



















# Career & Technical Education Information Page BISD Course Sequences:

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## Career and Technical Education

### What Are Programs of Study?

A program of study is a coordinated, non-duplicative sequence of academic and technical content provided at the secondary and post-secondary level that:

- Incorporates challenging state academic standards
- Addresses academic, technical, and employable skills
- Aligns with the needs of industries in the state, regional, and local economy
- Progresses in specificity, beginning with aspects of industry and leading to more occupation specific instruction.
- Has multiple entry and exit points that incorporate credentialing
- Students are recognized as a CTE completer upon the completion of three or more courses for four or more credits including one level 3 or level 4 course.
- Culminates in the attainment of a recognized postsecondary credential

## What Programs of Study are offered at BISD?

Programs of study are course sequences that prepare students with the knowledge and skills necessary for success in their chosen career. These sequences embed relevant, real-world experiences and culminate in a postsecondary credential. At BISD we offer the following programs of study:

Animal Science (Vet Tech)	Digital Communications	Applied Agricultural Engineering
Accounting & Financial Services	Rocketry Engineering	Environmental & Natural Resources
Culinary Arts	Business Management	Family and Community Services
Plant Science (Floral)	Entrepreneurship	Health and Wellness
Architectural Design*	Teaching and Training	Advanced Manufacturing & Machinery
Carpentry/Construction Electrical*	Welding	Refining and Chemical Process*
Graphic Design & Multimedia Arts	Healthcare Diagnostics	Cybersecurity
Printing and Imaging	Healthcare Therapeutic	PLTW Engineering
Cosmetology	Nursing Science	Automotive*

### \*Signifies Programs of Study Offered at Brazosport College

Suggested sequences are provided in the charts below to utilize as a reference when making schedule determinations. For more information concerning CTE Programs of Study, please refer to this CTE Exploration Guide or visit with your counselor. We also encourage you to visit the following sites for additional information on CTE and Programs of Study.

Texas Education Agency
O\*Net – My Next Move
Texas Workforce Commission
Occupational Outlook Handbook
Texas-Career Alternative Evaluation System
Texas CTE Resource Center

www.tea.state.tx.us www.mynextmove.org/ www.twc.state.tx.us www.bls.gov/oco www.txcte.org

# **BISD Course Sequences**

Programs of Study	9 <sup>th</sup> Year	10 <sup>th</sup> Year	11 <sup>th</sup> Year	12 <sup>th</sup> Year	Campus
Accounting & Financial Services	Business Information Management I	Accounting I or Financial Math	Accounting I or Financial Math	Practicum in Business or Career Prep (2)	BW, BP
Advanced Manufacturing & Machinery Mechanics (Robotics)	Introduction to Engineering Design	Robotics I	Robotics II	Robotics III or Career Prep (2)	BW, BP
Animal Science (Vet Tech)	Principles of Agriculture	Livestock Production	Vet Med	Practicum in Agriculture & Advanced Animal Science (2)	BW, BP
Applied Agricultura Engineering (Ag Mech)	Principles of Agriculture	Agricultural Mechanics & Metal Technologies	Agricultural Structures Design & Fabrications	Practicum in Agriculture (2)	BW, BP
Business Management	Business Information Management I	Business Information Management II	Business Management	Practicum in Business or Career Prep (2)	BW, BP
Carpentry (Construction)	Principles of Construction	Construction Technology I (2)	Construction Technology II (2)	Practicum in Construction or Career Prep (2)	BW, BP
Cosmetology and Personal Care Services	Principles of Cosmetology Design and Color Theory	Intro to Cosmetology (1) &/ or Nail Care, Enhancements, and Spa Services (2), and/or Esthetics (2)	Cosmetology I (3)/Lab or Barbering I (3)	Cosmetology II (3)/Lab or Barbering II (3)	ВР
Culinary Arts	Introduction to Culinary Arts	Culinary Arts (2)	Advanced CulinaryArts (2)	Practicum in Culinary Arts or Career Prep (2)	BW,BP
Cybersecurity	Fundamentals of Computer Science (PLTW)	AP Computer Science Principles (PLTW)	AP Computer Science A-Math or (PLTW) AP Computer Science B- LOTE		BW,BP
Graphic Design and Multimedia Arts (Graphic Design & Photography)	Principles of Arts, A/V, Technology, & Communication	Graphic Design & Illustration I (2) or Commercial Photography I	Graphic Design & Illustration II (2) or Commercial Photography II	Practicum in Graphic Design & Illustration or Practicum in Commercial Photography or Career Prep (2)	BW, BP

