Schertz-Cibolo-Universal City ISD
Career and Technical Education
Course Sequences

Version 11-12-19

Career & Technical Education Department
200 W Schlather
Cibolo, Texas 78108

MISSION

In support of the SCUCISD Mission and the TEA State Plan for Career and Technical Education, SCUCISD Career and Technical Education (CTE) department embraces quality instructional practices and works to develop and expand college and industry partnerships to prepare all students for post-secondary education and success in a challenging, globally competitive workforce.

2019-2020 Public Notification of Nondiscrimination in Career and Technical Education Programs

Schertz Cibolo Universal City ISD offers support to school district for career and technical education programs in Agriculture, Food, and Natural Resources; Architecture and Construction; Arts, Audio/Video Technology, and Communications; Business Management and Administration; Education and Training; Finance; Health Science; Hospitality and Tourism; Human Services; Information Technology; Law, Public Safety, Corrections, and Security; Marketing; and Science, Technology, Engineering, and Mathematics. Admission to these programs is based on enrollment in Schertz Cibolo Universal secondary schools.

It is the policy of Schertz Cibolo Universal not to discriminate on the basis of race, color, national origin, sex or handicap in its CTE programs, services or activities as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended.

It is the policy of Schertz Cibolo Universal 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.

Schertz Cibolo Universal will take steps to assure that lack of English language skills will not be a barrier to admission and participation in all educational and CTE programs.

For information about your rights or grievance procedures, contact the Title IX Coordinator, Linda Cannon, and/or the Section 504 Coordinator, Windi Hughes, at 1060 Elbel Rd, Schertz, TX 78154, (210) 945-6200.

Schertz Cibolo Universal ofrece programas vocacionales en Agriculture, Food, and Natural Resources; Architecture and Construction; Arts, Audio/Video Technology, and Communications; Business Management and Administration; Education and Training; Finance; Health Science; Hospitality and Tourism; Human Services; Information Technology; Law, Public Safety, Corrections, and Security; Marketing; and Science, Technology, Engineering, and Mathematics. La admisión a estos programas se basa en ESC-20 número de estudiantes en secundaria.

Es norma de Schertz Cibolo Universal no discriminar por motivos de raza, color, origen nacional, sexo o impedimento, en sus programas, servicios o actividades de CTE, tal como lo requieren el Título VI de la Ley de Derechos Civiles de 1964, según enmienda; el Título IX de las Enmiendas en la Educación, de 1972, y la Sección 504 de la Ley de Rehabilitación de 1973, según enmienda.

Es norma de Schertz Cibolo Universal no discriminar por motivos de raza, color, origen nacional, sexo, impedimento o edad, en sus procedimientos de empleo, tal como lo requieren el Título VI de la Ley de Derechos Civiles de 1964, según enmienda; el 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.

Schertz Cibolo Universal 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 CTE.

Para información sobre sus derechos o procedimientos para quejas, comuníquese con el Coordinador del Título IX, Linda Cannon, y/o el Coordinador de la Sección 504, Windi Hughes, en 1060 Elbel Rd, Schertz, TX 78154, (210) 945-6200.

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Career and Technical Education

- Organized educational activities that offer a sequence of courses that provide individuals with the academic and technical knowledge and skills needed to prepare for further education and for careers in current or emerging employment sectors.
- Fulfill employer needs in high-skill, high-wage, and high-demand areas for tomorrow's workforce.
- Competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical, and occupation-specific skills.
- Student preparedness for college and career readiness.

ACTE—Association for Career and Technical Education

Career and Technical Education Student Organizations (CTSO) and CTE Extra-Curricular Organizations

Students are encouraged to participate in extended learning experiences in all course pathways offered in Schertz-Cibolo-Universal City ISD. There are Career and Technical Student Organizations (CTSOs) and other leadership or extra-curricular organizations. See your CTE Teacher for opportunities available in your career pathway.

- Business Professionals of America (BPA)
- Texas DECA (DECA)
- Skills USA Texas
- Health Occupations Students of America (HOSA)
- Family, Career and Community Leaders of America (FCCLA)
- Texas FFA Association (FFA)
- Texas Public Service Association (TPSA)
- Texas Association of Future Educators (TAFE)
- Cyber Patriots (CTE Extra-Curricular)

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Schertz-Cibolo-Universal City ISD Endorsement Options

Business and Industry Endorsement (See 4-yr plans in this booklet)

- Agriculture, Food & Natural Resources
- Architecture and Construction
- Arts, Audio/Video Technology and Communications
- Business Marketing, and Finance
- Hospitality and Tourism
- Information Technology
- Manufacturing
- Journalism & Communication: You must successfully complete four English elective credits, three of which must come from one of the following course areas: Advanced Journalism Newspaper, Advanced Journalism Yearbook, Public Speaking, OR Debate.

Public Service Endorsement (See 4-yr plans in this booklet)

- Education & Training
- Human Services
- Health Science
- Law, Public Safety, Corrections & Security
- ROTC

Science, Technology, Engineering and Math (STEM) Endorsement (See the STEM 4-yr plan in this booklet. Also, you can choice from the following)

- **Option 1:** ADVACNED MATH— (5) Math courses including Algebra I, Geometry, Algebra II and 2 or more advanced math courses. Math Models will NOT count as one of the 5 math courses.
- **Option 2:** ADVANCED SCIENCE— (5) Science courses including Biology, Chemistry, Physics and 2 or more advanced science courses

Arts & Humanities Endorsement (Choose from the following)

ARTS AND HUMANITIES
4 credits in a coherent sequence unless otherwise stated

Area of Interest	9th Grade	10th Grade	11th Grade/12th Grade Students must meet all pre-requisites	
Social Studies	-World Geography -World History -AP Human Geography	-World Geography -World History -AP Human Geography -Psychology -AP Psychology -Sociology	-World Geography -World History -AP Human Geography -Psychology -AP Psychology	-Sociology -U.S. Government -Texas Government -Economics
	You must successfully complete 5 credits of social studies courses. These courses may be at the regular, Pre-AP, AP, Dual Credit, or IB levels. Note that U.S. History must be taken during the junior year and U.S. Government and Economics must be taken during the senior year.			
Fine Arts	-Fine Arts Level 1A	-Fine Arts Level 2A	-Fine Arts Level 3A	-Fine Arts Level 4A
	-Fine Arts Level 1A	-Fine Arts Level 2A	-Fine Arts Level 1B	-Fine Arts Level 2B
English	You must successfully complete 4 credits from the courses listed: English IV AP English III English IV Dual Credit AP English IV Literary Genres IB Language A1 HL Creative Writing Independent Study in English			
Languages Other Than English (LOTE)	-LOTE Level 1	-LOTE Level 2 (same language)	-LOTE Level 3 (same language)	-LOTE Level 4 (same language)
	-LOTE A - Level 1	-LOTE A - Level 2 (same language)	LOTE B – Level 1	LOTE B – Level 2 (same language)

Multidisciplinary Studies Endorsement (Choose from the following)

MULTIDISCIPLINARY
Requirements are stated below.

Area of Interest	9th Grade	10th Grade	11th Grade	12th Grade
Advanced Academics	You must successfully complete the Foundation curriculum **INCLUDING** 4 AP, and/or Dual Credit credits from English, math, science, social studies, and languages other than English OR fine arts.			
International Baccalaureate (IB – Clemens only)	You must successfully complete the Foundation curriculum **INCLUDING** four International Baccalaureate credits from English, math, science, social studies, languages other than English, **OR** fine arts. Students must follow the outlined course sequences for the IB program.			

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Career and Technical Education Endorsements by Campus
In Schertz-Cibolo-Universal City ISD ISD
2019-2020

Campus	Endorsement	Programs of Study Offered
Byron P. Steele II High School and Samuel Clemens High School	Business & Industry	Applied Agricultural Engineering
		Animal Science
		Plant Sciences
		Architectural Design
		Marketing and Sales
		Accounting and Financial Services
		Business Management
		Entrepreneurship
		Digital Communications
		Information Technology
		Design and Multimedia Arts-Graphic Design
		Design and Multimedia Arts-Animation
		Design and Multimedia Arts-Video Game Design
		Fashion Design
		Culinary Arts
		Information Technology Support and Services
		Networking Systems
		Advanced Manufacturing and Machinery Mechanics
	Public Services	Teaching and Training
		Family and Community Services
		Nursing Science (CNA) **STEELE HS ONLY**
		Healthcare Therapeutic Services (CCMA) **STEELE HS ONLY**
		Health Informatics (MBC) **CLEMENS HS ONLY**
		Healthcare Diagnostics (Radiology) **CLEMENS HS ONLY**
		Law Enforcement
	STEM	Engineering Design
		Programming and Software Development
		Cyber Security

Alamo Academies—Available to all Juniors Seniors who qualify at both comprehensive high schools
Academies include: Aerospace Academy; Information, Technology, and Security Academy; Advanced Technology and Manufacturing Academy; Health Professions Academy; and, Heavy Equipment Academy.

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Career and Technical Education

Business & Industry Endorsement

Levels*: refer to the recommended order for stackable knowledge and skills a student should obtain as they progress through the sequence. They do not represent grade bands and there is flexibility in how districts can offer courses between levels. Local Implementation Considerations:

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

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

BUSINESS & INDUSTRY ENDORSEMENT – 3 or more courses for 4 or more credits

Cluster	Program of Study	9th Grade (Level 1)	10th Grade (Level 2)	11th Grade (Level 3)	12th Grade (Level 4)
Agriculture, Food & Natural Resources	**Applied Agricultural Engineering** (Agriculture Mechanics)	1701 Principles of Agriculture, Food, and Natural Resources (1 Credit) *Quality Counts (Local)*	1711 Agricultural Mechanics & Metal Technologies (1 Credit) *OSHA 10 HR (Local)*	1712 Agricultural Structures Design & Fabrication (1 Credit) *AWS SENSE Welding Level 1 Credit (IBC)*	1946 Agricultural Equipment Design and Fabrication w/Lab (2 Credits) 1769 Practicum in Practicum in Agriculture, Food, and Natural Resources (2 Credits) 1726 Project Based Research (1 Credit)
Agriculture, Food & Natural Resources	**Animal Science** (Animal Science & Veterinary Technology)	1701 Principles of Agriculture, Food, and Natural Resources (1 Credit) *Quality Counts (Local)*	1704 Small Animal Management (.5 Credit) 1703 Equine Science (.5 Credit)	1702 Livestock Production (1 Credit) *Texas Beef Quality (Local)* 1717 Veterinary Medical Applications (1 Credit) *Certified Vet Assistance Level 1 Credit (IBC)*	1705 Advanced Animal Science (1 Credit) *Science credit 1769 Practicum in Practicum in Agriculture, Food, and Natural Resources (2 Credits) 1726 Project Based Research (1 Credit)
Agriculture, Food & Natural Resources	**Plant Sciences** (Environmental, Floriculture & Plant Science)	1701 Principles of Agriculture, Food, and Natural Resources (1 Credit) *Quality Counts (Local)*	1911 Greenhouse Operation and Production (1 Credit)	1708 Horticultural Science (1 Credit) 1706 Floral Design (1 Credit) *Fine Arts credit *Texas State Floral Association Floral Skills Knowledge Based Certification, Texas State Floral Association Level One Floral Certification, Texas State Floral Association Level Two Certification (IBC)*	1716Advanced Plant & Soil Science (1 Credit) Science credit 1769 Practicum in Practicum in Agriculture, Food, and Natural Resources (2 Credits) 1726 Project Based Research (1 Credit)

Participation in career and technical student organizations and other leadership or extracurricular organizations is encouraged.

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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.

PRINCIPLES of AGRICULTURE, FOOD AND NATURAL RESOURCES (1701)

TSDS PEIMS Code: 13000200 (PRINAFNR)
Grade Placement: 9–12
Credit: 1
Prerequisite: None.
Principles of Agriculture, Food, and Natural Resources will allow students to develop knowledge and skills regarding career and educational opportunities, personal development, globalization, industry standards, details, practices, and expectations.

LIVESTOCK PRODUCTION (1702)

TSDS PEIMS Code: 13000300 (LIVEPROD)
Grade Placement: 10–12
Credit: 1
Prerequisite: None.
In Livestock Production, students will acquire knowledge and skills related to livestock and the livestock production industry. Livestock Production may address topics related to beef cattle, dairy cattle, swine, sheep, goats, and poultry.

EQUINE SCIENCE (1703)

TSDS PEIMS Code: 13000500 (EQUINSCI)
Grade Placement: 10–12
Credit: .5
Prerequisite: None.
In Equine Science, students will acquire knowledge and skills related to equine animal systems and the equine industry. