

2024-2025



Dickinson High School Career & Technical Education Programs of Study

Updated: 1/22/2024

For more information about Career and Technical Education in Dickinson ISD, contact your counselor or visit our webpage at <https://www.dickinsonisd.org/page/ct.home>. You may also email at CTE@dickinsonisd.org.

2024-2025
Career and Technical Education
Program of Study

Programs of Study	9th Grade	10th Grade	11th Grade	12th Grade	Certification
Audio/Video Technology					
Digital Communications (Audio/Video)	Principles of Arts, Audio/Video Technology, and Communications	Audio/Video Production I	Audio/Video Production II	Practicum of Audio Video Production	<i>Adobe Premiere Pro; Adobe Photoshop; Adobe After Effects</i>
Graphic Design & Multimedia Arts (Photography)	Principles of Arts, Audio/Video Technology, and Communications	Commercial Photography I	Commercial Photography II	Practicum in Commercial Photography	<i>Adobe Photoshop</i>
Graphic Design & Multimedia Arts (Video Game Design)	Principles of Arts, Audio/Video Technology, and Communications	Video Game Programming	Advanced Video Game Programming	Career Preparation I	<i>Adobe Illustrator, Adobe After Effects, Autodesk Associate 3ds Max</i>
Graphic Design & Multimedia Arts (Yearbook)	Principles of Arts, Audio/Video Technology, and Communications	Graphic Design and Illustration I	Graphic Design and Illustration II	Practicum in Graphic Design and Illustration	<i>Adobe Photoshop, Adobe InDesign</i>
Agriculture					
Animal Science	Principles of Agriculture, Food and Natural Resources	Small Animal Management and Equine Science	Livestock Production	Practicum in Agriculture, Food and Natural Resources	<i>Elanco Fundamentals of Animal Science</i>
Animal Science (Vet Med)	Principles of Agriculture, Food and Natural Resources	Small Animal Management and Equine Science	Veterinary Medical Applications	Practicum of Veterinary Medicine	<i>Elanco Veterinary Medical Applications; Certified Veterinary Assistant, Level 1</i>
Applied Agricultural Engineering (AG Mechanics)	Principles of Agriculture, Food and Natural Resources	Agricultural Mechanics and Metal Technologies	Agricultural Structures Design and Fabrications	Practicum in Agriculture, Food, and Natural Resources (Applies Agriculture Engineering)	<i>AWS D9.1 Sheet Metal Welding</i>
Plant Science	Principles of Agriculture, Food and Natural Resources	Floral Design I (also a fine arts credit)	Advanced Floral Design	Plant and Soil Science (also a science credit)	<i>BASF Plant Science</i>
Plant Science (Floral Design)	Principles of Agriculture, Food and Natural Resources	Floral Design I (also a fine arts credit)	Advanced Floral Design	Practicum in Agriculture, Food and Natural Resources	<i>Principles of Floral Design</i>
Business, Marketing and Finance					
Accounting and Financial Services	Principles of Business, Marketing, and Finance	Accounting I and Financial Mathematics (also as math credit)	Financial Analysis	Practicum in Entrepreneurship	<i>Accounting - Basics; Accounting Foundations; Intuit QuickBooks Certified User</i>
Marketing and Sales	Principles of Business, marketing, and Finance	Sports and Entertainment Marketing, and Social Media Marketing	Advertising and Sports and Entertainment Marketing II	Career Preparation I	<i>Stukent Social Media Marketing</i>
Marketing and Sales (Real Estate)	Principles of Business, marketing, and Finance	Sports and Entertainment Marketing, and Social Media Marketing	Fundamentals of Real Estate	Practicum in Entrepreneurship	<i>Real Estate Sales Agent License</i>
Education and Training					
Teacher and Training	Principles of Human Services (8th Grade); Principles of Education and Training (9th grade)	Child Development	Instructional Practices (Ready Set, Teach I)	Practicum in Education and Training (Ready, Set, Teach II)	<i>Educational Aide I</i>
Human Services					
Cosmetology and Personal Care Services (Barbering)		Principles of Cosmetology Design and Color Theory	Barbering I	Barbering II	<i>Barber Operating License</i>
Cosmetology and Personal Care Services (Cosmetology)		Introduction to Cosmetology	Cosmetology I	Cosmetology II	<i>Cosmetology Operator License</i>
Health Science					
Healthcare Diagnostics (Imaging)	Introduction to Imaging Technology (1st Semester); Medical Terminology (2nd Semester)	Imaging Technology I	Imaging Technology II	Practicum in Health Science	<i>Limited Medical Radiologic Technologist</i>
Healthcare Therapeutics	Principles of Health Science	Medical Terminology	Medical Microbiology (also a science credit)	Anatomy and Physiology (also a science credit)	
Healthcare Therapeutics (EMT, EKG, PCT, Pharm Tech, Dental)	Principles of Health Science	Medical Terminology	Health Science Theory or Pharmacology (Pharm Tech)	Practicum in Health Science (EMT, EKG, PCT, Pharm Tech, Dental)	<i>Emergency Medical Technician - Basic; Certified EKG Technician; Patient Care Technician; Pharmacy Technician; Registered Dental Assistant X-Ray</i>
Law and Public Services					
Law Enforcement	Principles of Law, Public Safety, Corrections, and Security	Law Enforcement I	Law Enforcement II	Forensic Science; or Counseling and Mental Health; Practicum of Law, Public Safety, Corrections, and Security	<i>IAED Emergency Telecommunicator</i>
Advanced Manufacturing and Machinery					
Advanced Manufacturing and Machinery Mechanics (Robotics)	Principles of Applied Engineering	Engineering Design and Presentation I	Robotics I	Robotics II	
Science, Technology, Engineering and Mathematics (STEM)					
Engineering	Introduction to Engineering Design (PLTW)	Engineering Science	Engineering Design and Presentation I	Engineering Design and Presentation II	<i>Certified SolidWorks Associate</i>
Engineering (Aerospace)	Introduction to Engineering Design (PLTW)	Engineering Science	Aerospace Engineering (PLTW)	Practicum in STEM	
Programming and Software Development	Fundamentals of Computer Science	Computer Science I	Computer Science II	Practicum in STEM	<i>Certified Entry-Level Python Programmer</i>
Transportation					
Automotive	Automotive Basics	Automotive Technology I	Automotive Technology II	Practicum in Transportation Systems	<i>ASE Entry-Level Automobile</i>

Arts, Audio/Video Technology, and Communications Career Cluster

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

Digital Communications Statewide Program of Study



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.