Digital Communications (Audio/Video)	Principles of Arts, A/V Technology, & Communications	Audio/Video Production/ Lab (1 or 2)	Audio/Video Production II/ Lab (1 or 2)	Practicum in Audio/Video Production (2)	BW, BP
Engineering (Rockets & PLTW Engineering)	Introduction to Engineering Design (PLTW)	Engineering Science or Rockets I	Digital Electronics or Rockets II	Engineering Design 8 Development (PLTW) or Practicum STEM (Rockets III) (2	in BW
Entrepreneurship	Business Information Management I	Entrepreneurship		Practicum in Business or Career Prep (2)	BW, BP
Environmental & Natural Resources (Wildlife)	Principles of Agriculture, Food, & Natural Resources	Wildlife, Fisheries, & Ecology	Livestock Production	Practicum in Agriculture (2)	BW, BP
Family & Community Services (PALS)	Principles of Human Services or Professional Communications	Lifetime Nutrition & Wellness	Human Growth & Development	Practicum in Human Services or Career Prep (2)	BW, BP
Health & Wellness	Principles of Human Services	Lifetime Nutrition & Wellness	Human Growth & Development	Practicum in Human Services or Career Prep (2)	BW, BP
Healthcare Diagnostics	Medical Terminology	Principles of Health Science	Health Science Theory (1 or 2) &/or Medical Microbiology	Anatomy & Physiology &/or Pathophysiology &/ or Practicum in Health Science (2)	BW, BP
Healthcare Therapeutic	Medical Terminology	Principles of Health Science	Anatomy & Physiology &/or Health Science Theory (1 or 2) &/ or Medical Microbiology	Pathophysiology &/or Practicum in Health Science (2)	BW, BP
Networking Systems	Principles of Information Technology	Computer Maintenance	Networking	Practicum in Information Technology (2)	BW
Nursing Science	Medical Terminology	Principles of Health Science	Medical Microbiology and/ or Anatomy & Physiology	Pathophysiology	BW, BP
Plant Science (Floral)	Principles of Agriculture, Food, & Natural Resources	Floral Design	Advanced Floral Design	Practicum in Agriculture (2)	BW, BP

Printing & Imaging (Yearbook)	Principles of Arts, A/V Technology, & Communications	Printing & Imaging Technology I/Lab	Printing & Imaging Technology II/Lab	Practicum in Printing & Imaging Technology (2)	BW, BP
Teaching & Training	Principles of Education & Training or Principles of Human Services	Human Growth & Development	Instructional Practices	Practicum in Education & Training or Career Prep (2)	BW, BP
Welding	Introduction to Welding	Welding I (2)	Welding II (2)	Practicum in Manufacturing or Career Prep (2)	BW, BP

## Campus

- BW-Brazoswood High School
- BP- Brazosport High School

## **Brazosport College Course Sequences**

Architectural Design		Architectural Design I	Architectural Design	Architectural Design or Career Prep (2)
Automotive		Automotive Technology I	Automotive Technology II	
Electrical	Principles of Construction	Electrical Technology I	Electrical Technology II	Practicum in Construction Technology or Career Prep (2)

# 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.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Agriculture, Food, and Natural Resources	13000200/8010 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Agricultural Mechanics and Metal Technologies	13002200/8050 (1 credit)	Principles of Agriculture, Food, and Natural Resources

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Agricultural Structures Design and Fabrication	13002300/8051 (1 credit)	Agricultural Mechanics and Metal Technologies

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Agriculture, Food, and Natural Resources	13002500/8058 (2 credits)	Advanced Floral Design, Veterinary Applications, Livestock Production, or Ag Structures

# Industry Based Certifications AWS SENSE Level 1: Entry Welder

 $\label{eq:formation} FOR\ ADDITIONAL\ INFORMATION\,, \\ PLEASE\ CONTACT:\ amy.pope@brazosportisd.net$ 

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# Agriculture, Food, and Natural Resources Career Cluster

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## **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.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Agriculture, Food, and Natural Resources	13000200/8010 (1 credit)	None

#### Level 3

COURSE NAME	SERVICE /COURSE ID	PREREQUISITES
Livestock Production	13000300/8015 (1 credit)	Principles of Agriculture, Food, and Natural Resources

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Advanced Animal Science	13000700/8017 (1 credit)	Biology, Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; Livestock Production
Veterinary Medical Applications	13000600/8027 (1 credit)	Livestock Production
Practicum in Agriculture, Food, and Natural Resources	13002500/8058 (2 credits)	Advanced Floral Design, Veterinary Medical Applications, Livestock Production, or Ag Mechanics

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

Certified Veterinary Assistant, Level 1
Elanco Fundamentals of Animal Science Certification
Elanco Veterinary Medical Applications Certification
Equine Management & Evaluation Certification

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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.

# **Environmental and Natural Resources** *Statewide Program of Study*





The Environmental and Natural Resources program of study explores the occupations and educational opportunities associated with the research, design, and planning of engineering or technical duties in the prevention and control of environmental hazards. This program of study may also include exploration into conducting research for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or the health of the population.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Agriculture, Food, and Natural Resources	13000200/8010 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Wildlife, Fisheries, and Ecology Management	13001500/8085 (1 credit)	Principle of Agriculture, Food, and Natural Resources

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Agriculture, Food, and Natural Resources	13002500/8058 (2 credits)	Advanced Floral Design, Veterinary Medical Application, Livestock, Production, or Ag Mechanics

### **Industry-Based Certifications**

**Ducks Unlimited Ecology Conservation & Management** 

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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.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Agriculture, Food, and Natural Resources	13000200/8010 (1 credit)	None

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Floral Design	13001800/8040 (1 credit)	Principles of Agriculture, Food, and Natural Resources

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum of Agriculture, Food, and Natural Resources	13002500/8058 (2 credits)	Advanced Floral Design, Veterinary Medical Applications, Livestock Production, or Ag Mechanics
Advanced Floral Design	N1300270/8041 (1 credit)	Floral Design

### **Industry-Based Certifications**

Texas State Florist's Association Knowledge Based Floral Certification Texas States Florist's Association Level I Floral Certification Texas State Florist's Association Level II Floral Certification

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## **Architecture and Construction Career Cluster**

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

Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

# Carpentry Statewide Program of Study





The Carpentry program of study explores the occupations and educational opportunities related to constructing, installing, or repairing structures and fixtures made of wood, such as concrete forms (including frameworks, partitions, joists, studding, rafters, and stairways). This program of study may also include exploration into installing, dismantling, or moving machinery and heavy equipment according to layout plans, blueprints, or other drawings.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Construction	13004220/8060 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Construction Technology I	13005100/8080 (2 credit)	Principles of Construction

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Construction Technology II	13005200/8085 (2 credit)	Construction Technology I

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Construction Technology	13005250/8145 (2 credits)	Construction Technology II

## **Industry-Based Certifications**

NCCER Carpentry Level I NCCER Core

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# Graphic Design & Multimedia Arts Course Information

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.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Arts, A/V Technology, & Communications	13008200/8266 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Graphic Design and Illustration I/Lab	13008810/8128 (2 credits)	Principles of Arts, A/V Technology, & Communications
Commercial Photography I	13009100/5970 (1 credit)	Principles of Arts, A/V Technology, & Communications or Journalism

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Graphic Design and Illustration II/Lab	13008910/8129 (2 credits)	Graphic Design and Illustration I
Commercial Photography II	13009200/5971 (1 credit)	Commercial Photography I

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES (PREQ)
Practicum in Graphic Design and Illustration	13009000/8269 (2 credits)	Graphic Design and Illustration II/Lab
Practicum in Commercial Photography	13009250/5972 (2 credits)	Commercial Photography II

#### **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

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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.

# **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.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Arts, A/V Technology, and Communications	13008200/8266 (1 credit)	None
Professional Communication	13009900/5705 (.5 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Audio/Video Production I	13008500/8263 (1 credit)	Principles of Arts, A/V
Audio/Video Production I/Lab	13008510/8265 (2 credits)	Technology, and Communications

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Audio/Video Production II Audio/Video Production II/Lab	13008600/8125 (1 credit) 13008610/8126 (2 credits)	Audio/Video Production I

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Audio/Video Production	13008700/8267 (2 credits)	Audio/Video Production II

### **Industry-Based Certifications**

Adobe Certified Professional in Print and Digital Media Publication Using Adobe InDesign Adobe Certified Professional in Visual Design Using Adobe Photoshop

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# **Printing and Imaging**Statewide Program of Study



The Printing and Imagine regional program of study introduces CTE learners to knowledge and skills related to providing printing and imaging services. CTE learners may learn about or practice the foundations of business management, customer service, graphic design, graphic production and large format printing.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Graphic Design and Illustration I/Lab	13008810/8128 (2 credits)	Principles of Arts, A/V, Technology and Communication
Level 2		

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Printing and Imaging Technology I	13009600/5911 (1 credit)	Recommended: Journalism, Commercial Photography, or Principles of Arts, A/V Technology and Communication

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Printing and Imaging Technology II	13009700/5921 (1 credit)	Printing and Imaging Technology I

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Printing and Imaging Technology	13009800/5931 (2 credits)	Printing and Imaging Technology II/Lab

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

Adobe Certified Professional in Print and Digital Media Publication Using Adobe InDesign Adobe Certified Professional in Visual Design Using Adobe Photoshop

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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, 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.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Business Information Management I	13011400/8160 (1 credit)	None

### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Accounting I	13016600/8170 (1 credit)	BIM I
Financial Mathematics	13018000/8171(1 credit)	Algebra I

### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Business Management	13012200/8174 (2 credits)	BIM II, Accounting I, orEntrepreneurship
Career Preparation I	12701300 /8000(2 credits)	Interest Form Required

## **Industry-Based Certifications**

Accounting - Basic Accounting Foundations

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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.

## **Business Management** Statewide Program of Study





The Business Management program of study teaches CTE learners 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

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Business Information Management I	13011400/8160(1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Business Information Management II	13011500/8164 (1 credit)	Business Information Management I

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Business Management	13012100/8171 (1 credit)	BIM I and BIM II

### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Business Management	13012200/8174(2 credits)	Business Information II, Accounting I, or Entrepreneurship
Career Preparation I	12701300/8000 (2 credits)	Interest Form Required

### **Industry-Based Certifications**

Administrative Assisting
Project Management Institute (PMI) Project Management Ready

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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.

# **Entrepreneurship**Statewide Program of Study





The Entrepreneurship program of study teaches CTE learners how to plan, direct, and coordinate the management and operations of public or private sector organizations. Through this program of study, students will learn the skills necessary to formulate policies, manage daily operations, analyze management structures, and plan for the use of materials and human resources.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Business Information Management I	13011400/8160 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Entrepreneurship	13034400/8376 (1 credit)	BIM I

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Business Management	13012200/8174 (2 credits)	BIM II, Accounting I, or Entrepreneurship
Career Preparation I	12701300/8000 (2 credits)	Interest Form Required

### **Industry-Based Certifications**

**Entrepreneurship and Small Business** 

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## **Education and Training Career Cluster**

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

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





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

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Education and Training	13014200/8228 (1 credit)	None
Principles of Human Services	13024200/0902J (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Human Growth and Development	13014300/8235 (1 credit)	Principles of Education and Training or Principles of Human Services

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Instructional Practices	13014400/8240 (2 credits)	Human Growth and Development

### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Education and Training	13014500/8241 (2 credits)	Instructional Practices

# Industry-Based Certifications Educational Aide I

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## **Health Science Career Cluster**

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

## Healthcare 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 associate with blood laboratories as well as radiologic technology and ultrasound technology.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Health Science	13020200/8200 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Medical Terminology	13020300/8205 (1 credit)	None

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Health Science Theory Health Science Clinical	13020400/8210 (1 credit) 13020410/8211 (2 credits)	Principles of Health Science and Biology
Medical Microbiology	13020700/8213 (1 credit)	Biology and Chemistry, Principles of Health Science and/or Medical Terminology

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Anatomy and Physiology	13020600/2960 (1 credit)	Biology and Chemistry
Pathophysiology	13020800/8214 (1 credit)	Biology and Chemistry, Principles of Health Science and/or Medical Terminology
Practicum in Health Science	13020500/8215 (2 credits)	Health Science Theory

### **Industry-Based Certifications**

Certified Clinical Medial Assistant Certified EKG Technician Emergency Medical Technician – Basic

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## **Health Science Career Cluster**

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## **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.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Health Science	13020200/8200 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Medical Terminology	13020300/8205 (1 credit)	None

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Anatomy and Physiology	13020600/2960 (1 credit)	Biology and Chemistry
Health Science Theory/ Health Science Clinical	13020400/8210 (1 credit) 13020410/8211 (2 credits)	Principles of Health Science and Biology
Medical Microbiology	13020700/8213 (1 credit)	Biology and Chemistry, Principles of Health Science and/or Medical Terminology

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Pathophysiology	13020800/8214 (1 credit)	Biology and Chemistry
Practicum in Health Science	13020500/8215 (2 credits)	Health Science Theory and Biology

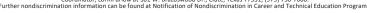
#### **Industry-Based Certifications**

Certified Clinical Medial Assistant Certified Dental Assistant Certified EKG Technician Emergency Medical Technician – Basic Certified Patience Care Technician (CPCT) Medical Laboratory Assistant Pharmacy Technician Phlebotomy Technician

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Further nondiscrimination information can be found at Notification of Nondiscrimination in Career and Technical Education Programs.





## **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.

# Nursing Science Statewide Program of Study





The Nursing Science program of study introduces students to the knowledge and skills related to patient care. CTE learners may learn about or practice caring for patients, routine procedures such as monitoring vital signs, development and implementation of care plans, maintenance of medical records, and disease or pain management. Students may focus on the healthcare system and research system designs and make recommended modifications.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Health Science	13020200/8200 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Medical Terminology	13020300/8205 (1 credit)	None

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Medical Microbiology	13020700 /8213(1 credit)	Biology and Chemistry, Principles of Health Science and/or Medical Terminology
Anatomy and Physiology	13020600/2960 (1 credit)	Biology and Chemistry

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Pathophysiology	13020800/8214 (1 credit)	Biology and Chemistry, Principles of Health Science and/or Medical Terminology

### **Industry-Based Certifications**

Certified Clinical Medial Assistant Certified Patient Care Technician (CPCT) Patient Care Technician Phlebotomy Technician

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## **Hospitality and Tourism Career Cluster**

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

# Culinary Arts Statewide Program of Study





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

#### Level 1

react 1		
COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Introduction to Culinary Arts	13022550/8219 (1 credit)	None
Level 2		
COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Culinary Arts	N1302268/8220 (1 credit)	Introduction to Culinary Arts
Level 3		
COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Advanced Culinary Arts	13022650/8222 (2 credits)	Culinary Arts
Level 4		
COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Culinary Arts	13022700/8221 (2 credits)	Advanced Culinary Arts

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

ServSafe Manager

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## **Human Services Career Cluster**

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

# Cosmetology and Personal Care Services Regional Program of Study





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

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Cosmetology Design and Color Theory	13025050/8500 (1 credit)	None

