IG AND EXP	ANDED
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.			n information is	Exploration Activ SkillsUSA TSA	Α	Vork Based Leactivities: Intern with a mu		
	information on postsecondary options for this program of study, visit			Join a photography		r photography	studio	

The Design and Multimedia Arts 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.



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.

Successful completion of the Design and Multimedia Arts program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.

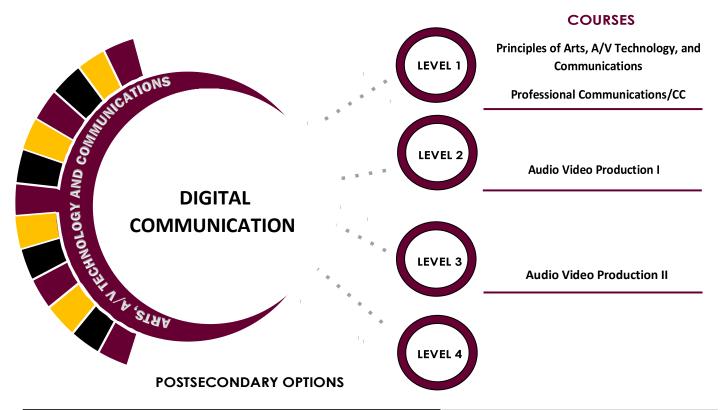


COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) REC. PREREQUISITES (RPREQ)	GRADE
Principles of Arts, A/V Technology, and Communications	13008200 (1 credit)	None	9
Commercial Photography I	13009100 (1 credit)	None	9-12
Commercial Photography II	13009200 (1 credit)	RPREQ: Commercial Photography I	10-12
Practicum in Commercial Photography	13009250 (2 credits)	PREQ: Commercial Photography I	11-12

FOR ADDITIONAL INFORMATION ON THE ARTS, A/V TECHNOLOGY AND COMMUNICATIONS CAREER CLUSTER, PLEASE CONTACT:

Les Hudson/Les.Hudson@tea.texas.gov

https://tea.texas.gov/cte



HIGH SCHOOL/ *INDUSTRY	CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL	OCCUPATIONS Sound Engineering	MEDIAN WAGE \$39,562	ANNUAL OPENINGS 79	% GROWTH 27%
CERTIFICATION				DEGREE	Technicians	, ,		
*Adobe Certified Associate Certifications— Photoshop, Premiere Pro,	Certified Broadcast Radio Engineer	Music Technology	Communicati	ons/Journalism	Camera Operators, Television, Video and Motion Pictures	\$50,024	129	9%
Visual Design Specialist					Audio and Video Equipment Technicians	\$40,581	757	29%
Apple Final Cut Pro X	Certified Video Engineer		ing Arts /Technician	Communications Technology/ Technician		\$47,382	118	23%
Apple Logic Pro X	Commercial Audio Technician	Cinematography and Film/ Video Production			WORK BASE LEAR		NG AND EXP	ANDED
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.			Exploration Active SkillsUSA TSA	A Ir	Vork Based L Activities: ntern at a local	I television		
For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.			study, visit	Shadow a production	_	tation or video ompany	production	

The Digital Communications program of study explores the occupations and educational opportunities associated with the production of audio and visual media formats for various purposes, such as TV broadcasts, advertising, video production or motion pictures. This program of study may also include exploration into operating machines and equipment to record sound and images, such as microphones, sound speakers, video screens, projectors, video monitors, sound and mixing boards, and related electronic equipment.



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.

Successful completion of the Digital Communication program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Arts, A/V Technology, and Communications	13008200 (1 credit)	None	9
Professional Communications/CC	13009900 (.5 credits)	None	9-12
Audio Video Production I	13008500 (1 credit)	None	10-12
Audio Video Production II	13008600 (1 credit)	PREQ: Audio Video Production I	11-12

FOR ADDITIONAL INFORMATION ON THE ARTS, A/V TECHNOLOGY AND COMMUNICATIONS CAREER CLUSTER, PLEASE CONTACT:

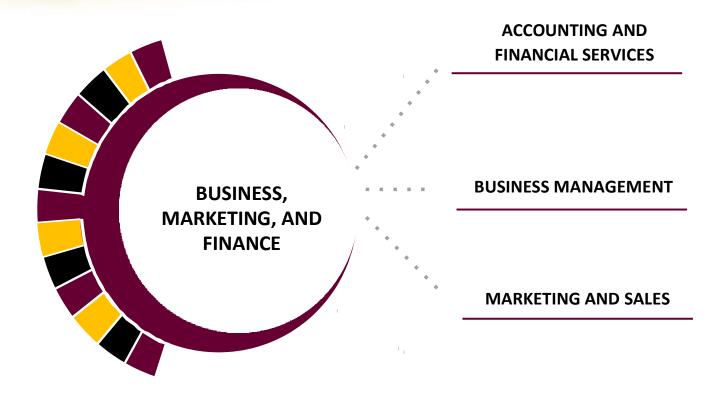
Les Hudson/Les.Hudson@tea.texas.gov

https://tea.texas.gov/cte

Business & Industry Endorsement

CAREER CLUSTER

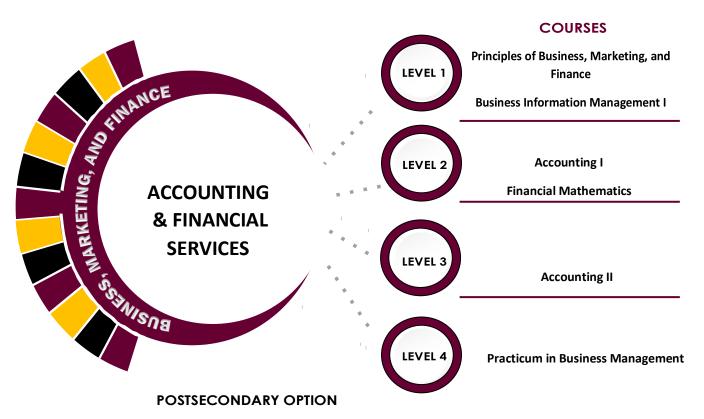
PROGRAMS OF STUDY



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Students finishing three or more courses for four or more credits with one course from level 3 or 4 within a program of study earn completer status for Perkins V federal accountability reporting.





HIGH SCHOOL/ *INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
*Intuit QuickBooks Certified User	Certified Management Accountant	Real Estate	Accounting	Financial Accounting
*Microsoft Office Specialist or Expert – Word and/or Excel	Certified Internal Auditor	Financial, General		Business Administration
Certified Insurance Service Representative	Certified Income Specialist	Financial Planning and Services		Financial Planning
*Google Analytics Individual Qualification	Certified Public Accountant	Certified Incon		

available from the TEA CTE website.

For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.

OCCUPATIONS	MEDIAN	ANNUAL OPENINGS	% GROWTH
	WAGE	OPENINGS	GROWIN
Accountants and Auditors	\$71,469	14,436	22%
Loan Officers	\$68,598	2,419	19%
Personal Financial Advisors	\$86,965	1,861	52%
Administrative Service Managers	\$96,138	2,277	21%
Insurance Underwriters	\$66,206	594	14%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities: Business Professionals of America (BPA), Future Business Leaders of America (FBLA), and **DECA**

Work Based Learning Activities:

Intern at an Accounting firm Earn certifications

The Accounting and Financial Services program of study teaches CTE concentrators how to examine, analyze, and interpret financial records. Through this program of study, students will learn the skills necessary to perform financial services, prepare financial statements, interpret accounting records, give advice, or audit and evaluate statements prepared by others. This program of study will also introduce students to mathematical modeling tools.



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, interior design, and construction management.

Successful completion of the Accounting and Financial Services program of study will fulfill requirements of the Business and Industry Endorsement - Approved Statewide Programs of Study - September 2019.



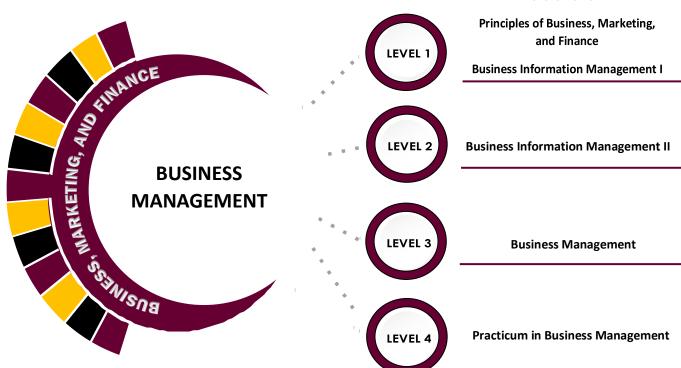
COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Business, Marketing, and Finance	13011200 (1 credit)	None	9-11
Business Information Management I	13011400 (1 credit)	None	9-12
Accounting I	13016600 (1 credit)	None	10-12
Financial Mathematics	13018000 (1 credit)	PREQ: Algebra I	10-12
Accounting II	13016700 (1 credit)	PREQ: Accounting I	11-12
Practicum in Business Management	13012200 (2 credits)	None	11-12

FOR ADDITIONAL INFORMATION ON THE BUSINESS, MARKETING, AND FINANCE CAREER CLUSTER, PLEASE CONTACT:

Dale Fowler/Dale.Fowler@tea.texas.gov

https://tea.texas.gov/cte

COURSES



	POST	SECONDAR	Y OPTIONS					
HIGH SCHOOL/	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Administrative Service Managers	\$96,138	2,277	21%
*Microsoft Office Specialist or Expert –Word	Certified Records Manager	Ві	Business Administration		Management Analysts	\$87,651	4,706	32%
*Microsoft Office Specialist or Expert –Excel	Certified Facility Manager	Business/ Commerce Business Administration		General and Operations Managers	\$107,640	18,679	20%	
Google Cloud Certified Professional – G-Suite	Certified Commercial Contracts Manager		Public Admir	nistration	Operations Research Analysts Supervisors of	\$78,083 \$57,61	, -	38% 20%
*Google Analytics	Teradata 14 Basics/	Business M	Business Management Management Science		Administrative Support Workers			
Individual Qualification	Certified Technical Specialist			Colonico			NG AND EXP PORTUNITIES	ANDED
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.			Exploration Acti Business Profess of America (BPA)	ionals / , Future <u>l</u>	Nork Based L Activities: ntern with a loo	cal business		
For more information on postsecondary options for this program of study, visit TXCTE.org, or visit your counselor, or the CTE department at DISD			Business Leaders America (FBLA), DECA	- OI	Earn certification	ons		

The Business Management program of study teaches CTE concentrators how to plan, direct, and coordinate the administrative services and operations of an organization. Through this program of study, students will learn the skills necessary to formulate policies, manage daily operations, and allocate the use of materials and human resources. This program of study will also introduce students to mathematical modeling tools and organizational evaluation methods.



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, interior design, and construction management.

Successful completion of the Business Management program of study requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.



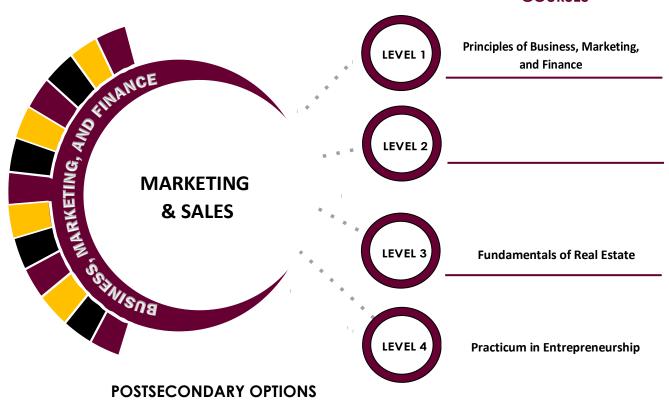
COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Business, Marketing, and Finance	13011200 (1 credit)	None	9-11
Business Information Management I	13011400 (1 credit)	None	9-12
Business Information Management II	13011500 (1 credit)	PREQ: Business Information Management I	10-12
Business Management	13012100 (1 credit)	None	10-12
Practicum in Business Management	13012200 (2 credits)	None	11-12

FOR ADDITIONAL INFORMATION ON THE BUSINESS, MARKETING, AND FINANCE CAREER CLUSTER, PLEASE CONTACT:

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COURSES



HIGH SCHOOL/ *INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE	OCCUPATIONS W Marketing Research \$ Analysts & Marketing
*Microsoft Office Specialist, Expert/Master in Word and/or Excel	Certified Product Manager	Marketing/N Managemen	•	Marketing	Specialists Real Estate Agents Insurance Sales
*Google Analytics Individual Qualification	DMA Certified Marketing Professional	Consumer Merchandising/ Retailing Management	Business A	dministration	Agent First-Line Supervisors Research Analysts
*Customer Service Certification	Certified Salesperson	International Marketing	Applied	Economics	Wholesale and Retail Buyers WORK BASED LE
*Real Estate Sales Agent License	Real Estate Appraise	Business	Marketing Research	Advertising	Exploration Activities Business Professional of America (BPA), Fut
available from t	ered at DISD. Add the TEA CTE web nation on postseco	site.			

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH			
Marketing Research Analysts & Marketin Specialists		4,664	40%			
Real Estate Agents	\$60,040	4,190	17%			
Insurance Sales Agent	\$43,181	5,886	30%			
First-Line Supervisor Research Analysts	ors \$72,550	2,826	15%			
Wholesale and Retail Buyers	\$51,106	1,299	19%			
WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES						
Exploration Active Business Profession of America (BPA), Business Leaders	ork Based Loctivities: tern at a Mark hadow a Real	ceting firm				

Agent

The Marketing and Sales program of study teaches CTE concentrators how to collect information to determine potential sales of a product or service and/or create a marketing campaign to market or distribute goods and services. Through this program of study, students will learn the skills necessary to understand and apply data on customer demographics, preferences, needs, and buying habits.



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, interior design, and construction management.

Successful completion of the Marketing and Sales program of study requirements of the Business and Industry Endorsement Approved Statewide Programs of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Business, Marketing, and Finance	13011200 (1 credit)	None	9-11
Fundamentals of Real Estate	N1301120 (2 credits)	None	11-12
Practicum in Entrepreneurship	TBD	TBD	TBD

FOR ADDITIONAL INFORMATION ON THE BUSINESS, MARKETING, AND FINANCE CAREER CLUSTER, PLEASE CONTACT:

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Business & Industry Endorsement

CAREER CLUSTER

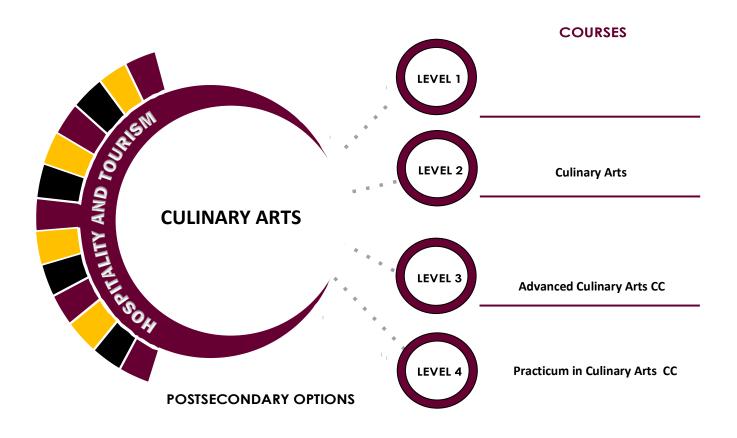
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CEPTIFICATE / ASSOCIATE'S RACHELOP'S	MASILK 3/	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH			
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	DEGREE PROFESSIO	DOCTORAL PROFESSIONAL DEGREE	Food Service Managers	\$55,619	1,561	28%
*ServSafe Manager	Comprehensive Food Safety	Culinary Arts	Hospitality Administration/ Management, General		Chef and Head	\$43,285	1,366	25%
Certified Fundamentals Cook	Certified Chef	Hotel and	d Restaurant M	lanagement	Cooks	ψ+3,203	,	
Certified Fundamentals Pastry Cook	*Commercial Cooking Certificate-STC	Restaurant Culinary and Catering Management	Management		Food Science Technicians Food and Beverage Managers	\$34,382 \$35,629	236 1,561	11% 28%
ManageFirst Professional	Foodservice Management Professional	Culinary Arts/ Chef Training	Culinary Business Science and Administration Food Service Management		WORK BASED	LEARNING AND EXPANDED NING OPPORTUNITIES		
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.					Exploration Activities: Work Based Learning Activities: Activities: Plan a catering event		event	
For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.				Work for a res catering comp Cook at home				

The Culinary Arts program of study introduces students 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.



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.

Successful completion of the Culinary Arts program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Culinary Arts	13022600 (2 credits)	None	10-12
Advanced Culinary Arts CC	13022650 (2 credits)	PREQ: Culinary Arts	11-12
Practicum in Culinary Arts CC	13022700 (2 credits)	PREQ: Adv. Culinary Arts CC	12

FOR ADDITIONAL INFORMATION ON THE HOSPITALITY AND TOURISM CAREER CLUSTER, PLEASE CONTACT:

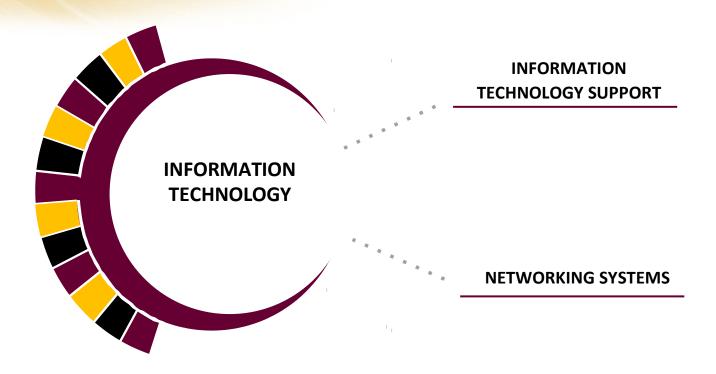
Debbie Wieland/Debbie.Wieland@tea.texas.gov

https://tea.texas.gov/cte

Business & Industry Endorsement

CAREER CLUSTER

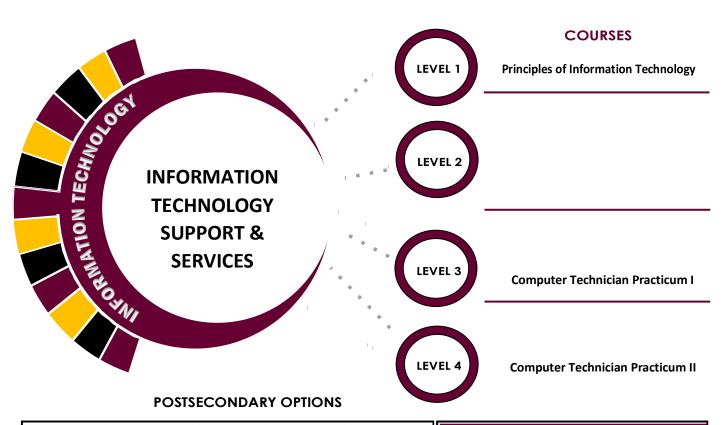
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HIGH SCHOOL/	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	DEGREE		Database Administrators	\$83,075	1,063	19%
*Microsoft Technology Associate (MTA) Window Operating System Fundamentals	IBM Certified Specialist InfoSphere Option for Distributed Systems fundamentals	Comp	uter and Informat General	ion Sciences,	Computer Hardware	\$111,738	3 343	24%
*Comp TIA A+ *Comp TIA IT Fundamentals	HP ASE ProLiant Server Solutions Integrator V2	Information Technology	Computer Engineering, General		Engineers Computer System Analysts	\$87,568	5,937	29%
*MTA Intro. to Programming Using Python	Oracle Linus 6 Advanced System Administration	Computer Systems Networking and Telecommunications		and Support				
*MTA Intro. to Programming Using HTML &	*MTA Intro. to Programming		Computer Systems Networking and Telecommunications			NING OPP	ORTUNITIES	
CSS	Using JAVA	Por In I			Exploration Action Join TSA, BPA		ork Based Loctivities:	earning
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.				Job shadow a dat administrator or	Te	ntern with a Computer echnician		
For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.				computer hardware Earn certifications engineer			ns	

The Information Technology Support and Services program of study explores the occupations and educational opportunities associated with administering, testing, and implementing computer databases and applying knowledge of database management systems. This program of study may also include analyzing user requirements and problems to automate or improve existing systems and review computer system capabilities. This program of study may also include exploration into the research, design, or testing of computer or computer-related equipment for commercial, industrial, military, or scientific use.



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.

Successful completion of the Information Technology Support and Services program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.

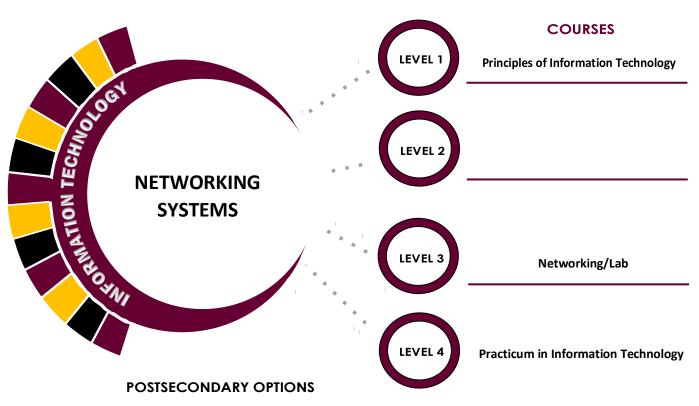


COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Information Technology	13027200 (1 credit)	None	9-10
Computer Technician Practicum I	13027500 (2 credits)	None	10-12
Computer Technician Practicum II	13027510 (2 credits)	PREQ: Computer Technician Practicum I	12

FOR ADDITIONAL INFORMATION ON THE INFORMATION TECHNOLOGY CAREER CLUSTER, PLEASE CONTACT:

Laura Torres/Laura.Torres@tea.texas.gov

https://tea.texas.gov/cte



HIGH SCHOOL/	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Computer Network	\$111,633	1,082	23%
*Microsoft Technology Associate (MTA) Networking Fundamentals	Cisco Certified Entry Networking Specialist	Сотри	ter and Information Sciences, General		Architects Computer Systems	\$87,568	5,937	29%
*MTA Security Fundamentals	Oracle Certified Database Associate	Cybersec	urity	Information Technology	Analysts	\$68,037	1,824	19%
*Comp TIA Security+	Cisco Certified Entry	Information Technology	Systems Sec	nd Information urity/Information	Network Support Specialists	400,00.	.,02.	.070
*MTA Window	Networking Technician *MTA Intro. to	Network and		rance			IG AND EXP	ANDED
Operating Systems Fundamentals	Programming Using JAVA	System Administration	•	r Engineering, eneral	Exploration Acti Join TSA, BPA		Vork Based L ctivities:	earning
	ered at DISD. Add ne TEA CTE webs	•	eased certification	n information is	Job shadow a con network architect	or N	ntern with a co letwork archite	ect or
	nation on postsectors or the			study, visit	support specialist Support Specialist Earn certifications			

The Networking Systems program of study explores the occupations and educational opportunities associated with designing and implementing computer and information networks, such as local area networks (LAN), wide area networks (WAN), intranets, extranets, and other data communications networks. This program of study may also include exploration into analyzing science, engineering, and other data processing problems to implement and improve computer systems.



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.

Successful completion of the Networking Systems program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Information Technology	13027200 (1 credit)	None	9-10
Networking/Lab	13027410 (2 credits)	None	10-12
Practicum in Information Technology	13028000 (2 credits)	PREQ: Minimum of two IT courses	12

FOR ADDITIONAL INFORMATION ON THE INFORMATION TECHNOLOGY CAREER CLUSTER, PLEASE CONTACT:

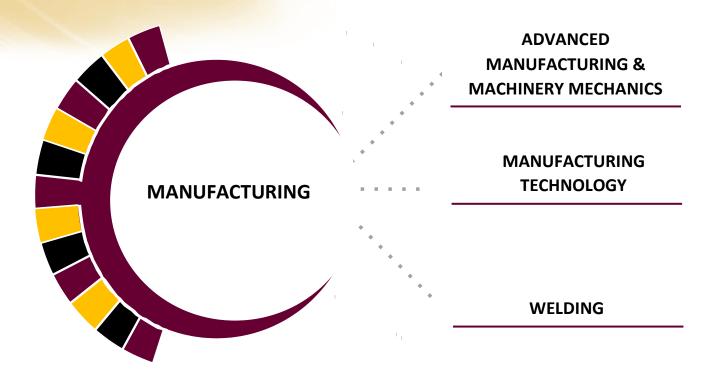
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Business & Industry Endorsement

CAREER CLUSTER

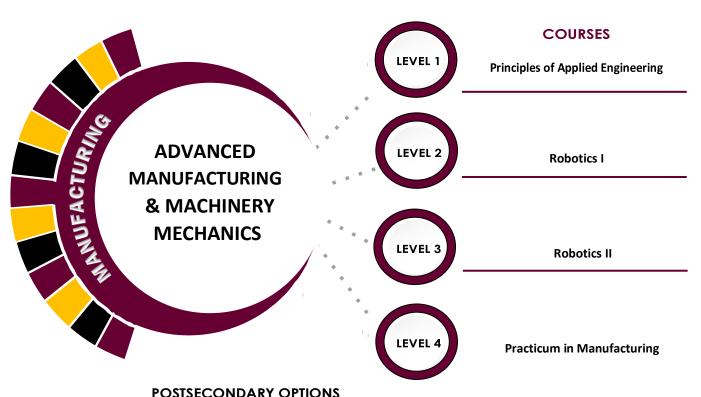
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HIGH SCHOOL/	CERTIFICATE/	ASSOCIATE'S	DA GUEL GRIG	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	BACHELOR'S DEGREE	PROFESSIONAL DEGREE	Electro Mechanical	\$30,160	951	9%
*NIMS Machining Level 1-Materials, Measurement and Safety	Engineer, Professional	Electro- Mechanical Engineering/ Technology	Electric	cal Engineering	Assemblers Electro	\$56,555	127	9%
*NIMS Industrial Technology Maintenance - Maintenance Operations	*NIMS Industrial Technology Maintenance – Basic Mechanical Systems	Instrumental Technology Technician	Industri	ial Engineering	Mechanical Technicians Industrial Machinery	\$49,816	3,788	27%
FANUC Robot, Operator 1	Certified Quality Technician	Industrial Mechanics & Maintenance Technology	Mechanic	cal Engineering	Mechanics WORK BASE	D I FARNIN	G AND EXPA	ANDED
Mastercam Associate Level	Mechatronics	Robotics	Engineerir	ng, General		NING OPP		
Certification	Programmable Logic Controllers	Technology/ Technician			Exploration Acti SkillsUSA	A	ork Based Le	Ū
	ered at DISD. Add		sed certification	on information is	STEM/Robotics Competitions		bb shadow a m chnician	ecnanicai
	ation on postseco			f study, visit			oprenticeship a dustry	at a local
0, ,	,			of study focuses on	the assembly, operat	tion mainten	ance and rena	oir of

The Advanced Manufacturing and Machinery Mechanics program of study focuses on the assembly, operation, maintenance, and repair of electromechanical equipment or devices. Students may work in a variety of mechanical fields, gaining knowledge and experience in robotics, refinery and pipeline systems, deep ocean exploration, or hazardous waste removal. CTE concentrators may work in a variety of fields of engineering.



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.

Successful completion of the Advanced Manufacturing and Machinery Mechanics program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.

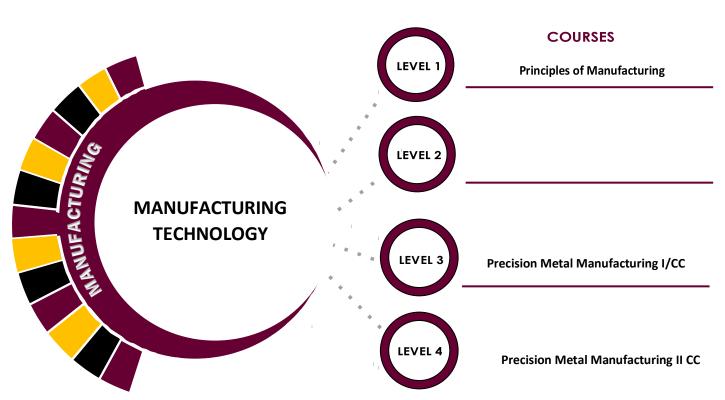


COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Applied Engineering	13036200 (1 credit)	None	9-10
Robotics I	13037000 (1 credit)	None	9-10
Robotics II	13037050 (1 credit)	PREQ: Robotics I	10-12
Practicum in Manufacturing	13033000 (2 credits)	None	12

FOR ADDITIONAL INFORMATION ON THE MANUFACTURING CAREER CLUSTER, PLEASE CONTACT:

 $A manda\ Brantley/A manda. Brantley@tea.texas.gov$

https://tea.texas.gov/cte



POSTSECONDARY OPTIONS

HIGH SCHOOL/ *INDUSTRY	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Mechanical Engineering	\$57,117	453	9%
*NIMS Machining Level 1-Materials, Measurement and Safety	NIMS Industrial Technology Maintenance - Basic Mechanical Systems		Environ	mental Health	Technicians CNC Machine Operators Aerospace	\$39,250	1,319	12%
*NIMS Machining Level 1- CNC Milling Operations	Certified Environmental, Safety, and Health Trainer	Machine Shop Technology/ Assistant	Biomedical Technology/ Technician	Occupational Health and Industrial Hygiene	Engineering and Operations Technicians	\$60,757		9%
*NIMS Machining Level 1- Drill Press Skills	Fast Start Precision Manufacturing	Precision Manufacturing Technology		al Engineering	Electrical Engineer			9%
*STC Precision Manufacturing Technology	Mechatronics Technology		•	Management pervision	WORK BASE LEAR		IG AND EXP	ANDED
Certificate *Certification offe	Specialist ered at DISD. Add ne TEA CTE webs		ased certification	n information is	Exploration Active SkillsUSA	A	Vork Based L activities: ob shadow a r	J
	ation on postseco			study, visit			pprenticeship ndustry	at a local

The Manufacturing Technology 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. Students will learn how to set up and operate a variety of machine tools to produce precision parts and instruments. Students will also 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.



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.

Successful completion of the Manufacturing Technology program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.

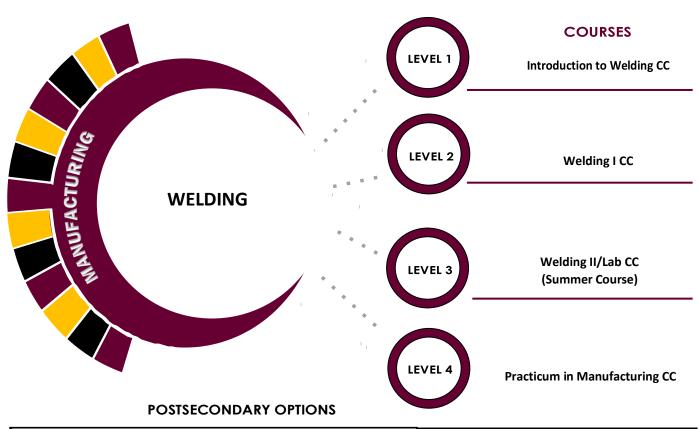


COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Manufacturing	13032200 (1 credit)	None	9-12
Precision Metal Manufacturing I/CC	13032500 (2 credits)	None	11
Precision Metal Manufacturing II CC	13032600 (2 credits)	PREQ: Precision Metal Manufacturing I CC	12

FOR ADDITIONAL INFORMATION ON THE MANUFACTURING CAREER CLUSTER, PLEASE CONTACT:

Amanda Brantley/Amanda.Brantley@tea.texas.gov

https://tea.texas.gov/cte



HIGH SCHOOL/	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Welders, Cutters, Solderers, and	\$41,350	6,171	9%
*NIMS Machining Level 1-Materials, Measurement and Safety	Certified Welder/ Welder Inspector	Welding Technology/ Welder	Welding E Technology	ingineering /Technician	Brazers Welding,			
*AWS Certified Welder, D1.1	ASW SENSE Level 1	Machine Shop Technology/ Assistant	Biomedical Technology/ Technician	Occupational Health and Industrial Hygiene	Soldering and Brazing Machine Setters, Operators and Tenders	\$40,040	280	9%
*AWS Certified Welder, D9.1	Certified Welding Engineering	Operations Ma	anagement and	Supervision	Production and Operating Technicians	\$62,171	5,094	9%
*STC Structural Welding Certificate	Combination Welding Certificate	Occupational Safety and Health Technology/	Environmer	ntal Health	WORK BASED		G AND EXPA	ANDED
		Technician			Exploration Activi		ork Based Le	arning
	*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.				SkillsUSA Activities: Job shadow a welder Apprenticeship at a local			
	nation on postsecour counselor, or the			study, visit	industry		dustry	

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. Students 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.



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.

Successful completion of the Welding program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ)	GRADE
Introduction to Welding CC	13032250 (1 credit)	None	11
Welding I CC	13032300 (2 credits)	CREQ: Introduction to Welding CC	11
Welding II CC Welding II CC/Lab	13032400 (2 credits) 13032410 (3 credits)	PREQ: Introduction to Welding CC and Welding I CC	11
Practicum in Manufacturing CC	13033000 (2 credits)	PREQ: Introduction to Welding CC, Welding I CC, and Welding II CC/Lab	12

FOR ADDITIONAL INFORMATION ON THE MANUFACTURING CAREER CLUSTER, PLEASE CONTACT:

Lee Hudson/Lee.Hudson@tea.texas.gov

https://tea.texas.gov/cte

Business & Industry Endorsement

CAREER CLUSTER

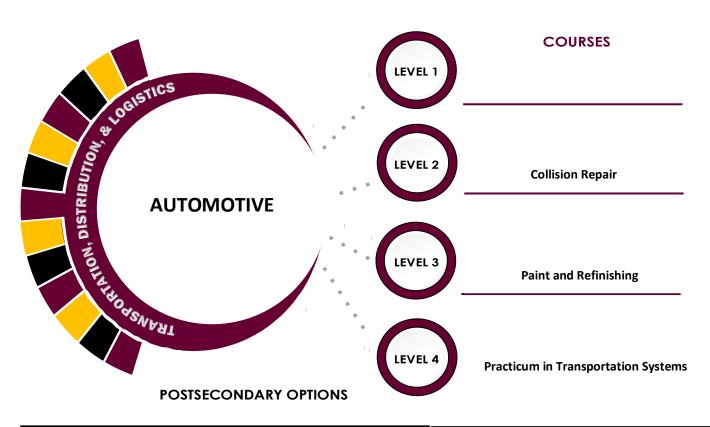
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HIGH SCHOOL/	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Automotive Body and	\$40,144	1,456	25%
*Commercial Driver's License, Class A & B	Master Collision Repair and Refinishing Technician	Autobody/ Collision and Repair Technology/ Technician		Mechanical Engineering	Related Repairers Automotive Service Technician	\$38,459	5,557	18%
*OSHA 30 Hour General Industry	*ASE Safety Service		ical Engineering/ hnology/Technic		and Mechanics			
*ASE Suspension & Steering, Entry Level	*ASE Pollution Prevention	Medium/Heavy Vehicle and Truck Technology/						
*FAA Certified	*ASE Engine	Technician			WORK BASEI LEARN		G AND EXPA	ANDED
Part 107 Remote Drone Pilot	Repair, Entry Level				Exploration Activ		ork Based Le	arning
	ered at DISD/*ASE certification inform				Automotive Service		b shadow a m	
	nation on postsect	, ,		study, visit	Association (ASE)		ork at a local a pair or body sh	

The Automotive program of study teaches students how to repair and refinish automobiles and service various types of vehicles. Students may learn to collect payment for services or supplies and perform typical vehicle maintenance procedures such as lubrication, oil changes, installation of antifreeze, or replacement of accessories like wiper blades or tires.



The Transportation, Distribution, and Logistics Career Cluster® focuses on careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

Successful completion of the Automotive program of study will fulfill requirements of the Business and Industry Endorsement Approved Statewide Programs of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Collison Repair	13039800 (2 credits)	None	10-12
Paint and Refinishing	13039900 (2 credits)	None	10-12
Practicum in Transportation Systems Practicum in Transportation Systems/Extended Practicum in Transportation Systems	13040450 (2 credits) 13040455 (3 credits)	None	11-12

 $FOR\ ADDITIONAL\ INFORMATION\ ON\ THE\ TRANSPORTATION,\ DISTRIBUTION,\ AND\ LOGISTICS\ CAREER\ CLUSTER,\ PLEASE\ CONTACT:$

Kevin Johnson/Kevin.Johnson@tea.texas.gov

https://tea.texas.gov/cte

Public Services Endorsement

CAREER CLUSTER

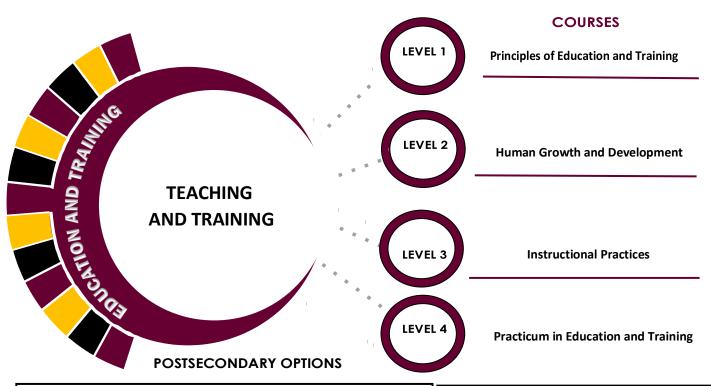
PROGRAM OF STUDY



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HIGH SCHOOL/ *INDUSTRY	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWT
CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Adult Basic and Secondary Education and	\$48,069	862	17%
*Certified Substitute Teacher	Texas Educator Certification	Teacher Education	Bilingual and Multilingual	Instruction and Learning	Literacy Teacher and Instructors			
(Region One Academy)	Program		Education		Middle School Teachers	\$54,510	6,407	15%
*Educational Aide I	Educational Instructional Technology		n, General subject area)	Educational Leadership and Administration, General	Special Education Teachers	\$56,720	980	18%
	Counselor, Professional		Special Educa	ation	Educational -Administrators	\$79,830	2,407	16%
	Athletic Trainer	Health and Education	•	Social and Philosophical Foundations			NG AND EXP	ANDED
				of Education	Exploration Act		Nork Based L	earning
	ered at DISD. Add he TEA CTE webs		pased certification	n information is	Texas Associatio Future Educators FCCLA		Activities: Job shadow a t	eacher
	nation on postsectur counselor, or the			study, visit	FUCLA		/olunteer as a assistant	teacher

The Teaching and Training program of study prepares students for careers related to teaching, instruction, and creation of instructional and enrichment materials. The program of study introduces CTE concentrators 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.



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.

Successful completion of the Teaching and Training program of study will fulfill requirements of the Public Services Endorsement - Approved Statewide Programs of Study - September 2019.



% GROWTH

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Education and Training	1314200 (1 credit)	None	9-10
Human Growth and Development	13014300 (1 credit)	None	10 -12
Instructional Practices	13014400 (2 credits)	None	11-12
Practicum in Education and Training	13014500 (2 credits)	PREQ: Instructional Practices	12

FOR ADDITIONAL INFORMATION ON THE EDUCATION AND TRAINING CAREER CLUSTER, PLEASE CONTACT:

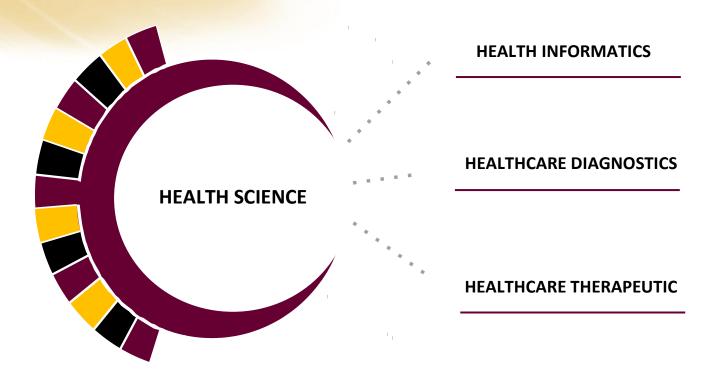
Debbie Wieland/Debbie.Wieland@tea.texas.gov

https://tea.texas.gov/cte

Public Services Endorsement

CAREER CLUSTER

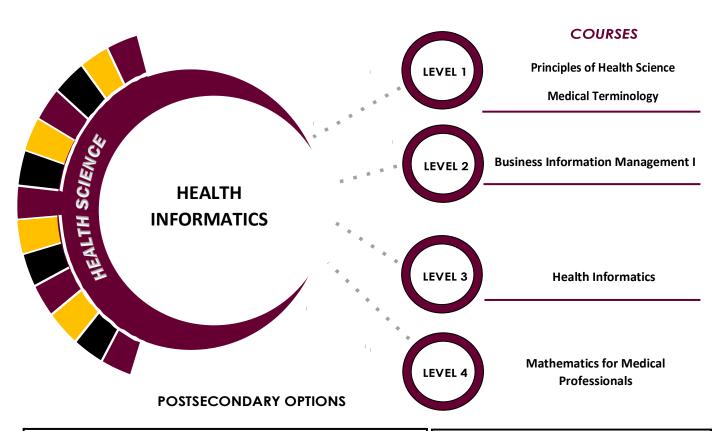
PROGRAMS OF STUDY



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HIGH SCHOOL/ *INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE	OCCUPATIONS Medical Records and
*Certified Medical Billing and Coding	Medical Transcriptionist				Health Information Technicians Medical and Health Service
Certified Coding Associate	Certified Professional in Informatics	Health Information/ Medical Records	Medical and H Mana	Managers Billing and Posting Clerks	
		Technology/ Technician			WORK BASEI LEARN
	ered at DISD. Add	•	pased certification	n information is	Exploration Activ HOSA SkillsUSA

SASED LEARNING AND EXPANDED EARNING OPPORTUNITIES **Activities: Work Based Learning** Activities:

MEDIAN WAGE

\$35,922

\$93,995

\$35,485

ANNUAL %
OPENINGS GROWTH

24%

29%

25%

1,588

2,562

5,775

Job shadow a healthcare professional Volunteer at a hospital,

Assisted Living, or nursing

available from the TEA CTE website.

For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.

The Health Informatics program of study focuses on exposing students to the management and use of patient information in the healthcare field. Students may learn about and research recent modifications of computerized healthcare and the process of creating and maintaining hospital and patient records in accordance with regulatory requirements of the healthcare system. Students may also practice writing and interpreting medical reports.



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

Successful completion of the Health Informatics program of study will fulfill requirements of the Public Services Endorsement - Approved Statewide Programs of Study - September 2019.

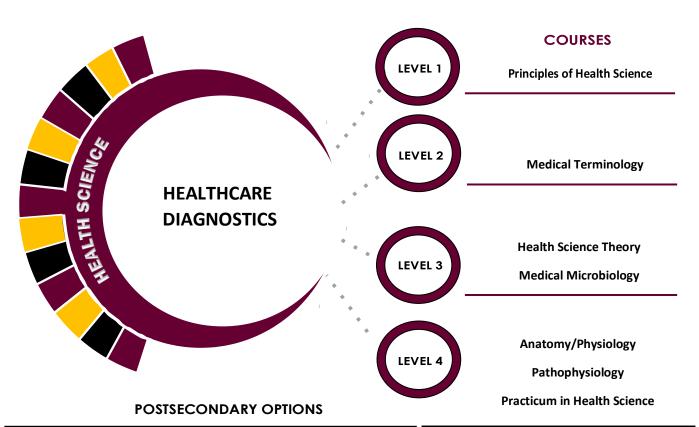


COURSE NAME	SERVICE ID	VICE ID PREREQUISITES (PREQ)	
Principles of Health Science	13020200 (1 credit)	None	9-10
Medical Terminology	13020300 (1 credit)	None	9-12
Business Information Management Systems I	13011400 (1 credit)	None	9-12
Health Informatics	13020960 (1 credit)	PREQ: BIM I and Medical Terminology	11-12
Mathematics for Medical Professionals	13020970 (1 credit)	PREQ: Geometry and Algebra II	11-12

FOR ADDITIONAL INFORMATION ON THE HEALTH SCIENCE CAREER CLUSTER, PLEASE CONTACT:

Kevin Johnson/Kevin.Johnson@tea.texas.gov

https://tea.texas.gov/cte



HIGH SCHOOL/	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWT
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	EKG/ECG Technicians	\$50,880	400	21%
*Certified EKG/ECG	Radiologic Technologist	Magnetic Resonance	Medical Radiologic	Radiologic Technology/	Phlebotomists	\$30,597	1,442	36%
Technician	J	Imaging (MRI) Technology/ Technician	Technology/ Science Radiation	Science – Radiographer	Diagnostic Medical Sonographers	\$69,909	495	35%
*Dhlahatamy			Therapist		Nuclear Medicine Technologists	\$75,962	91	13%
*Phlebotomy Technician								
					Radiologic Technologists	\$55,494	1,196	19%
Limited Licensed Radiology Technologist	Medical Sonographer	Nuclear Medica Technolo	0,	Radiologist	MRI Technologists	\$68,661	217	21%
Medical							NG AND EXP	ANDED
Laboratory Technician					Exploration Activ		ORTUNITIES ork Based Lea	rnina
*Certification offe	ered at DISD. Add ne TEA CTE webs		pased certification	n information is	HÖSA SkillsUSA	Act Job	tivities: b shadow a heafessional	J
	nation on postsecour counselor, or the	, ,	, ,	study, visit	Tour a healthcare Facility	Vol	unteer at a hos sisted Living, o	

The Healthcare Diagnostics program of study introduces students to occupations and educational opportunities related to performing complex medical laboratory tests for the diagnosis, treatment, and prevention of disease. This program of study may also include exploration into the opportunities associated with blood laboratories as well as radiologic technology, and ultrasonic technology.



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.

Successful completion of the Healthcare Diagnostics program of study will fulfill requirements of the Public Services Endorsement – Approved Statewide Programs of Study – September 2019.



% GROWTH

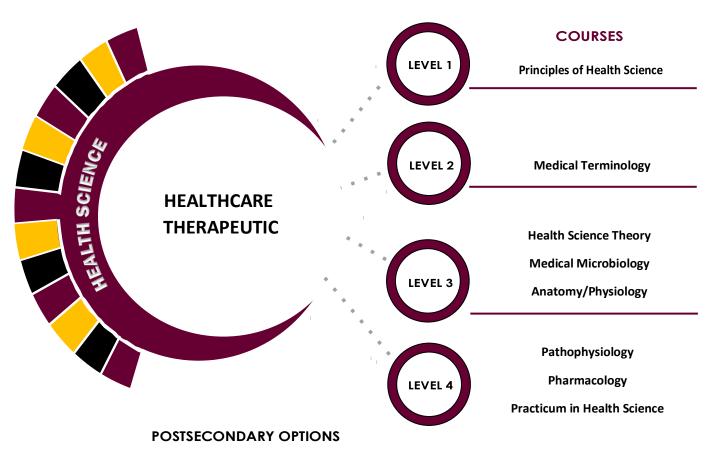
21%

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Health Science	13020200 (1 credit)	None	9-10
Medical Terminology	13020300 (1 credit)	None	9-12
Health Science Theory	13020400 (1 credit)	PREQ: Biology	10-12
Medical Microbiology	13020700 (1 credit)	PREQ: Biology and Chemistry	10-12
Anatomy/Physiology	13020600 (1 credit)	PREQ: Biology and a second science credit	10-12
Pathophysiology	13020800 (1 credit)	PREQ: Biology and Chemistry	10-12
Practicum in Health Science/Extended Practicum in Health Science	13020505 (3 credits)	PREQ: Biology, Health Science Theory	11-12

FOR ADDITIONAL INFORMATION ON THE HEALTH SCIENCE CAREER CLUSTER, PLEASE CONTACT:

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HIGH SCHOOL/ *INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE		
*Certified Pharmacy Technician	Pharmacy Aides	Biology		Biology		Pharmacist
*Certified Nurse Aide/Nurse Assistant	Surgical Technologist	Science, Pre-Med		Family and General Practitioner		
*Certified Clinical Medical Assistant	Registered Dental Assistant	Dental Hygienist	Science, Pre-Dental	Dentist		
Certified Patient Care Technician	Registered Dental Assistant			Physician Assistant		

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities: Work Based Learning Activities:

MEDIAN WAGE

\$29,598

\$73.507

\$48,420

OCCUPATIONS

Medical

Assistants Dental

Hygienists

Surgical

Technologists

SkillsUSA

*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.

For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.

The Healthcare 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.



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.

Successful completion of the Healthcare Therapeutic program of study will fulfill requirements of the Public Services Endorsement – Approved Statewide Programs of Study – September 2019.



ANNUAL %
OPENINGS GROWTH

30%

38%

20%

8,862

1.353

1,150

Job shadow a healthcare

Volunteer at a hospital,

Assisted Living, or nursing

professional

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Health Science	13020200 (1 credit)	None	9-10
Medical Terminology	13020300 (1 credit)	None	9-12
Health Science Theory	13020400 (1 credit)	PREQ: Biology	10-12
Medical Microbiology	13020700 (1 credit)	PREQ: Biology and Chemistry	10-12
Anatomy/Physiology	13020600 (1 credit)	PREQ: Biology and a second science credit	10-12
Pharmacology	13020950 (1 credit)	PREQ: Biology and Chemistry	11-12
Pathophysiology	13020800 (1 credit)	PREQ: Biology and Chemistry	11-12
Practicum in Health Science Practicum in Health Science/Extended Practicum in Health Science	13020500 (2 credits) 13020505 (3 credits)	PREQ: Biology, Health Science Theory	11-12

FOR ADDITIONAL INFORMATION ON THE HEALTH SCIENCE CAREER CLUSTER, PLEASE CONTACT:

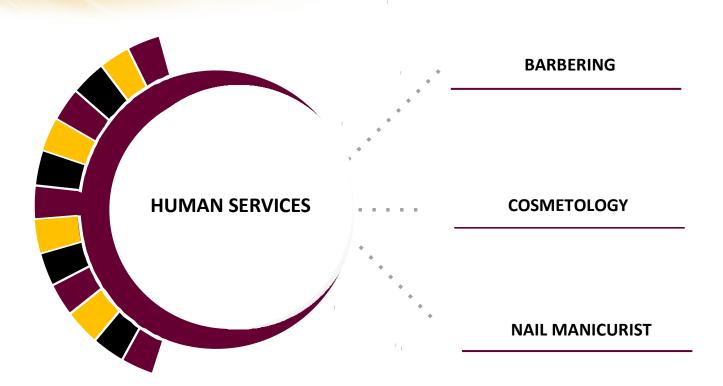
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Public Services Endorsement

CAREER CLUSTER

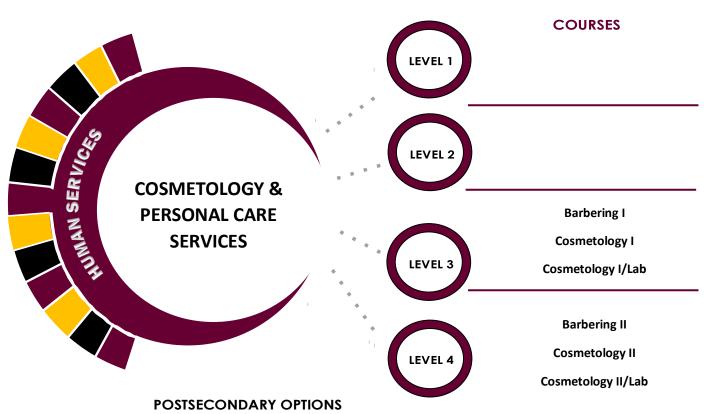
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HIGH SCHOOL/ *INDUSTRY	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Barber	\$28,150	1,340	20%
*Barber Operator License		Barber/ Stylist, and Nail Instructor			Cosmetologist	\$24,850	470	19%
*Cosmetology- Nail Manicurist		Spa/Nail Manicurist			Makeup Artists, Theatrical Actors, & Performers	\$42,320) 40	10%
*Cosmetology Operator License		Cosmetology/ Cosmetologist, General			Nail Manicurists	\$23,290	0 440	18%
		Aesthetician/ Esthetician & Skin Care			WORK BASE LEAR		IG AND EXP	ANDED
		Specialist			Exploration Activ	vities: V	Vork Based L	earning
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.				SkillsUSA	lr	ctivities: ntern in a salor	-	
	ation on postsecon counselor, or the			study, visit	_	ir	rovide special latest Cosme ends	

The Cosmetology & Personal Care Services program of study focuses on preparing individual for employment in career pathways related to personal care services. To pursue a career in cosmetology, students will learn to provide beauty services, such as shampooing, cutting coloring and styling hair, and massaging and treating scalp. They will learn to apply makeup, dress wigs, perform hair removal and provide nail and skin care services.



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.