Secondary Courses for High School Credit

Level 1

- Principles of Arts, Audio/Video Technology, and Communications

Level 2

- Audio/Video Production I/Lab

Level 3

- Audio/Video Production II/Lab

Level 4

- Practicum of Audio/Video Production

Postsecondary Opportunities

Associates Degrees

- Recording Arts Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television Broadcasting Technology/Technician
- Music Technology

Bachelor's Degrees

- Recording Arts Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television
- Agricultural Communication/Journalism

Master's, Doctoral, and Professional Degrees

- Communications Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television
- Agricultural Communication/Journalism



Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Shadow a production team
- Participate in SkillsUSA or TSA

Work-Based Learning Activities

- Intern at a local television station or video production company
- Work with a local company on a project

Industry-Based Certifications

- Adobe Certified Professional in Print and Digital Media Publication Using Adobe InDesign
- Adobe Certified Professional in Print and Digital Media Publication Using Adobe InDesign
- Adobe Certified Professional in Visual Design
- Adobe Certified Professional in Visual Design Using Adobe Photoshop
- Audio-Visual Communications - Job Ready
- Broadcasting and Journalism
- Digital Video Production Foundations

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Sound Engineering Technicians	\$39,562	79	27%
Camera Operators, Television, Video, and Motion Picture	\$50,024	129	9%
Audio and Video Equipment Technicians	\$40,581	757	29%
Film and Video Editors	\$47,382	118	23%

Successful completion of the Digital Communications program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Digital Communications Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Principles of Arts, A/V Technology, and Communications	13008200	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Audio/Video Production I/Lab	13008500	None	1	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Audio/Video Production II/Lab	13008610	Audio/Video Production I	2	\$0

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Practicum in Audio/Video Production	13008700 13008710	Audio/Video Production II/Lab	2	\$0

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Arts, Audio/Video Technology, and Communications Career Cluster

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

Graphic Design & Multimedia Arts Statewide Program of Study



The Graphic 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.

Secondary Courses for High School Credit

Level 1

- Principles of Arts, A/V Technology, and Communications

Level 2

- Graphic Design and Illustration I/Lab
- Video Game Programming
- Commercial Photography I/Lab

Level 3

- Graphic Design and Illustration II/Lab
- Advanced Video Game Programming
- Commercial Photography II/Lab

Level 4

- Practicum in Graphic Design and Illustration
- Practicum in Animation
- Practicum in Commercial Photography

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> Join a website development or coding club Participate in SkillsUSA or TSA 	<ul style="list-style-type: none"> Intern with a multimedia or animation studio Obtain a certificate or certification in graphic design

Industry-Based Certifications

- Adobe Certified Professional in Graphic Design and Illustration Using Adobe Illustrator
- Adobe Certified Professional in Print and Digital Media Publication Using Adobe InDesign
- Adobe Certified Professional in Visual Design Using Adobe Photoshop
- Adobe Certified Professional In Visual Effects and Motion Graphics Using Adobe After Effects
- Autodesk Associate (Certified User) 3ds MAX

Postsecondary Opportunities

Associates Degrees

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

Bachelor's Degrees

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

Master's, Doctoral, and Professional Degrees

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



- Adobe Certified Professional Animate*

*IBC Sunsetting 8/31/24

Aligned Occupations

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

Successful completion of the Graphic Design & Multimedia Arts program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Graphic Design & Multimedia Arts

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Principles of Arts, A/V Technology, & Communications	13008200	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Graphic Design and Illustration I /Lab	13008800	None	1	\$0
Video Game Programming	N1300994	None	1	\$0
Commercial Photography I/Lab	13009100	None	1	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Graphic Design and Illustration II/Lab	13008900	Graphic Design and Illustration I	1	\$0
Advanced Video Game Programming	N1300995	None	1	\$0
Commercial Photography II/Lab	13009200	None	1	\$0

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Practicum in Graphic Design and Illustration	13009000 13009010	Graphic Design and Illustration II Lab	2	\$0
Practicum in Animation	13008450) 13008460	Animation II and Animation II Lab	2	\$0
Practicum in Commercial Photography	13009250 13009260	Commercial Photography I and Commercial Photography I Lab	2	\$0

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Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

Animal Science Statewide Program of Study



The Animal Science program of study focuses on the science, research, and business of animals and other living organisms. It teaches CTE learners how to apply biology and life science to real-world life processes of animals and wildlife, either in laboratories or in the field, which could include a veterinary office, a farm or ranch, or any outdoor area harboring animal life. Students may also research and analyze the growth and destruction of species and research or diagnose diseases and injuries of animals.

Secondary Courses for High School Credit

Level 1

- Principles of Agriculture, Food, and Natural Resources

Level 2

- Small Animal Management
- Equine Science

Level 3

- Livestock Production/Lab

Level 4

- Advanced Animal Science
- Veterinary Medical Applications/Lab
- Practicum in Agriculture, Food, and Natural Resources



Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Texas FFA

Work-Based Learning Activities

- Compete in an Agri-Science Fair 4H
- Volunteer at a local farm or with a veterinarian
- Participate in an FFA supervised agriculture experience

Industry-Based Certifications

- Certified Veterinary Assistant, Level 1
- Elanco Fundamentals of Animal Science Certification
- Elanco Veterinary Medical Applications Certification

Postsecondary Opportunities

Associates Degrees

- Food Science and Technology
- Veterinary Studies
- Biotechnology Laboratory Technician
- Biology Technician

Bachelor's Degrees

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

Master's, Doctoral, and Professional Degrees

- Genetics
- Veterinary Medicine
- Biological and Physical Sciences
- Biological and Biomedical Sciences



Aligned Occupations

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

Successful completion of the Animal Science program of study will fulfill requirements of a Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Animal Science Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Principles of Agriculture, Food, and Natural Resources	13000200	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Small Animal Management	13000400	Principles of Agriculture, Food, and Natural Resources	0.5	\$10
Equine Science	13000500	Principles of Agriculture, Food, and Natural Resources	0.5	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Livestock Production/Lab	13000300	Principles of Agriculture, Food, and Natural Resources	1	\$0

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Advanced Animal Science (counts as a 4 th Science Credit)	13000700	Biology, Chemistry, IPC; Algebra I, Geometry; and Small Animal Management, Equine Science, or Livestock Production	1	\$0
Veterinary Medical Applications/Lab	13000610	Small Animal Management (Preferred), Equine Science, or Livestock Production	2	\$20
Practicum in Agriculture, Food, and Natural Resources	13002500 13002510	Veterinary Medical Applications	2	\$0

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Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

Applied Agricultural Engineering Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Agriculture, Food, and Natural Resources

Level 2

- Agricultural Mechanics and Metal Technologies/Lab

Level 3

- Agricultural Structures Design and Fabrications/Lab

Level 4

- Agricultural Equipment Design and Fabrication/Lab
- Practicum in Agriculture, Food, and Natural Resources

Postsecondary Opportunities

Associates Degrees

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

Bachelor's Degrees

- Agricultural Engineering
- Agricultural Mechanization, General

Master's, Doctoral, and Professional Degrees

- Agricultural Engineering
- Agricultural Mechanization, General

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> Tour a farm products or machinery plant Participate in Texas FFA 	<ul style="list-style-type: none"> Earn a welding certification Intern at a farm products or machinery plant Participate in an FFA supervised agriculture experience

Industry-Based Certifications

- AWS D9.1 Sheet Metal Welding



- OSHA General 30*

*IBC sunseting 8/31/24

Aligned Occupations

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

Successful completion of the Applied Agricultural Engineering program of study will fulfill requirements of a Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Applied Agricultural Engineering Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Principles of Agriculture, Food, and Natural Resources	13000200	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURS FEE
Agricultural Mechanics and Metal Technologies/Lab	13002200 13002210	Principles of Agriculture, Food, and Natural Resources	1	\$100

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Agricultural Structures Design and Fabrications/Lab	13002300	Agricultural Mechanics and Metal Technologies	1	\$100

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Practicum in Agriculture, Food, and Natural Resources	13002500 13002510	Agricultural Structures Design and Fabrications	2	\$100

Required Safety Equipment for Level 2, 3, & 4 (provided by student)

- Safety Glasses (z87 coded)
- Leather gauntlet style gloves no cloth, rubber, or garden gloves of any kind
- Leather boots
- Blue Jeans (no holes)
- Long sleeve shirt with no pocket or pockets with flap cover (cotton or fire retardant only)
- Welding hood preferable auto darkening (Available at Harbor Freight)
- Welding cap

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Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life - food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

Plant Science Statewide Program of Study



The Plant Science program of study focuses on the science, research, and business of plants and other living organisms. It teaches students how to apply biology and life science to real-world life processes of plants and vegetation, either in laboratories or in the field.

Secondary Courses for High School Credit

Level 1

- Principles of Agriculture, Food, and Natural Resources

Level 2

- Floral Design/Lab

Level 3

- Advanced Floral Design

Level 4

- Practicum in Agriculture, Food, and Natural Resources
- Advanced Plant and Soil Science

Postsecondary Opportunities

Associates Degrees

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

Bachelor's Degrees

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

Master's, Doctoral, and Professional Degrees

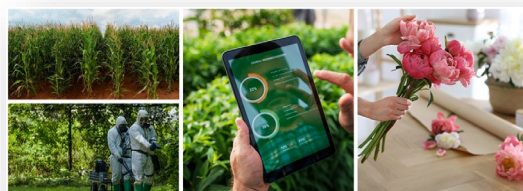
- Applied Horticulture/ Horticulture Operations, General
- Agronomy and Crop Science
- Agricultural Business and Management, General
- Farm/Farm and Ranch Management

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> Participate in Texas FFA 	<ul style="list-style-type: none"> Work at a florist or landscaper business Participate in an FFA supervised agriculture experience

Industry-Based Certifications

- BASF Plant Science Certification
- Principles of Floral Design Certification



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Soil and Plant Scientists	\$54,662	116	21%
Tree Trimmers and Pruners	\$32,240	589	14%
Pesticide Handlers, Sprayers, and Applicators	\$36,733	196	22%
Landscaping Supervisors	\$44,408	807	19%
Biological Technicians	\$42,931	452	17%

Successful completion of the Plant Science program of study will fulfill requirements of a Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Plant Science Course information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Principles of Agriculture, Food, and Natural Resources	13000200	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Floral Design/Lab	13001800	Principles of Agriculture, Food, and Natural Resources	1	\$100

Course fee can be paid by student or student can sell floral arrangement subscription

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Advanced Floral Design	N1300270	Floral Design	1	\$100

Course fee can be paid by student or student can sell floral arrangement subscription

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Practicum in Agriculture, Food, and Natural Resources	13002500 13002510	3 credits in Agriculture, Food, and Natural Resources	2	\$0
Advanced Plant and Soil Science (also a science credit)	13002100	Biology and 1 other science	1	\$0

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Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Accounting and Financial Services Statewide Program of Study



The Accounting and Financial Services program of study teaches CTE learners 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.