#### Level 2

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COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Introduction to Cosmetology	13025100 (1 credit)	None
Nail Care, Enhancements, and Spa Services	N1302531 (2 credits)	None
Esthetics	N1302533 (2 credits)	None

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Cosmetology I/Lab	13025200 (2 credits)	None
Barbering I	N1302534 (3 credits)	None

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Cosmetology II/Lab	13025300 (2 credits) 13025310 (3 credits)	Cosmetology I
Barbering II	N1302535 (3 credits)	Barbering I

### Industry-Based Certifications

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

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## **Human Services Career Cluster**

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

# Family and Community Services Statewide Program of Study





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

### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Human Services	13024200/0902J (1 credit)	None
Professional Communications	13009900/0780J (.5 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Lifetime Nutrition and Wellness	13024500/901J (.5 credit)	None
Human Growth and Development	13014300/8235(1 credit)	Principles of Education and Training or Principles of Human Services

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Human Services (PALS III)	13025000/9521 (2 credits)	PALS I and PALS II

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

Community Health Workers Child Development Associate

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## **Human Services Career Cluster**

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

## Health and Wellness Statewide Program of Study





The Health and Wellness program of study introduces students to knowledge and skills related to promoting physical, emotional, social, and mental health and wellness. Students who choose this program of study may learn how to assist patients in planning for their health and wellness, respond to crises, and advise, provide education or counseling, or make referrals. CTE learners may also focus on addressing barriers to access health and wellness services.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Human Services	13024200/0902J (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Lifetime Nutrition and Wellness	13024500/0901J (.5 credit)	None
Human Growth and Development	13014300/8235 (1 credit)	Principles of Education and Training or Principles of Human Services

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Human Services (PALS III)	13025000/9521 (2 credits)	PALS I and PALS II

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

Community Health Workers
Pre-Professional Certification in Nutrition, Food, and Wellness

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## **Information Technology Career Cluster**

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.

# Networking Systems Statewide Program of Study





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.

#### Level 1

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COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Principles of Information Technology	13027200/6260 (1 credit)	None
Level 2		
COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Computer Maintenance	13027300/6261 (1 credit)	Principles of Information Technology
Level 3		
COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Networking	13027400/6262 (1 credit)	Computer Maintenance
Level 4		

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Information Technology	13028000/6263 (2 credits)	Minimum of two high school Information Technology (IT) courses

### **Industry-Based Certifications**

CompTIA A+ Certification CompTIA Network+

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## **Manufacturing Career Cluster**

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

# 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.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Introduction to Engineering Design (PLTW)	N1303742/8387 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Robotics I	13037000/8400 (1 credit)	Introduction to Engineering Design (PLTW)

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Robotics II	13037050/8401 (1 credit)	Robotics I

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Manufacturing (Robotics III)	13033000/2941 (2 credits)	Robotics II

### **Industry-Based Certifications**

C-101 Certified Industry 4.0 Associate - Basic Operations

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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



## **Manufacturing Career Cluster**

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

# **Welding**Statewide Program of Study





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

### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Introduction to Welding	13032250/8329 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Welding I	13032300 /8330(2 credits)	Intro to Welding and/or Agricultural Mechanics & Metal Technology

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Welding II	13032400/8340 (2 credits)	Welding I

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Practicum in Manufacturing (Welding)	13033000/8350 (2 credits)	Welding II

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

AWS D1.1 Structural Steel
AWS D9.1 Sheet Metal Welding
Industrial Technology Maintenance (ITM) - Maintenance
Welding NCCER Core
NCCER Welding Level I

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## 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.