Successful completion of the Cosmetology & Personal Care Services program of study will fulfill requirements of the Public Services Endorsement – Approved Statewide Regional Program of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Barbering I	N1302534 (3 credits)	None	11
Barbering II	N1302535 (3 credits)	PREQ: Barbering I	12
Cosmetology I (Nail Manicurist)	13025200 (2 credits)	None	11
Cosmetology II (Nail Manicurist)	13025300 (2 credits)	PREQ: Cosmetology I	12
Cosmetology I/Lab (Cosmetology Operator)	13025210 (3 credits)	None	11
Cosmetology II/Lab (Cosmetology Operator)	13025310 (3 credits)	PREQ: Cosmetology I/ Lab	12

FOR ADDITIONAL INFORMATION ON THE HUMAN SERVICES CAREER CLUSTER, PLEASE CONTACT:

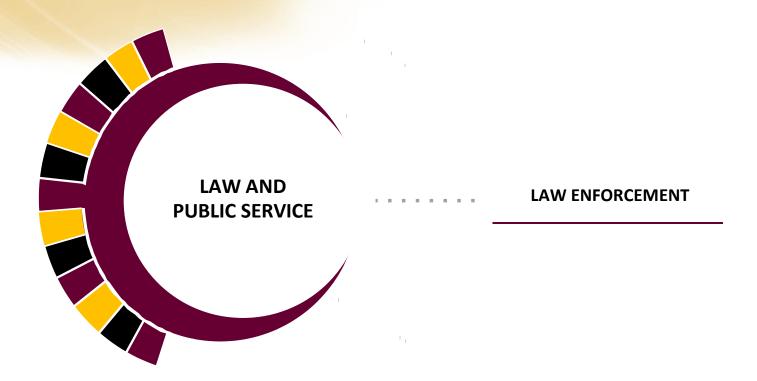
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Public Services Endorsement

CAREER CLUSTER

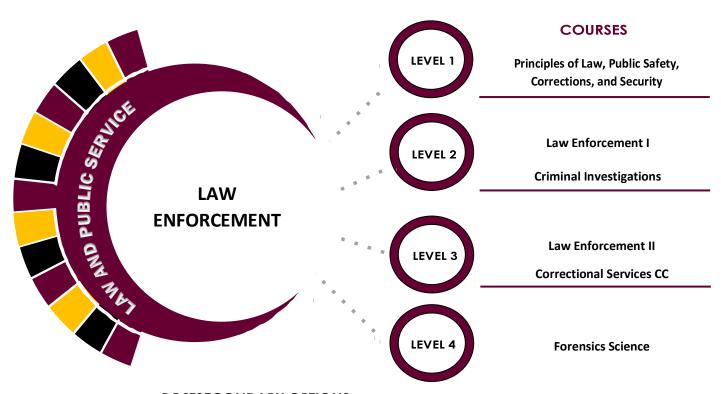
PROGRAM OF STUDY



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POSTSECONDARY OPTIONS

HIGH SCHOOL/	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Police and Sheriff's Patrol Officers	\$60,112	5,241	13%
*Non- Commissioned Security Guard, Level II	Law Enforcement Officer		inal Justice/Safe Enforcement Adı		Probation Officers and Correctional Treatment Officers	\$44,054	793	9%
*International Academy of	Private Investigator/	Criminal Police So			Correctional Officers and Jailers	\$40,186	4,683	9%
Emergency Dispatch (IAED) Emergency	Security Guard	Criminal Science			Immigration and Customs Inspectors	\$78,104	1,236	9%
Telecommunicator					Supervisors of Police and	\$91,312	253	25%
*NECC 911 (National	Code Enforcement	Corrections	Juvenile Corrections	Natural Resources Law	Detectives			
Emergency Communication Certificate 911)	Officer			Enforcement and Protective Services	WORK BASED LEARNING AND EXPANDED		NDED	
		Cyber/Cor Forensics and C	mputer Counterterrorism		Exploration Activi		ork Based Lea	arning
	*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.				Texas Public Service Association;		end court hea er legal proce	
	ition on postsecon counselor, or the			tudy, visit	SkillsUSA		ern with law er encies	nforcement

The Law Enforcement program of study teaches students about the development of, adherence to, and protection of various branches of law. Students may 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.



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 protective agencies of fire and emergency services.

Successful completion of the Law Enforcement program of study will fulfill requirements of the Public Services Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) REC. PREREQUISITES (RPREQ)	GRADE
Principles of Law, Public Safety, Corrections, & Security	13029200 (1 credit)	None	9-12
Law Enforcement I	13029300 (1 credit)	None	10-12
Criminal Investigations	13029550 (1 credit)	None	10-12
Law Enforcement II	13029400 (1 credit)	RPREQ: Law Enforcement I	10-12
Correctional Services CC	13029700	RPREQ: Principles of Law, Public Safety, Corrections, & Security	10-12
Forensics Science	13029500 (1 credit)	PREQ: Biology and Chemistry	11-12

FOR ADDITIONAL INFORMATION ON THE LAW AND PUBLIC SERVICE CAREER CLUSTER, PLEASE CONTACT:

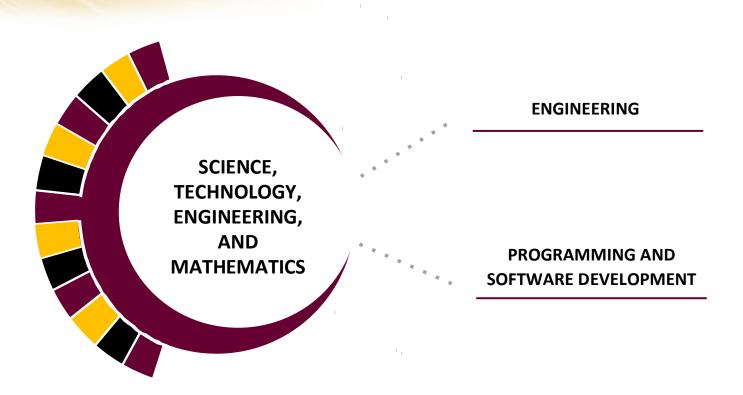
Debbie Wieland/Debbie.Wieland@tea.texas.gov

https://tea.texas.gov/cte

Science, Technology, Engineering & Mathematics Endorsement

CAREER CLUSTER

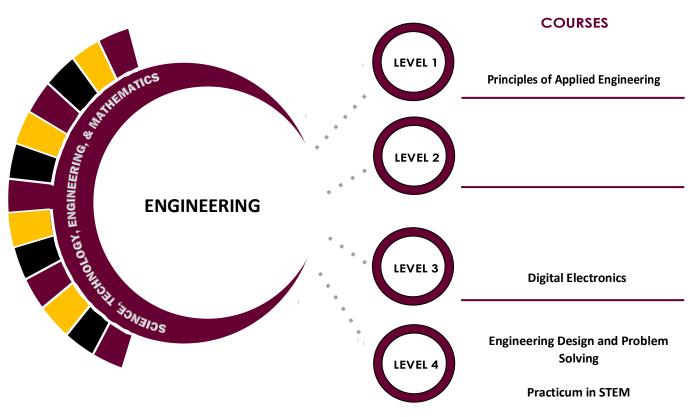
PROGRAMS OF STUDY



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POSTSECONDARY OPTIONS

CERTIFIC ATE/	ASSOCIATE'S	RACHELOP'S	BACHELOR'S	F'S BACHELOR'S	MASTER'S/	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Aerospage	\$110,843	481	9%		
Fluid Power Systems Designer	Drafting and Design Technology/ Technician, Genera	CAD/CADD Drafting and/or Design Technology/ Technician	Mechanical Engineering	Engineers Industrial Engineers	\$97,074	1,263	10%		
Certified Cost Estimator/ Analyst		Construction Engineering Technology/ Technician		Mechanical Engineers Chemical	\$91,707 \$112,819	1,535	11% 9%		
Engineer, Professional	Electrical and Electronics Engineering	Electrical and Electronics Engineering	Electrical and Electronics Engineering	Electrical Engineers	\$98,405	1,137	10%		
Certified	Engineering	Bioengineering	Bioengineering				ANDED		
Auditor	recrinology	Biomedical Engineering	Biomedical Engineering	Exploration Act	Α	ctivities:	ŭ		
		ased certification	information is	SkillsUSA Engineering internship Job shadow a machinist Tour of engineering firm			nachinist		
			study, visit				3 ·····		
	Fluid Power Systems Designer Certified Cost Estimator/ Analyst Engineer, Professional Certified Biomedical Auditor red at DISD. Addee TEA CTE webs ation on postseco	Fluid Power Systems Designer Certified Cost Estimator/ Analyst Engineer, Professional Certified Biomedical Auditor Cettified Biomedical Certified	Fluid Power Systems Design Technology/ Technician, Genera Certified Cost Estimator/ Analyst Engineer, Professional Electronics Engineering Technology Certified Engineering Technology/ Technician Engineer, Professional Electronics Engineering Engineering Technology Auditor Technology And Biomedical Engineering Technology Technology Auditor Engineering Engineerin	Fluid Power Systems Design Technology/ Technician, Genera Construction Engineering Technology/ Analyst Engineer, Professional Electronics Engineering	Fluid Power Systems Design Technology/ Technician, Genera Cost Estimator/ Analyst Engineer, Professional Professional Electronics Engineering Engineering Engineering Exploration Act	CERTIFICATE/ LICENSE LICENSE	Certified Cost Estimator/ Analyst Engineer, Professional Engineering Professional Engineering Engineering Engineering Engineering Biomedical Auditor Certified Engineering Biomedical Auditor Engineering Biomedical Auditor Certified Engineering Electronics Engineering Biomedical Engineering En		

how to apply science, mathematical methods, and empirical evidence to the innovation, design, construction, operation, and maintenance of different manufacturing systems.



The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster® focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

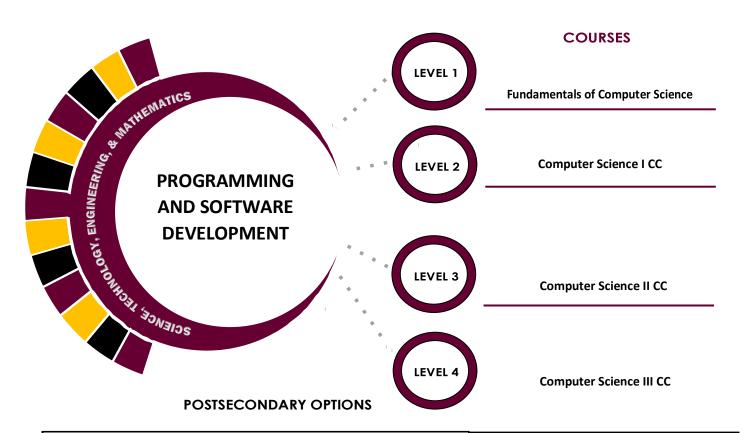
Successful completion of the Engineering program of study will fulfill requirements of the Science, Technology, Engineering, and Mathematics Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Applied Engineering	13036200 (1 credit)	None	9-10
Digital Electronics	13037600 (1 credit)	PREQ: Algebra I and Geometry	10-12
Engineering Design and Problem Solving	13037300 (1 credit)	PREQ: Algebra I and Geometry	11-12
Practicum in STEM	13037400 (2 credits)	PREQ: Algebra I and Geometry	12

FOR ADDITIONAL INFORMATION ON THE SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS CAREER CLUSTER,
PLEASE CONTACT:

https://tea.texas.gov/cte



HIGH SCHOOL/	CERTIFICATE/	ASSOCIATE'S	BACHELOR'S	MASTER'S/ DOCTORAL	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*INDUSTRY CERTIFICATION	LICENSE	DEGREE	DEGREE	PROFESSIONAL DEGREE	Software	\$103,334	1 2,985	25%
Oracle Certified Association JAVA SE 8 Programmer	Certified Computing Professional	Computer Programming/ Programmer General	Management Information Systems, General		Developers, Systems Software Software	\$104,499	6,311	30%
*Microsoft Technology Associate-Intro. to Programming Using Python, HTML, or CSS	AEM 6 Developer	Computer Science		Developers, Applications				
*Microsoft Technology Associate-Intro. to Programming Using JAVA or JAVA Script	Certified Software Analyst	Information Science/Studies			Computer Programmers			
Oracle Certified Database Associate	Cloud Technology	Computer Software Engineer		LEARNING OPPORTUNITIES				
Dalabase Associate	Associate				Exploration Act		ork Based L	earning.
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.					SkillsUSA	Р	Activities: Programming internship Job shadow Tour of engineering firm	
For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.					Coding Club	_		

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.