Secondary Courses for High School Credit

Level 1

- Principles of Business, Marketing, and Finance

Level 2

- Accounting I
- Financial Mathematics (counts as a math credit)

Level 3

- Accounting II
- Financial Analysis

Level 4

- Practicum in Entrepreneurship
- Career Preparation I



Postsecondary Opportunities

Associates Degrees

- Real Estate
- Financial, General
- Financial Planning and Services
- Certified Income Specialist

Bachelor's Degrees

- Accounting
- Financial, General
- Financial Planning and Services
- Certified Income Specialist

Master's, Doctoral, and Professional Degrees

- Financial Accounting
- Business Administration
- Financial Planning

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Business Professionals of America, Future Business Leaders of America, or DECA

Work-Based Learning Activities

- Intern with a local accounting firm
- Earn Microsoft Office certifications

Industry-Based Certifications

- Accounting - Basic
- Accounting Foundations
- Intuit QuickBooks Certified User

- Microsoft Office Specialist-Excel*

*IBC sunsetting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
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%

Accounting and Financial Services Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Principles of Business, Marketing, and Finance	13011200	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Accounting I	13016600	Principles of Business, Marketing, and Finance	1	\$0
Financial Mathematics	13018000	Algebra I and Geometry	1	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Accounting II	13016700	Accounting I	1	\$0
Financial Analysis	13016800	Accounting I	1	\$0

Counselors Note for Accounting II: This class will be school store class for students not able to double block the practicum class

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Practicum in Entrepreneurship	N1303425	Financial Analysis or Accounting II	2	\$0
Career Preparation I	12701300 12701305	Must be employed	2 3	\$0

Counselors Note Practicum in Entrepreneurship:

This class will be school store class for students not able to double block the practicum class

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Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Marketing & Sales Statewide Program of Study



The Marketing and Sales program of study teaches CTE learners 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.

Secondary Courses for High School Credit

Level 1

- Principles of Business, Marketing, and Finance

Level 2

- Sports and Entertainment Marketing

Level 3

- Social Media Marketing
- Advertising
- Sports and Entertainment Marketing II
- Fundamentals of Real Estate

Level 4

- Practicum in Entrepreneurship
- Career Preparation I

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Business Professionals of America, Future Business Leaders of America, or DECA

Work-Based Learning Activities

- Intern with a local marketing firm
- Shadow a real estate agent
- Operate a school store on campus

Industry-Based Certifications

- Real Estate Sales Agent License
- Student Social Media Marketing Certification

- Google Analytics Individual Qualification*
*IBC sunseting 8/31/24



Postsecondary Opportunities

Associates Degrees

- Marketing/ Marketing Management, General
- Consumer Merchandising/ Retailing Management
- International Marketing
- Business

Bachelor's Degrees

- Marketing/ Marketing Management, General
- Business Administration
- Applied Economics
- Marketing Research

Master's, Doctoral, and Professional Degrees

- Marketing
- Business Administration
- Applied Economics
- Advertising



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Marketing Research Analysts and Marketing Specialists	\$70,346	4,664	40%
Insurance Sales Agent	\$43,181	5,886	30%
First-Line Supervisors of Retail Sales Workers	\$72,550	2,826	15%
Wholesale and Retail Buyers	\$51,106	1,229	19%

Successful completion of the Marketing and Sales program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Marketing & Sales Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Principles of Business, Marketing, and Finance	13011200	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Social Media Marketing	13034650	Principles of Business, Marketing, and Finance	.5	\$0
Sports and Entertainment Marketing	13034600	Principles of Business, Marketing, and Finance	.5	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Advertising	13034200	Social Media Marketing and Sports And Entertainment Marketing	.5	\$0
Sports and Entertainment Marketing II	N1303422	Sports and Entertainment Marketing	.5	\$0
Fundamentals of Real Estate	N1301120	Permission of Instructor; Taken in sequence after prior CTE business courses, must be 18 before July 15 th of your senior year	2	\$200

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Career Preparation I	12701300 12701305	Must be employed	2 3	\$0

FOR ADDITIONAL INFORMATION ON THE BUSINESS, MARKETING, AND FINANCE CAREER CLUSTER,
PLEASE CONTACT: CTE@dickinsonisd.org or visit our webpage at: <https://www.dickinsonisd.org/page/ct.home>

Education and Training Career Cluster

The Education and Training Career Cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training career cluster.

Teaching and Training Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Education and Training (Taken 9th grade)
- Principles of Human Service (8th grade – counts towards completer)

Level 2

- Child Development

Level 3

- Instructional Practices

Level 4

- Practicum in Education and Training



Postsecondary Opportunities

Associates Degrees

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

Bachelor's Degrees

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

Master's, Doctoral, and Professional Degrees

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

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in the Texas Association of Future Educators or Family, Career, and Community Leaders of America (TAFE)

Work-Based Learning Activities

- Teach a community education class
- Intern as a teaching assistant or tutor
- Serve as a camp counselor

Industry-Based Certifications

- Educational Aide I



Aligned Occupations

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

Successful completion of the Teaching and Training program of study will fulfill requirements of the Public Service endorsement. Revised – August 2022

Teaching and Training Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEES
Principles of Education and Training	13014200	None	1	\$0
Principles of Human Services (taken in 8 th grade)	13024200	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEES
Child Development	13024700	None	1	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEES
Instructional Practices	13014400	1 credit from Education and Training Career Cluster	2	\$55

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEES
Practicum in Education and Training	13014500	Instructional Practices	2	\$55
	13014510		2	

FOR ADDITIONAL INFORMATION ON THE EDUCATION AND TRAINING CAREER CLUSTER,
PLEASE CONTACT: CTE@dickinsonisd.org or visit our webpage at: <https://www.dickinsonisd.org/page/ct.home>

Human Services Career Cluster

The Human Services Career Cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care services, and consumer services.