## **Cybersecurity** Statewide Program of Study





The Cybersecurity program of study includes the occupations and educational opportunities related to planning, implementing, upgrading, or monitoring security measure for the protection of computer networks and information. This program of study may also include exploration into responding to computer security breaches and virus and administering network security measures.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Computer Science Essentials (Fundamentals of Computer Science-PLTW)	03580140 /6256 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
AP Computer Science Principles	A3580300/6257 (1 credit)	Computer Science Essentials (Fundamentals of Computer Science-PLTW)

#### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
AP Computer Science A-Math	A3580110/6258 (1 credit)	PLTW AP Computer Science Principles or Algebra II or Algebra II Concurrent

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Cybersecurity Capstone	03580855/6259 (1 credit)	PLTW - AP computer Science A

### **Industry-Based Certifications**

Cisco 200-201 CBROPS - Understanding Cisco Cybersecurity Operations Fundamentals

CompTIA A+ Certification

CompTIA Network+

CompTIA Security+

Cybersecurity Fundamentals

CyberSecurity Fundamentals: An ISACA Certificate

Oracle Certified Associate Java SE 8 Programmer

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# 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.

#### Level 1

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Introduction to Engineering Design (PLTW)	N1303742/8387 (1 credit)	None

#### Level 2

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Digital Electronics	131037600/8391 (1 credit)	Algebra I, Geometry Intro to Engineering Design (PLTW) Principles of Engineering
Principles of Engineering (PLTW)- Engineering Science	13037500/8390 (1 credit)	Algebra I, Biology, Intro to Engineering Design (PLTW)

### Level 3

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Engineering Design and Development (PLTW)	N1303749/8392 (1 credit)	Digital Electronics

#### Level 4

COURSE NAME	SERVICE/COURSE ID	PREREQUISITES
Engineering Design and Problem Solving (Rockets 2)	13037300 (1 credit)	Rockets 1
Practicum in Science, Technology, Engineering, and Mathematics (Rockets 3)	13037400 (2 credits)	Algebra I, Geometry, Rockets 2
Scientific Research & Design (Rockets 1)	13037200/2950 (1 credit)	Introduction to Engineering Design (PLTW)  Concurrent enrollment in Algebra 1, Biology, Chemistry and either Integrated Physics (IPC) or Physics

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

Autodesk Associate (Certified User) Fusion 360

FOR ADDITIONAL INFORMATION, PLEASE CONTACT: amy.pope@brazosportisd.net

Brazosport ISD does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquirines regarding the nondiscrimination policies: Title IX Coordinator, Robin Pelton at 301 W. Brazoswood Dr., Clute, Texas 77531, (979) 730-7000 and/or the Section 504 Coordinator, Lorin Furlow at 301 W. Brazoswood Dr., Clute, Texas 77531, (979) 730-7000.

Further nondiscrimination information can be found at Notification of Nondiscrimination in Career and Technical Education Programs.



## **Career and Technical Education Staff:**

Amy Pope, Director of Career and Technical Education and Fine Arts

Inga Gibbons, Career and Technical Education Coordinator

Owen Dickson, Career and Technical Education Specialist

Judy Arredondo, Career and Technical Education Administrative Assistant

#### Continuous Notification of Nondiscrimination

As a sub recipient of funds local education agencies [LEA] must take continuous steps to notify participants, beneficiaries, applicants, parents, employees (including persons with visual or auditory impairments), other interested parties, and unions or professional organizations holding collective bargaining or professional agreements with the LEA or campus that it does not discriminate on the basis of race, color, national origin, sex, disability, or age. A statement of nondiscrimination shall be included on publications and other materials that are distributed to or accessible by students, parents, applicants, beneficiaries, employees, unions, or professional organizations holding collective bargaining or professional agreements with the district and other interested parties.

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Brazosport ISD no discrimina por motivos de raza, color, origen nacional, sexo, discapacidad o edad en sus programas o actividades y brinda igualdad de acceso a los Boy Scouts y otros grupos juveniles designados. La siguiente persona ha sido designada para manejar consultas sobre las políticas de no discriminación: Title IX Coordinator, Robin Pelton at 301 Brazoswood Dr, Clute, Texas 77531, 979-730-7000 and/or the Section 504 Coordinator, Lorin Furlow at 301 W. Brazoswood Dr, Clute, Texas 77531, 979-730-7000.

<sup>\*\*</sup>NOTE: The Brazosport ISD CTE Exploration Guide is updated online periodically to reflect adjustments in local, state, and federal policies. The information in the current online planning guide supersedes any information shared in printed material or previous online versions.