The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster® focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

Successful completion of the Programming and Software Development program of study will fulfill requirements of the Science, Technology, Engineering, and Mathematics Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Fundamentals of Computer Science	03580140 (1 credit1)	None	9-12
Computer Science I CC	03580200 (1 credit)	PREQ: Algebra I	9-12
Computer Science II CC	03580300 (1 credit)	PREQ: Algebra I, Computer Science I CC	11-12
Computer Science III CC	03580350 (2 credits)	PREQ: Computer Science I CC and Computer Science II CC	12

FOR ADDITIONAL INFORMATION ON THE SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS CAREER CLUSTER, PLEASE CONTACT:

https://tea.texas.gov/cte

Industry Certifications and Licenses by Endorsement

(*Performance Acknowledgment-Meets CCMP)

Business & Industry Endorsement

Agriculture, Food, & Natural Resources

- *Certified Veterinarian Assistant, Level 1
 Veterinary Medical Technician-TVMA
- *Noncommercial Pesticide Applicator
- *OSHA 30 Hour General Industry
- Texas Beef Quality Assurance (Texas Beef Council, Texas & Southwest Cattle Raisers
 - Association & Texas AgriLife Extension)
- *Texas State Floral Association Level One Floral Certification
- *Texas State Floral Association Floral Skills Knowledge Based Certification

Architecture and Construction

- *Autodesk Certified Professional or User in AutoCAD
- *OSHA 30 Hour Construction
- Architectural and Civil Engineering Technology Certificate – STC Dual Credit





Arts, Audio Video Technology and Communications

- *Adobe Certified Associate Photoshop (Visual Design using Adobe Photoshop)
- *Adobe Certified Associate- Premiere Pro (Digital Video using Adobe Premiere)
- *Adobe Certified Associate-Visual Design Specialist – 3 Exams (Illustrator + InDesign + Photoshop)

Business, Marketing and Finance

- *Intuit QuickBooks Certified User
- *Microsoft Office Specialist Word Expert
- *Microsoft Office Specialist Excel Expert
- *Microsoft Office Master
- *Microsoft Office Specialist Word
- *Microsoft Office Specialist Excel
- Microsoft Office Specialist PowerPoint
- *Real Estate Sales Agent License
- Customer Service Certification STC
- Google Analytics Individual Qualification





Business & Industry Endorsement

Hospitality & Tourism

- ServSafe Food Handler Certification
- *ServSafe Manager
- Commercial Cooking Certificate STC Dual Credit

Information Technology

- *Comp TIA A+ Certification
- *Comp TIA Network+
- *Comp TIA Security+
- *Microsoft Technology Associate (MTA) Introduction to Programming Using HTML
- *Microsoft Technology Associate (MTA) Introduction to Programming Using JAVA
- *Microsoft Technology Associate (MTA) Introduction to Programming Using Python
- *Microsoft Technology Associate (MTA) Networking Fundamentals
- *Microsoft Technology Associate (MTA) Security Fundamentals
- *Microsoft Technology Associate (MTA)
 Windows Operating System Fundamentals
- *Microsoft Technology Associate (MTA)
 Windows Server Administration
 Fundamentals



Manufacturing

- ARC Plug Welding (STISD ½ Day Program)
- *AWS D1.1 Structural Steel (American Welding Society)
- *AWS D9.1 Sheet Metal Welding (American Welding Society)
- NIMS Machining Level 1, Job Planning, Benchwork & Layout
- *NIMS, Machining Level 1, Measurement, Materials and Safety
- *NIMS, Machining Level 1 CNC Milling Operations
- *NIMS Machining Level 1 Drill Press Skills
- *OSHA 30 Hour General Industry
- Precision Manufacturing Technology Certificate – STC Dual Credit
- Structural Welding Certificate STC Dual Credit



Transportation

- *ASE Engine Repair (STISD ½ Day Program)
- *ASE Entry-Level: Engine Repair (ER) (STISD ½ Day Program)
- *ASE Entry-Level Suspension & Steering (STISD ½ Day Program)
- ASE Safety Service (STISD ½ Day Program)
- *ASE Suspension & Steering (STISD ½ Day Program)
- ASE Service Pollution Prevention (STISD ½ Day Program
- Commercial Driver's License, Class A & B
- *FAA Certified Part 107 Remote Drone Pilot
- *OSHA 30 Hour General Industry
- Valvoline Ignition Program (STISD ½ Day Program)



Industry Certifications and Licenses by Endorsement

(*Performance Acknowledgment-Meets CCMP)

Public Service Endorsement

Education & Training

- Substitute Teacher Academy Region
 One
- Educational Aide I

Health Science

- Basic Life Support American Heart Assoc.
- *Certified EKG/EGG Technician
- *Certified Pharmacy Technician (CPhT)
- *CMA-Certified Medical Assistant
- *CNA Certified Nurse Aide/Assistant
- CPR Certification American Heart Assoc.
- HIPAA Certification
- *Medical Coding & Billing Specialist
- OSHA Bloodborne Pathogens Certification
- *Patient Care Technician (STISD ½ Program)
- *Phlebotomy Technician, Certified (CPT)





Human Services

- *Barber Operator License TDLR
- *Cosmetology Operator License TDLR
- *Nail Manicurist Specialty License TDLR

Law and Public Service

- *FAA Certified Part 107 Remote Drone Pilot
- *International Academy of Emergency Dispatch (IAED) Emergency Telecommunicator
- NECC 911 (National Emergency Communication Certificate 911)
- *Non-Commissioned Security Officer, Level 2 (Texas Department of Public Safety/Private Security Bureau)





Industry Certifications and Licenses by Endorsement

(*Performance Acknowledgment-Meets CCMP)

STEM Endorsement

Engineering

- *Microsoft Technology Associate (MTA)
 Introduction to Programming Using HTML
- *Microsoft Technology Associate (MTA) Introduction to Programming Using JAVA
- *Microsoft Technology Associate (MTA) Introduction to Programming Using Python
- *NIMS (National Institute of Metal Working Skills) Machining Level 1 – Measurement, Materials & Safety
- *SolidWorks Certified Associate (CSWA)



Final List of Industry-Based Certifications approved by TEA can be found at https://tea.texas.gov/sites/default/files/Industry Based Certifications.pdf

CTE Dual Credit Courses

High School Course	Architecture Architectural & Civil Engineering Technology Certificate (*STC)	Credit Hrs. Earned
Architecture Design II	JrsFall-DFTG 1409 – Basic Computer Aided Drafting	4
CC Service ID: 13004700 HS Code: CCB4700	JrsSpring DFTG 1315 – Architectural Blueprint & Sketching	3
Practicum of	SrsFall ARCE 1421- Architectural Illustration	4
Architecture Design CC Service ID: 13004800 HS Code: CCB4800 SrsSpring DFTG 1493 – Intro. to Civil Drafting		4
	SrsSpring ARCH 1311 – Intro. to Architecture	3
	Total Hours Earned	18
High Sahaal Cayyee	Culinary Arts	Credit Hrs.
High School Course	Commercial Cooking Certificate (*STC)	Earned
Advanced	JrsFall CHEF 1301 – Basic Food Preparation	3
Culinary Arts CC	JrsFall CHEF 1305 – Sanitation and Safety	3
Service ID: 13022650	JrsSpring PSTR 1301 – Fundamentals of Baking	3
HS Code: CCI2650	JrsSpring Chef 1345-International Cuisine	3
Practicum in	SrsFall BIOL 1322 — Nutrition and Diet Therapy I (Cohort 2021) SrsFall CHEF 1391- Special Topics (Prof. Kitchen EssCohort 2022)	3
Culinary Arts I CC	SrsFall CHEF 2301 – Intermediate Food Prep.	3
Service ID: 13022700 HS Code: CCI2700	SrsSpring CHEF 1264 – Capstone: Practicum I	2
H3 Code. CCI2700	SrsSpring RSTO 2307 - Catering	3
	Total Hours Earned	23
High School Course	Precision Metal Manufacturing	Credit Hrs.
	Precision Manufacturing Technology Certificate (*STC)	Earned
Precision Metal	JrsFall DFTG 1325 – Blueprint Reading & Sketching	3
Manufacturing I CC	JrsFall MCHN 1338 – Basic Machine Shop I	3
Service ID: 13032500 HS Code: CCM2500	JrsSpring MCHN 1320–Precision Tools & Measurement	3
TIS COUC. CCIVIZSOU	JrsSpring MCHN 1343 – Machine Shop Mathematics	3
	SrsFall DFTG 1313 – Drafting for Specific Occupations	5
Precision Metal	SrsFall MCHN 2303 – Fundamentals of Computer Numerical Controlled Machine Controls	3
Manufacturing II CC Service ID: 13032600	SrsSpring MCHN 1326 – Intro. to Computer-Aided	
HS Code: CCM2600	Manufacturing (CAM)	3
	SrsSpring MCHN 1352 – Intermediate Machining I	3
	Total Hours Earned	24
High School Course	Welding Structural Welding Certificate (*STC)	Credit Hrs. Earned

Intro to Welding CC (Fall only)	JrsFall MCHN 1343—Machine Shop Mathematics (Cohort 2021) WLDG 1327 — Welding Codes and Standards (Cohort 2022)	3
Service ID: 13032250 HS Code: CCM2250	JrsFall WLDG 1313—Intro. to Blueprint Reading for Welders (Cohort 2021) JrsFall WLDG 1317 — Intro. to Layout & Fabrication (Cohort 2022)	3
Welding I CC Service ID: 13032300 HS Code: CCM2300	JrsSpring WLDG 1428 – Intro. to Shielded Metal Arc Welding (SMAW)	4
Welding II/Lab CC	JrsSummer I (AM) WLDG 1430 – Intro. to Gas Metal Arc Welding (GMAW)	4
Service ID: 13032410 HS Code: CCM2410	JrsSummer I (PM) WLDG 1312 – Intro. to Flux Cored Arc Welding (FCAW)	3
Welding II CC Service ID: 13032400 HS Code: CCM2400	Jrs. – Summer III – WLDG 1434 – Intro. to Gas Tungsten Arc Welding (GTAW)	4
Practicum in Manufacturing CC Service ID: 13033000	SrsFall WLDG 1457 – Intermediate Shielded Metal Arc Welding (SMAW) (Cohort 2021) SrsFall WLDG 1453 – Intermediate Layout & Fabrication (Cohort 2022)	4
HS Code: CCM3000	SrsSpring WLDG 1417 – Intro. to Layout & Fabrication	4
	Total Hours Earned	29

Other Dual Credit Courses

Professional Communications CC Service ID: 13009900 HS Code: CCC9900	9 th -12 th Speech Course - STC SPCH 1311 - Introduction to Speech Communication Offered both semesters	3
Computer Science I CC Service ID: 03580200 HS Code: CCO0200	Fall - COSC 1301 – Introduction to Computing Spring - COSC 1436 – Programming Fundamentals I	3 4
Computer Science II CC Service ID: 03580300 HS Code: CCO0300	Fall – COSC 1320 – C Programming	3
Correctional Services CC Service ID: 13029700 HS Code: CCL9700	Fall – CRIJ 1301 – Criminal Justice	3

*STC Level 1 Certificates Awarded Through Dual Credit:

- Architectural & Civil Engineering Technology Certificate
- Commercial Cooking Certificate
- Precision Manufacturing Technology Certificate
- Structural Welding Certificate

Level 1 certificates are awarded by an Institution of Higher Education (IHE) for completing a program consisting of at least 15 and no more than 42 semester credit hours.

Level 2 certificates are awarded by an Institution of Higher Education (IHE) for completing a program consisting of at least 30 but not more than 51 semester credit hours.

CTE COURSES FOR HIGH SCHOOL CORE CREDIT

ENGLISH

Business English (4th English)



MATH

Math Application in Ag. (3rd)
Applied Math for Tech Professionals (3rd)

- *Accounting II (3rd)
- *Financial Mathematics (3rd)

Manufacturing Engineering Tech II (3rd)

- *Digital Electronics (3rd)
- *Robotics II (3rd)
- *Engineering Math (4th)

Statistics & Decision Making (4th)

*Math for Medical Professionals (4th)



SCIENCE

Principles of Technology (3rd or 4th)

- *Advanced Animal Science
- *Advanced Plant & Soil Science
- *Anatomy & Physiology
- *Medical Microbiology
- *Pathophysiology
- *Forensics Science

Food Science

Biotechnology I, II

Scientific Research and Design I, II III

*Engineering Design and Problem Solving

Engineering Science





ELECTIVE/CTE CREDITS – NON-CORE

- *Floral Design (Fine Arts) 1 credit
- *Professional Communications (Speech credit) ½ credit
- *General Employability Skills (Taught by CTE or Special Ed.)

^{*}Offered at DISD/Not Available at All High Schools

*Middle School CTE Courses for High School Credit

Health Science

Principles of Health Science



Law Enforcement

• Principles of Law, Public Safety, Corrections & Security



Science, Technology, Engineering and Mathematics

Robotics I



^{*}Tentative - Based on student interest, facilities and/or staff availability

Middle School CTE Course

• Investigating Careers – Currently Taught during 8th Grade

The goal of this course is to create a foundation for success in high school, future studies, and careers such as Science, Technology, Engineering, and Mathematics; Business and Industry; Public Service; Arts and Humanities; and Multidisciplinary Studies. The students research labor market information, learn job-seeking skills, and create documents required for employment. They complete a career assessment, and together with their parents, select an endorsement and develop their personal graduation plan for guidance into their high school years. Students can also participate in CTSOs and extended learning experiences. It is vital that students have a clear sense of direction for their career choice. Career planning is a critical step and essential to success.

Clubs and Organizations

Students are encouraged to be active members in clubs and Career & Technical Student
Organizations. CTSOs give students an opportunity to acquire and demonstrate skills and abilities
related to their chosen careers.

Business Professionals of America (BPA) www.texasbpa.com

Business Professionals of America (BPA) is a regional, state, and national organization. BPA is for students pursing the Business and Industry endorsement with a career cluster in Business, Marketing, & Finance and/or Information Technology. BPA students might be interested in pursuing a possible career in Business Management and Administration, Office Administration, and Information Technology or a related career. BPA offers students opportunities to compete in co-curricular activities that support business and information technology education.