Cosmetology and Personal Care Services Regional Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Cosmetology Design and Color Theory (Barbering)

Level 2

- Introduction to Cosmetology

Level 3

- Cosmetology I/Lab
- Barbering I

Level 4

- Cosmetology II/Lab
- Barbering II



Postsecondary Opportunities

Certificate/License

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

Associates Degrees

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

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

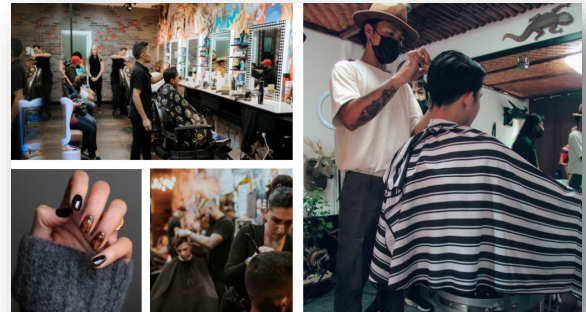
- Participate in TIVA or SkillsUSA

Work-Based Learning Activities

- Job shadow a cosmetologist
- Work part-time at a salon, spa, or barbershop

Industry-Based Certifications

- Cosmetology Operator License
- Barber Operating License



Aligned Occupations

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

Successful completion of the Cosmetology and Personal Care Services regional program of study will fulfill requirements of the Public Service endorsement. Revised – August 2022

Cosmetology and Personal Care Services

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Principles of Cosmetology Design and Color Theory (Barbering)	13025050	None	1	\$45

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Introduction to Cosmetology	13025100	None	1	\$25

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDIT	COURSE FEE
Cosmetology I/Lab	13025210	None	3	\$550
Barbering I	N1302534	None	3	\$703

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDIT	COURSE FEE
Cosmetology II/Lab	13025310	Cosmetology I	3	\$200
Barbering II	N1302535	Barbering I	3	\$175

FOR ADDITIONAL INFORMATION ON THE HUMAN SERVICES CAREER CLUSTER,
PLEASE CONTACT: CTE@dickinsonisd.org or visit our webpage at: <https://www.dickinsonisd.org/page/ct.home>

Health Science Career Cluster

The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

Healthcare Diagnostics Statewide Program of Study



The Healthcare Diagnostics program of study introduces students to occupations and education 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 ultrasound technology.

Secondary Courses for High School Credit

Level 1

- Introduction to Imaging Technology(1st semester-freshman year)
 - 1 Semester-1 credit (imaging pathway only)

Level 2

- Medical Terminology(2nd semester-freshman year)
 - 1 Semester-1 credit (imaging pathway only)
- Imaging Technology I (sophomore)

Level 3

- Imaging Technology II (junior)

Level 4

- Practicum in Health Science (senior)

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> • Participate in Health Occupation Students of America 	<ul style="list-style-type: none"> • Perform clinical rotations at a community wellness center, hospital, assisted living, nursing home

Industry-Based Certifications

- Limited Medical Radiologic Technologist



Postsecondary Opportunities

Associates Degrees

- Nuclear Medical Technology/Technologist
- Magnetic Resonance Imaging (MRI) Technology/Technician

Bachelor's Degrees

- Nuclear Medical Technology/Technologist
- Medical Radiologic Technology/Science Radiation Therapist

Master's, Doctoral, and Professional Degrees

- Radiologist
- Radiologic Technology/Science Radiographer

- Registered Diagnostic Medical Sonographer - Abdomen*
- Registered Diagnostic Medical Sonographer - Obstetrics and Gynecology*
- Registered Technologist - Cardiac-Interventional Radiography*
- Registered Technologist - Computed Tomography*
- Registered Technologist - Magnetic Resonance Imaging*
- Registered Technologist - Mammography*
- Registered Technologist - Nuclear Medicine Technology*
- Registered Technologist - Radiography*
- Registered Technologist - Sonography*
- Registered Technologist - Vascular Sonography*
- Registered Technologist - Vascular-Interventional Radiography*
- Registered Vascular Technology*

*IBC sunseting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Diagnostic Medical Sonographers	\$69,909	495	35%
Phlebotomist	\$30,597	1,442	36%
Nuclear Medicine Technologists	\$75,962	91	13%
Radiologic Technologists	\$55,494	1,196	21%
Magnetic Resonance Imaging Technologists	\$68,661	217	21%

Successful completion of the Healthcare Diagnostics program of study will fulfill requirements of the Public Service or STEM endorsement if the math and science requirements are met. Revised – August 2022

Healthcare Diagnostics Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Introduction to Imaging Technology	N1302102	None	1	\$0

Taken 1st semester with Medical Terminology 2nd semester – specific to imaging pathway

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Medical Terminology	13020300	None	1	\$0
Imaging Technology I	N1302123	Introduction to Imaging Technology and Medical Terminology	1	\$0

Medical Terminology 2nd semester of freshman year – specific to imaging pathway

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Imaging Technology II	N1302131	Imaging Technology I	2	\$0

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Practicum in Health Science	13020500 13020510	Imaging Technology II	2	\$0

FOR ADDITIONAL INFORMATION ON THE HEALTH SCIENCE CAREER CLUSTER,
PLEASE CONTACT: CTE@dickinsonisd.org or visit our webpage at: <https://www.dickinsonisd.org/page/ct.home>

Health Science Career Cluster

The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

Healthcare Therapeutic Statewide Program of Study



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.

Secondary Courses for High School Credit

Level 1

- Principles of Health Science

Level 2

- Medical Terminology

Level 3

- Anatomy and Physiology (science credit)
- Health Science Theory
- Medical Microbiology (science credit)
- Pharmacology (Pharm Tech)

Level 4

- Practicum in Health Science
 - Dental
 - EMT
 - PCT/EKG
 - Pharmacy Technician

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in SkillsUSA or Health Occupation Students of America

Work-Based Learning Activities

- Volunteer at a community wellness center, hospital, assisted living, or nursing home

Industry-Based Certifications

- Emergency Medical Technician - Basic
- Certified EKG Technician
- Patient Care Technician
- Pharmacy Technician
- Registered Dental Assistant X-Ray Certification



Postsecondary Opportunities

Associates Degrees

- Dental Hygienist
- Medical/Clinical Assistant

Bachelor's Degrees

- Dental Hygienist

Master's, Doctoral, and Professional Degrees

- Dentist
- Physician Assistant
- Family and General Practitioners
- Pharmacist



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Medical Assistants	\$29,598	8,862	30%
Surgical Technologists	\$45,032	1,150	20%
Dental Hygienists	\$73,507	1,353	38%
Physicians and Surgeons	\$213,071	1,151	30%

Successful completion of the Healthcare Therapeutic program of study will fulfill requirements of a Public Service endorsement or STEM endorsement if the math and science requirements are met. Revised – March 2023

Healthcare Therapeutic Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Principles of Health Science	13020200	None	1	

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Medical Terminology	13020300	None	1	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Health Science Theory	13020400	Biology	1	\$0
Medical Microbiology	13020700	Biology and Chemistry	1	\$0
Pharmacology	13020950	Biology and Chemistry	1	\$0

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Anatomy and Physiology	13020600	One credit in Biology, one credit in Chemistry, Integrated Physics and Chemistry, or Physics.	1	\$0
Practicum in Health Science	13020500 13020510	Health Science Theory and Biology	1	\$0

FOR ADDITIONAL INFORMATION ON THE HEALTH SCIENCE CAREER CLUSTER,
PLEASE CONTACT: CTE@dickinsonisd.org or visit our webpage at: <https://www.dickinsonisd.org/page/ct.home>

Law and Public Service Career Cluster

The Law and Public Service Career Cluster focuses on planning, managing, and providing legal services, public safety, protective services, and homeland security, including professional and technical support services. Students will examine the roles and responsibilities of police, courts, corrections, private security, and fire and emergency services.

Law Enforcement Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Law, Public Safety, Corrections, and Security

Level 2

- Law Enforcement I

Level 3

- Law Enforcement II
- Counseling and Mental Health

Level 4

- Forensic Science (Science credit)

TPSA

Postsecondary Opportunities

Associates Degrees

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

Bachelor's Degrees

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

Master's, Doctoral, and Professional Degrees

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

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Join the Texas Public Service Association or local criminal justice clubs

Work-Based Learning Activities

- Attend court hearings and other legal procedures

Industry-Based Certifications

- IAED Emergency Telecommunicator



Aligned Occupations

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

Successful completion of the Law and Public Service program of study will fulfill requirements of the Public Service endorsement. Revised – August 2022

Law Enforcement Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Principles of Law, Public Safety, Corrections, and Security	13029200	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Law Enforcement I	13029300	None	1	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Law Enforcement II	13029400	None	1	\$0
Counseling and Mental Health	13024600	None	1	\$25

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Forensic Science	13029500	Biology and Chemistry	1	\$0

FOR ADDITIONAL INFORMATION ON THE LAW AND PUBLIC SERVICE CAREER CLUSTER,
PLEASE CONTACT: CTE@dickinsonisd.org or visit our webpage at: <https://www.dickinsonisd.org/page/ct.home>

Manufacturing Career Cluster

The Manufacturing Career Cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

Advanced Manufacturing and Machinery Mechanics Statewide Program of Study



The Advanced Manufacturing and Machinery Mechanics program of study focuses on the assembly, operation, maintenance, and repair of electromechanical equipment or devices. CTE learners 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.

Secondary Courses for High School Credit

Level 1

- Principles of Applied Engineering

Level 2

- Robotics I

Level 3

- Engineering Design and Presentation I
- Robotics II

Level 4

- Career Preparation I



Postsecondary Opportunities

Associates Degrees

- Electromechanical Engineering/Technology
- Certified Quality Technician
- Industrial Mechanics and Maintenance Technology

Bachelor's Degrees

- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

Master's, Doctoral, and Professional Degrees

- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

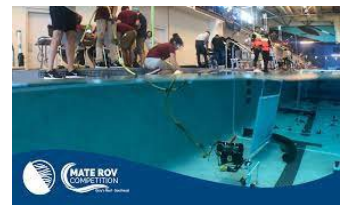
Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in VEX Robotics Competitions and MATE underwater robotics

Work-Based Learning Activities

- Work at a local business or industry apprenticeship
- Join the American Welding Society



- Industrial Technology Maintenance (ITM) - Electronic Control Systems*
- ISCET Certified Electronics Technicians*
- Mastercam Associate Certification Mill Design and Toolpaths*
- Mastercam Certified Professional Mill Level 1*
- Mastercam Professional Level Certification*
- OSHA 30 Hour General*

*IBC sunseting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Electro-Mechanical Assemblers	\$30,160	951	9%
Electro-Mechanical Technicians	\$56,555	127	9%
Industrial Machinery Mechanics	\$49,816	3,788	27%

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

Revised – August 2022

Advanced Manufacturing and Machinery Mechanics Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Principles of Applied Engineering	13036200	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Robotics I	13037000	None	1	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Engineering Design and Presentation I	13036500	Algebra I	1	\$0
Robotics II	13037050	Robotics I	1	\$0

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Career Preparation I	12701300 12701305	None	2 3	\$0

FOR ADDITIONAL INFORMATION ON THE MANUFACTURING CAREER CLUSTER,
PLEASE CONTACT: CTE@dickinsonisd.org or visit our webpage at: <https://www.dickinsonisd.org/page/ct.home>

Science, Technology, Engineering, and Mathematics Career Cluster

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.

Engineering Statewide Program of Study



The Engineering program of study focuses on the design, development, and use of engines, machines, and structures. CTE learners will learn how to apply science, mathematical methods, and empirical evidence to the innovation, design, construction, operation, and maintenance of different manufacturing systems.

Secondary Courses for High School Credit

Level 1

- Introduction to Engineering Design (PLTW)

Level 2

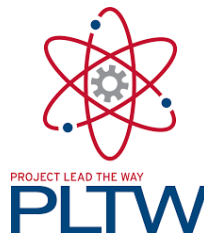
- Engineering Science

Level 3

- Engineering Design and Presentation I
- Aerospace Engineering (PLTW)

Level 4

- Engineering Design and Presentation II
- Practicum in STEM



Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Skills USA competitions

Work-Based Learning Activities

- Intern at an engineering firm
- Shadow a machinist

Industry-Based Certifications

- Autodesk Associate (Certified User) & Professional Fusion 360
- Autodesk Certified User & Professional in Inventor

- Certified SOLIDWORKS Associate*
*IBC sunsetting 8/31/24



Postsecondary Opportunities

Associates Degrees

- Electrical and Electronics Engineering
- Drafting and Design Technology/ Technician, General
- Engineering Technology

Bachelor's Degrees

- Electrical and Electronics Engineering
- CAD/CADD Drafting and/or Design Technology/ Technician
- Bioengineering and Biomedical Engineering
- Construction Engineering Technology/ Technician

Master's, Doctoral, and Professional Degrees

- Electrical and Electronics Engineering
- Mechanical Engineering
- Bioengineering and Biomedical Engineering

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Aerospace Engineers	\$110,843	481	9%
Industrial Engineers	\$97,074	1,263	10%
Mechanical Engineers	\$91,107	1,535	11%
Chemical Engineers	\$112,819	474	9%
Electrical Engineers	\$98,405	1,137	105%

Successful completion of the Engineering program of study will fulfill requirements of the Business and Industry or STEM endorsement if the math and science requirements are met. Revised – November 2022



Engineering Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEES
Introduction to Engineering Design (PLTW)	N1303742	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEES
Engineering Science	13037500	Algebra I, Biology, Chemistry and either Integrated Physics (IPC) or Physics	1	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEES
Engineering Design and Presentation I	13036500	Algebra I	1	\$0
Aerospace Engineering (PLTW)	N1303745	None	1	\$0

Level 4

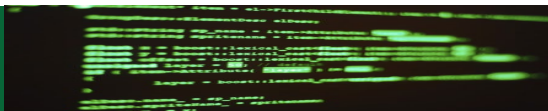
COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEES
Engineering Design and Presentation II	13036600	Algebra I and Geometry	2	\$0
Practicum in Science, Technology, Engineering, and Mathematics	13037400 13037410	Algebra I and Geometry	2	\$0

FOR ADDITIONAL INFORMATION ON THE SCIENCE, TECHNOLOGY, ENGINEERING AND MATH CAREER CLUSTER, PLEASE CONTACT: CTE@dickinsonisd.org or visit our webpage at: <https://www.dickinsonisd.org/page/ct.home>

Science, Technology, Engineering, and Mathematics Career Cluster

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.

Programming and Software Development Statewide Program of Study



The Programming and Software Development program of study explores the occupations and education opportunities associated with researching, designing, developing, and testing operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computer applications. This program of study may also include exploration into creating, modifying, and testing the codes, forms, and script that allow computer applications to run.

Secondary Courses for High School Credit

Level 1

- Fundamentals of Computer Science

Level 2

- Computer Science I

Level 3

- Computer Science II

Level 4

- Practicum in Science, Technology, Engineering, and Mathematics

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Join TSA
- Participate in coding club at school

Work-Based Learning Activities

- Obtain an industry-based certification

Industry-Based Certifications

- Certified Entry-Level Python Programmer (PCEP)



Postsecondary Opportunities

Associates Degrees

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

Bachelor's Degrees

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

Master's, Doctoral, and Professional Degrees

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

Aligned Occupations

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

Successful completion of the Programming and Software Development program of study will fulfill requirements of the Business and Industry endorsement and STEM endorsement if the math and science requirements are met. Revised – August 2022

Programming and Software Development Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEES
Fundamentals of Computer Science	03580140	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEES
Computer Science I	03580200	Algebra I	1	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEES
Computer Science II	03580300	Algebra I, Computer Science I, or Fundamentals of Computer Science	1	\$0

Level 4

Course Name \$\$	Service ID	PREREQUISITES	CREDITS	COURSE FEES
Practicum in Science, Technology, Engineering, and Mathematics	13037400 13037410	Algebra I and Geometry	2	\$0

FOR ADDITIONAL INFORMATION ON THE SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS CAREER CLUSTER, PLEASE CONTACT: CTE@dickinsonisd.org or visit our webpage at: <https://www.dickinsonisd.org/page/ct.home>

Transportation, Distribution, and Logistics Career Cluster

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.

Automotive Statewide Program of Study



The Automotive program of study teaches CTE learners how to repair and refinish automobiles and service various types of vehicles. CTE learners 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.

Secondary Courses for High School Credit

Level 1

- Automotive Basics

Level 2

- Automotive Technology I

Level 3

- Automotive Technology II/Lab

Level 4

- Practicum in Transportation Systems

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Join SkillsUSA or the Automotive Service Association

Work-Based Learning Activities

- Work at a local automotive repair or body shop

Industry-Based Certifications

- ASE Entry Level Automobile Maintenance and Light Repair (MR)
- ASE Entry-Level Automobile Brakes (BR)



Postsecondary Opportunities

Associates Degrees

- Autobody/ Collision and Repair Technology/ Technician
- Medium/Heavy Vehicle and Truck Technology/ Technician
- Mechanical Engineering/ Mechanical Technology/ Technician

Bachelor's Degrees

- Mechanical Engineering/ Mechanical Technology/ Technician

Master's, Doctoral, and Professional Degrees

- Mechanical Engineering

- OSHA 30 Hour General*
- ASE Suspension and Steering*
- ASE Structural Analysis Damage Repair*
- ASE Painting & Refinishing*
- ASE Non-Structural Analysis Damage Repair*
- ASE Mech Elec Components*
- ASE Manual Drive Train Axles*
- ASE Maintenance Light Repair*
- ASE Heating, Ventilation, AC (HVAC)*
- ASE Auto Transmission*
- ASE Automobile Service Technology*
- ASE Brakes*
- ASE Electrical/Electronic Systems*
- ASE Engine Performance*
- ASE Engine Repair*

*IBC sunseting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Automotive Body and Related Repairers	\$40,144	1,456	25%
Automotive Service Technician and Mechanics	\$38,459	5,557	18%

Successful completion of the Automotive program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Automotive Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Automotive Basics	13039550	None	1	\$0

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Automotive Technology I: Maintenance and Light Repair	13039600	None	2	\$0

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Automotive Technology II/Lab	13039700	Automotive Technology I: Maintenance and Light Repair	2	\$0

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	CREDITS	COURSE FEE
Practicum in Transportation Systems	13040450 13040460	Automotive Technology II/Lab	2	\$0

FOR ADDITIONAL INFORMATION ON THE TRANSPORTATION, DISTRIBUTION, AND LOGISTICS CAREER CLUSTER,
PLEASE CONTACT: CTE@dickinsonisd.org or visit our webpage at: <https://www.dickinsonisd.org/page/ct.home>

Career and Technical Education

Annual Public Notification of Nondiscrimination

Dickinson ISD offers career and technical education programs in Agriculture, Food and Natural Resources; Architecture and Construction; Arts, A/V Technology and Communications; Business Management and Administration; Education and Training; Finance; Government and Public Administration; Health Science; Human Services; Information Technology; Law, Public Safety, Corrections and Security; Manufacturing; Marketing; Science, Technology, Engineering and Mechanics; as well as Transportation, Distribution and Logistics. Admission to these programs is based on student interest, student needs and grade level requirements set by the Texas Education Agency.

It is the policy of Dickinson ISD not to discriminate on the basis of race, color, national origin, sex or handicap in its vocational programs, services or activities and provides equal access to the Boy Scouts and other designated youth groups as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended.

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

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

For information about your rights or grievance procedures, contact the Title IX Coordinator at rcobb@dickinsonisd.org, (281) 229-6000, and/or the Section 504 Coordinator lrodriguez@dickinsonisd.org, (281) 229-6000.

Career and Technical Education

Annual Public Notification of Nondiscrimination

El Distrito Escolar Independiente de Dickinson ofrece programas de educación técnica y vocacional en Agricultura; Alimentos y Recursos Naturales; Arquitectura y Construcción; Artes; Tecnología y Comunicaciones de Audio/Video; Gerencia y Administración de Empresas; Educación y Entrenamiento; Finanzas; Administración Pública y Gubernamental; Ciencia Médica; Servicios Humanos; Informática; Derecho; Seguridad Pública; Correcciones y Seguridad; Manufactura; Mercadeo; Ciencia, Tecnología, Ingeniería y Mecánica; así como también Transportación, Distribución y Logística. La admisión a estos programas se basa en necesidades del estudiante y requerimientos de nivel académico impuestos por la Agencia de Educación de Texas.

Es norma de Distrito Escolar Independiente de Dickinson no discriminar en sus procedimientos de empleo por motivos de raza, color, origen nacional, sexo, impedimento o edad, tal como lo requieren el Título VI de la Ley de Derechos Civiles de 1964, según enmienda; Título IX de las Enmiendas en la Educación, de 1972, la ley de Discriminación por Edad, de 1975, según enmienda; y la Sección 504 de la Ley de Rehabilitación de 1973, según enmienda.

Es norma de Distrito Escolar Independiente de Dickinson no discriminar en sus programas, servicios o actividades vocacionales por motivos de raza, color, origen nacional, sexo o impedimento, tal como lo requieren el Título VI de la Ley de Derechos Civil es de 1964, según enmienda; Título IX de las Enmiendas en la Educación de 1972, y la Sección 504 del a Ley de Rehabilitación de 1973, según enmienda.

Distrito Escolar Independiente de Dickinson tomará las medidas necesarias para asegurar que la falta de habilidad en el uso del inglés no sea un obstáculo para la admisión y participación en todos los programas educativos y vocacionales.

Para información sobre sus derechos o procedimientos de quejas, comuníquese con el Coordinador del Título IX en rcobb@dickinsonisd.org, (281) 229-6000, y/o el Coordinador de la Sección 504 en lrodriguez@dickinsonisd.org, (281) 229-6000.