Distributive Education Clubs of America (DECA) www.texasdeca.org

DECA prepares emerging leaders for careers in marketing, finance, hospitality, management, and entrepreneurship in high schools and colleges around the globe. DECA offers students opportunities to compete in co-curricular activities to practice and enhance their leadership skills, consensus building, and project management.



Future Farmers of America (FFA) www.texasffa.org

Future Farmers of America (FFA) is a local, state, and national organization. FFA is a dynamic youth organization within agricultural education that changes lives and prepares students for premier leadership, personal growth and career success. FFA offers students opportunities to compete in co-curricular activities that support agricultural, food and natural resources education.



Clubs and Organizations

Health Occupations Students of America (HOSA) www.texashosa.org

HOSA is a co-curricular organization that provides students with the opportunity to compete at the regional, state, national, and international levels in the health science related field. HOSA empowers students to develop leadership and HOSA technical skills competencies as part of the Health Science Education instructional program. Students interested in the health science field are encouraged to become active members of HOSA.



Robotics Club

Students interested in careers in the engineering field are encouraged to be active members of the Robotics Club. Students explore engineering and robotics through hands-on activities and participate in area competitions. The Robotics Club promotes skills learning in science, technology, engineering and mathematics.

Skills USA/Skills USA Texas www.skillsusa.org www.skillsusatx.org

Skills USA is a partnership organization supported by teachers, students, and industry to support students to ensure that America has a skilled workforce. Skills USA develops leadership, positive attitude, pride and workmanship in students. Skills USA prepares students through employment by introducing them to corporate quality culture. Students compete in leadership and technical skills and engineering. Students compete at the regional, state, and national levels.





Clubs and Organizations

Texas Association of Future Educators (TAFE) www.online.org

Texas Association of Future Educators (TAFE pronounced Taffy) is a statewide co-curricular organization to support students who are interested in exploring the teaching profession. TAFE is sponsored by the Texas Association of Secondary School Principals and its board is made up of students, teachers, and principals. TAFE is a state affiliate of Educators Rising and students must have membership in Educators Rising in order to compete at the regional, state and national levels. TAFE encourages students to learn about careers in education and assists them in exploring the teaching profession while promoting character, service, and leadership skills.



Texas Public Service Association (TPSA) www.tpsa.org

Texas Public Service Association (TPSA) is a co-curricular student organization in Texas that provides students with knowledge, skills, leadership and student growth through real life career preparation, experience, and training through competitions. Students compete at the regional and state level in the following career areas: Law Enforcement, Courts, Fire, Forensics Science, Corrections and Security. Its focus is to extend the knowledge of students in the Law and Public Service career cluster.



Helpful Websites

CTE Resources:

Texas CTE Resource Site www.txcte.org

College and Career Planning Resources www.texasoncourse.org

Career Assessments:

Career Exploration and Assessment www.texasgenuine.com

Career Assessments https://www.careeronestop.org/Toolkit/toolkit.aspx

Career Coach https://wfsolutions.emsicc.com

Career Exploration:

Career, College Search and <u>www.everychanceeverytexan.org</u>

Financial Aid Information

Career Exploration https://www.onetonline.org/
Career Options https://www.mynextmove.org/
Texas Career Check/Exploration www.texascareercheck.com

College Options, Exploration, and Application:

Apply Texas <u>www.applytexas.org</u>

College for All Texans <u>www.collegeforalltexans.com</u>

College Planning and Preparation Resources <u>www.collegeboard.org</u>

General Information on SAT and ACT www.collegeboard.org and www.actstudent.org

GenTX (Generation Texas) http://gentx.org

Listing of All Universities https://university.graduateshotline.com

Financial Aid and Future Exploration:

FAFSA (Free Application for Federal Student Aid) www.fafsa.ed.gov

Texas Internship Challenge www.txinternshipchallenge.com
Texas Reality Check www.texasrealitycheck.com

Labor Market and Career Information:

Labor Market and Career Information www.lmci.state.tx.us
Occupational Outlook Handbook https://www.bls.gov/ooh/

Texas CREWS (TX Consumer Resources for http://board.thecb.state.tx.us/apps/txcrews/

Education & Workforce Statistics)

Texas Wages and Employment Projection <u>www.texaswages.com</u>

Military Awareness:

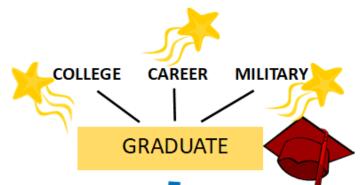
ASVAB <u>www.asvabprogram.com</u>
ARMY Resource/Test Prep Site <u>www.march2success.com</u>

Explore the Branches of the Military http://www.todaysmilitary.com

Connecting Industry to Classrooms www.nepris.com

Educators and students can connect with industry professionals, virtually, bringing real-world relevance and career exposure to students. Live chats with professionals and prerecorded video presentations are available.





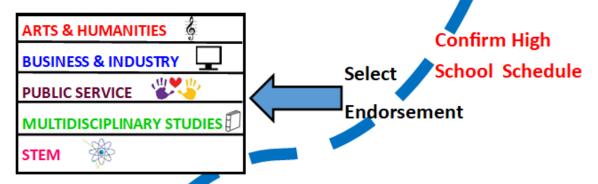
PATHWAY to

GRADUATION

Finalize College, Career or Military Plans

Explore Options and Take
ACT/SAT/TSI/ASVAB Exams

Attend Classes & Earn Credits



Know Your Graduation
Requirements

Research Careers

Take Career Assessment

Starts Here

DONNA INDEPENDENT SCHOOL DISTRICT GRADUATION PLAN

Beginning with Grade 9, 2014-2015 and thereafter

AA (A)	Beginning with Gra	ue 9, 2014-2013 and thereafter		
Foundation HSP without Endorsements - 26 Credits		Foundation HSP with one or more Endorsements - 26 Credits	Foundation HSP Distinguished Level of Achievement + 1 Endorsement - 26 Credits	
English Language Arts *	Four credits: 34	Four credits: 34E	Four credits: 34DE	
	•English I	•English I	•English I	
	•English II	•English II	•English II	
	•English III	•English III	•English III	
	Advanced English	Advanced English	Advanced English	
Mathematics *	Three credits:	Four credits:	Four credits:	
	•Algebra I	•Algebra I	•Algebra I	
	Geometry	Geometry	•Geometry	
	Advanced Mathematics Course	Advanced Mathematics Course	•Algebra II	
		 Advanced Mathematics Course 	Advanced Mathematics Course	
Science *	Three credits:	Four credits:	Four credits:	
	Biology	Biology	Biology	
	•IPC, Chemistry, or Physics	•IPC, Chemistry, or Physics	•IPC, Chemistry, or Physics	
	Advanced Science Course	Advanced Science Course	Advanced Science Course	
		Advanced Science Course	Advanced Science Course	
Social Studies *	Four credits:	Four credits:	Four credits:	
	World Geography	 World Geography 	 World Geography 	
	World History	World History	World History	
	•US History	•US History	•US History	
	Government/Economics	Government/Economics	Government/Economics	
Health	One-half credit or 1 credit of Prin. of Health	One-half credit or 1 credit of Prin. of Health	One-half credit or 1 credit of Prin. of Health	
	Science	Science	Science	
Physical Education	One credit	One credit	One credit	
Language Other	Two credits:	Two credits:	Two credits:	
Than English	•Spanish I	•Spanish I	•Spanish I	
(in same LOTE)	•Spanish II	•Spanish II	•Spanish II	
Fine Arts	One credit:	One credit:	One credit:	
	Bond Art I Charala Theatra Arts Tachrical	Band, Art I, Chorale, Theatre Arts, Technical	Band Art I Charala Thaatra Arts Tashnisal	
	Band, Art I, Chorale, Theatre Arts, Technical		Band, Art I, Chorale, Theatre Arts, Technical	
	Theatre, Mariachi, Dance, Jazz, Music	Theatre, Mariachi, Dance, Jazz, Music	Theatre, Mariachi, Dance, Jazz, Music	
	Theory, Applied Music, Classical Guitar	Theory, Applied Music, Classical Guitar	Theory, Applied Music, Classical Guitar	
Speech	One-half credit	One-half credit	One-half credit	
	 Professional Communications 	 Professional Communications 	 Professional Communications 	
Technology App.	One credit	One credit	One credit	
Electives	Six credits	Four credits	Four credits	
Total Credits	26	26	26	

D.I.S.D. ENDORSEMENTS



Arts & Humanities

Social Studies; Fine Arts; Language other than English (LOTE)



Agriculture, Food and Natural Resources: Architecture and Construction: Arts, Audio-Video, and Communications: Business Marketing and Finance; Information Technology; Hospitality and Tourism; Journalism; Manufacturing; Transportation, Distribution



Public Service

Education and Training; Law and Public Safety; Health Science; Human Services; JROTC



Engineering; Advanced Math; Advanced Science; Technology



Multidisciplinary Studies

A student may earn a multidisciplinary studies endorsement by completing foundation and general endorsement requirements

(A) four advanced courses that prepare a student to enter the workforce successfully or postsecondary education without remediation from within one endorsement area or among endorsement areas that are not in a coherent sequence

(B) four credits in each of the four foundation subject areas to include English IV and chemistry and/or physics

(C) four credits in advanced placement, International Baccalaureate, or dual credit selected from English, mathematics, science, social studies, economics, languages other than English, or fine arts

Grade Classification (Credits)

Freshman......0-6 1/2 Sophomore.....7 Junior.....14 Senior.....20 Graduate.. .26

CollegeBoard

* College Board Advanced Placement, College Level Concurrent/Dual Enrollment, International Baccalaureate courses may be substituted for requirements in appropriate areas.



PERFORMANCE ACKNOWLEDGEMENTS



- A student may earn a Performance Acknowledgment for outstanding performance:
 - in a dual credit course in bilingualism and biliteracy

 - on an AP test or IB exam on the PSAT, the ACT-Plan (ASPIRE) , the SAT, or the ACT
 - for earning a nationally or internationally recognized business or

Texas High School Diploma – Steps

Distinguished Level of Achievement

26 credits of the Foundation High School Plan

+

Requirements of one endorsement (including 4 credits of science and math with Algebra II)

ENDORSEMENTS

STEM BUSINESS & INDUSTRY

PUBLIC SERVICE

ARTS & HUMANITIES

MULTIDISCIPLINARY

STUDIES



Satisfactory completion of required STAAR EOC tests



Be sure to visit your school counselor to learn more about your options. Students may earn more than one endorsement.

ENDORSEMENT Choices

Students will be able to earn one or more endorsements as part of their graduation requirements. Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area.

Students must first select an endorsement in the eighth grade and can change it as their interests change as long as they have ample time to complete the requirements of an endorsement. Students cannot choose to graduate without an endorsement until after their sophomore year and only if approved by their parent or guardian and a school official in writing.

Donna ISD Endorsements and Specializations

Donna ISD provides five endorsements to students with opportunities for specializations. Each program of study allows students to explore, prepare and specialize in an area of interest.

Science, Technology, Engineering and Mathematics (STEM)

- Advanced Mathematics
- Advanced Science
- Engineering
- Combination of no more than two of the categories listed above

Business and Industry (one of the following or a combination of areas)

- Agriculture, Food, and Natural Resources
- Architecture and Construction
- Arts, A/V Technology, and Communication
- Business, Marketing, and Finance
- Hospitality and Tourism
- Information Technology
- Journalism
- Manufacturing
- Transportation, Distribution, and Logistics

Public Service

- Education and Training
- Health Science
- Human Services
- Junior Reserve Officer Training (JROTC)
- Law and Public Safety

Arts and Humanities

- Fine Arts
- Social Studies
- LOTE (4 levels in same LOTE or 2 levels each in two LOTE)

Multi-Disciplinary Studies

- Take 4 Advanced courses within 1 endorsement area or among endorsement areas that are not in a coherent sequence. The courses must prepare students to enter the workforce successfully or postsecondary education without remediation.
- Take 4 credits in each of the foundation subject areas to include English IV and Chemistry and/or Physics.
- Take 4 Advanced Placements or International Baccalaureate courses to include 1 credit in each of the 4 foundation subjects.

Graduation Requirements and Endorsements Link - TEA















STEM Endorsements

The Science, Technology, Engineering and Math (STEM) endorsement is a curriculum path that allows a student to focus deeply on courses directly related to science, technology, engineering and advanced math.

CAREERS

There is a wide range of careers available in the STEM field including: engineer, computer programmer, software developer, and research scientist. Students interested in pursuing an intentional path toward any of these careers should consider a STEM endorsement to guide course selection.

Ways to earn a STEM Endorsement:

1. Mathematics Sequence – 5 credits

• three credits in mathematics by successfully completing Algebra I, Geometry, and Algebra II and two additional math credits in courses for which Algebra II is a prerequisite

2. Science Sequence – 5 credits

• three credits in science by successfully completing Biology, Chemistry, Physics, and two additional science credits in courses beyond chemistry and physics

3. Computer Science Sequence – 4 credits

• four credits in a coherent sequence in computer science

4. Career & Technical Education Sequence-4 credits

• four credits in a coherent sequence in CTE STEM courses, to include at least one advanced CTE course

5. Combination of Academic and CTE – 4 credits

• in addition to successfully completing Algebra II, chemistry, and physics, a coherent sequence of three additional credits from no more than two of disciplines in numbers 1, 2, 3, and/or 4

For more information, please contact your school counselor or visit www.donnaisd.net





The Business and Industry endorsement is a curriculum path that allows a student to focus deeply on courses directly related to the business field.

Business and Industry

CAREERS

There is a wide range of careers available in the business and industry sector, including fields of technology, communication, agriculture, construction, management, architecture, welding, machinist, chef, auto collision technician, and accountant. Students interested in pursuing an intentional path in the business world may want to consider the Business and Industry Endorsement to guide course selection.

Ways to earn a Business and Industry Endorsement:

1. Academic Sequence – 4 credits

- four credits of English electives to include three levels in one of the following areas and one other English elective credit
 - Advanced Journalism Newspaper Production
 - Advanced Journalism Yearbook Production
 - Advanced Broadcast Journalism

For more information, please contact your school counselor or visit www.donnaisd.net

2. Career & Technical Education Sequence – 4 credits

- a coherent sequence of CTE courses with 4 or more credits from a career cluster listed below with at least
- three credits
- \circ two credits from courses in the same career cluster (for example: **BIM I** followed by **BIM II**) and
- one credit must be from at least one advanced CTE course

one credit

The fourth course to be selected from a cluster listed below:

- o Agriculture, Food, & Natural Resources
- Architecture & Construction
- Arts, Audio/Video Technology & Communications
- o Business, Marketing, & Finance
- Energy
- Hospitality & Tourism
- Information Technology
- Manufacturing
- Transportation, Distribution & Logistics







Public Services

The Public Services endorsement is a curriculum path that allows a student to focus deeply on courses directly related to the public field, including the education field and government.

CAREERS

There is a wide range of careers available in the public services sector, including serving as a police officer, firefighter, government official, human resources administrator, teacher, cosmetologist, barber, nurse, doctor, or therapist.

Ways to earn a Public Service Endorsement:

- 1. Academic Sequence 4 credits
 - four credits in JROTC (Junior Reserve Officer Training Corps)

2. Career & Technical Education Sequence – 4 credits

- a coherent sequence of CTE courses with 4 or more credits from a career cluster listed below with at least
 - three credits
 - two credits from courses in the same career cluster (for example: Principles of Education followed by Human Growth & Development) and
 one credit must be from at least one advanced CTE course
 - one credit

The fourth CTE credit to be selected from a course in a career cluster listed below:

- Education and Training
- Health Science
- Human Services
- Law & Public Service

For more information, please contact your school counselor or visit www.donnaisd.net





E

Arts and Humanities

The Arts and Humanities endorsement is a curriculum path that allows students to focus deeply on courses directly related to fine arts, English literature, foreign languages, and social studies.

CAREERS

Students interested in pursuing a career path in the entertainment industry or as an interpreter, an author, for example, may want to consider the Arts and Humanities Endorsement to guide course selection.

Ways to earn an Arts and Humanities Endorsement:

- 1. Social Studies 5 credits
 - 5 social studies credits
- 2. Languages Other Than English (LOTE) 4 credits
 - 4 levels of the same language in a LOTE
- 3. English Electives 4 credits
 - English IV
 - AP English IV
 - Creative Writing
 - Humanities
 - Literary Genres
 - Business English
 - IB Language and Literature

4. Fine Arts - 4 credits

- four credits from one or two of the following:
 - Art
 - Dance
 - Music
 - Theater

For more information, please contact your school counselor or visit www.donnaisd.net







Multidisciplinary Studies

The Multidisciplinary Studies endorsement is a curriculum path that allows a student to study a foundation area or a wide range of curriculum sets.

CAREERS

Due to the broad nature of a multidisciplinary endorsement, students can choose from a wide variety of careers. If students are unsure of their career interests and wish to cross-study multiple subjects, they may want to consider a Multidisciplinary Endorsement to guide their course selection.

Ways to earn a Multidisciplinary Endorsement:

1. Foundation Subject Areas – 4 credits

- four courses in each of the four foundation subject areas to include English IV, Chemistry, and/or Physics
- 2. Advanced Placement and/or Dual Credit 4 credits
 - four AP or Dual Credit courses to include courses selected from English, mathematics, science, social studies, economics, LOTE, or fine arts.

3. Academic and/or Career and Technical Education

• four credits from advanced courses that prepare a student to enter the workforce successfully or postsecondary education without remediation from within one endorsement area or among endorsement areas that are not in a coherent sequence.

For more information, please contact your school counselor or visit

www.donnaisd.net



Equivalent Proficiency for Prerequisite Courses

Chapter §74.11 High School Graduation Requirements

(j) A student may not be enrolled in a course that has a required prerequisite unless: the student has successfully completed the prerequisite course(s); (2) the student has demonstrated equivalent knowledge as determined by the school district; or (3) the student was already enrolled in the course in an out-of-state, an out-of-country, or Texas nonpublic school and transferred to a Texas public school prior to successfully completing the course. School Year Fall Campus: Date: Student: Student ID#: This form serves to document this student's successful demonstration of equivalent knowledge as determined by the school district, for the following course(s): Course ID#: Course(s): Equivalent knowledge demonstrated by: Check all that apply Attaining a proficient level on an Equivalent Proficiency Assessment submitted by the teacher of record for the course in question (the prerequisite course); _ Attaining a proficient level on a Course Rubric submitted by the teacher of record for the course in question; Completion of an Approved Project demonstrating proficient knowledge of the course in question; or Successfully completing all course requirements for a similar course, hence demonstrating equivalent knowledge for the prerequisite course(s) as determined by the school district. Similar Course Name: Similar Course ID#: Teacher of Record Date Teacher's Signature CTE Counselor's Signature CTE Counselor Date Counselor Date Counselor's Signature

This form must be kept in the student's PRC and noted on the student's record/file held by the counselor to be referenced during course audits of the student's Academic Achievement Record.

Date

Source: TAC Chapter 74 - Graduation Requirements

Principal or Designee's Name

Principal or Designee's Signature

Texas – Perkins Nontraditional Occupations for Males

CODE	COURSE NAME		
A	AGRICULTURE, FOOD, AND NATURAL RESOURCES CAREER CLUSTER		
13000600	VETERINARY MEDICAL APPLICATIONS		
	BUSINESS, MARKETING, AND FINANCE CAREER CLUSTER		
13011300	TOUCH SYSTEM DATA ENTRY		
13016300	BANKING AND FINANCIAL SERVICES		
13011400	BUSINESS INFORMATION MANAGEMENT I		
13011500	BUSINESS INFORMATION MANAGEMENT II		
	EDUCATION AND TRAINING CAREER CLUSTER		
13014400	INSTRUCTIONAL PRACTICES IN EDUCATION AND TRAINING		
13014500	PRACTICUM IN EDUCATION AND TRAINING		
13014510	PRACTICUM IN EDUCATION AND TRAINING II		
	HEALTH SCIENCE CAREER CLUSTER		
13020300	MEDICAL TERMINOLOGY		
13020400	HEALTH SCIENCE THEORY		
13020700	MEDICAL MICROBIOLOGY		
	HUMAN SERVICES CAREER CLUSTER		
13024500	LIFETIME NUTRITION AND WELLNESS		
13024800	CHILD GUIDANCE		
13025100	INTRODUCTION TO COSMETOLOGY		
13025200	COSMETOLOGY I		
13025300	COSMETOLOGY II		

Texas – Perkins Nontraditional Occupations for Females

CODE	COURSE NAME
	AGRICULTURE, FOOD, AND NATURAL RESOURCES CAREER CLUSTER
13000300	LIVESTOCK PRODUCTION
13000400	SMALL ANIMAL MANAGEMENT
13000500	EQUINE SCIENCE
13000700	ADVANCED ANIMAL SCIENCE
13000900	AGRIBUSINESS MANAGEMENT AND MARKETING
13001200	ADVANCED ENVIRONMENTAL TECHNOLOGY
13001300	FOOD TECHNOLOGY AND SAFETY
13001400	FOOD PROCESSING
13001500	WILDLIFE, FISHERIES AND ECONOLOGY MANAGEMENT
13001600	RANGE ECOLOGY AND MANAGEMENT
13001700	FORESTRY AND WOODLAND ECOSYSTEMS
13001900	LANDSCAPE DESIGN AND TURF GRASS MANAGEMENT
13002000	HORTICULTURE SCIENCE
13002100	ADVANCED PLANT AND SOIL SCIENCE
13002200	AGRICULTURAL MECHANICS AND METAL TECHNOLOGIES
13002300	AGRICULTURAL STRUCTURES DESIGN AND FABRICATIONS
13002400	AGRICULTURAL POWER SYSTEMS
	ARCHITECTURE AND CONSTRUCTION CAREER CLUSTER
13004600	ARCHITECTURAL DESIGN
13004700	ADVANCED ARCHITECTURAL DESIGN
13004800	PRACTICUM IN ARCHITECTURAL DESIGN
13004810	PRACTICUM IN ARCHITECTURAL DESIGN II
13004900	CONSTRUCTION MANAGEMENT
13005000	ADVANCED CONSTRUCTION MANAGEMENT
13005100	CONSTRUCTION TECHNOLOGY
13005200	ADVANCED CONSTRUCTION TECHNOLOGY
13005300 13005400	MILL AND CABINETMAKING TECHNOLOGY BUILDING MAINTENANCE TECHOLOGY
13005500	ADVANCED BUILDING MAINTENANCE TECHOLOGY
13005600	ELECTRICAL TECHNOLOGY
13005700	ADVANCED ELECTRICAL TECHNOLOGY
13005700	HVAC AND REFRIGERATION TECHNOLOGY
13005900	ADVANCED HVAC AND REGRIGERATION TECHNOLOGY
13006000	PIPING AND PLUMBING TECHNOLOGY
13006100	ADVANCED PIPING AND PLUMBING TECHNOLOGY
13006200	PRACTICUM IN CONSTRUCTION MANAGEMENT
13006210	PRACTICUM IN CONSTRUCTION MANAGEMENT II
	ARTS, AUDIO VIDEO TECHNOLOGY AND COMMUNICATIONS CAREER CLUSTER
13008500	AUDIO VIDEO PRODUCTION
13008600	ADVANCED AUDIO VIDEO PRODUCTION
13008700	PRACTICUM IN AUDIO VIDEO PRODUCTION
	PRACTICUM IN AUDIO VIDEO PRODUCTION II
13008710	
40004400	BUSINESS, MARKETING, AND FINANCE CAREER CLUSTER
13034400	ENTREPRENEURSHIP
13011800	GLOBAL BUSINESS
	HOSPITALITY AND TOURISM CAREER CLUSTER
13022600	CULINARY ARTS
13022700	PRACTICUM IN CULINARY ARTS
13022710	PRACTICUM IN CULINARY ARTS II
13023000	FOOD SCIENCE

	INFORMATION TECHNOLOGY CAREER CLUSTER
13027300	COMPUTER MAINTENANCE
13027400	TELECOMMUNICATIONS & NETWORKING
13027500	COMPUTER TECHNICIAN
13027600	COMPUTER PROGRAMMING
13027700	ADVANCED COMPUTER PROGRAMMING
	LAW AND PUBLIC SERVICE CAREER CLUSTER
13029300	LAW ENFORCEMENT I
13029400	LAW ENFORCEMENT II
13029600	COURT SYSTEMS AND PRACTICES
13029800	SECURITY SERVICES
13029900	FIREFIGHTER I
13030000	FIREFIGHTER II
	MANUFACTURING CAREER CLUSTER
13032200	PRINCIPLES OF MANUFACTURING
13032300	WELDING
13032400	ADVANCED WELDING
13032500	PRECISION METAL MANUFACTURING
13032600	ADVANCED PRECISION METAL MANUFACTURING
13032700	FLEXIBLE MANUFACTURING
13032800	ADVANCED FLEXIBLE MANUFACTURING
13032900	MANUFACTURING ENGINEERING
13033000	PRACTICUM IN MANUFACTURING
13033010	PRACTICUM IN MANUFACTURING II
SC	IENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) CAREER CLUSTER
13036500	ENGINEERING DESIGN AND PRESENTATION
13036600	ADVANCED ENGINEERING DESIGN AND PRESENTATION
13036800	ELECTRONICS
13036900	ADVANCED ELECTRONICS
13037000	ROBOTICS I
13036500	ENGINEERING DESIGN AND PROBLEM SOLVING
13037500	PRINCIPLES OF ENGINEERING
13037600	DIGITAL ELECTRONICS
	TRANSPORTATION, DISTRIBUTION, AND LOGISTICS CAREER CLUSTER
13039300	ENERGY, POWER AND TRANSPORTATION SYSTEMS
13039400	AIRCRAFT TECHNOLOGY
13039500	ADVANCED AIRCRAFT TECHNOLOGY
13039600	AUTOMOTIVE TECHNOLOGY
13039700	ADVANCED AUTOMOTIVE TECHNOLOGY
13039800	COLLISION REPAIR AND REFINISHING
13039900	ADVANCED COLLISION REPAIR AND REFINISHING
13040000	SMALL ENGINE TECHNOLOGY
13040100	ADVANCED SMALL ENGINE TECHNOLOGY
13040200	TRANSPORTATION SYSTEMS MANAGEMENT
13040300	LOGISTICS, PLANNING, AND MANAGEMENT SYSTEMS
13040400	PRACTICUM IN TRANSPORTATION, DISTRIBUTION, AND LOGISTICS
13040410	PRACTICUM IN TRANSPORATATION, DISTRIBUTION AND LOGISTICS II



FOR MORE INFORMATION, CONTACT THE CTE DEPARTMENT AT DONNA ISD.

116 N. 10th Street Donna, TX 78537 (956) 464-1600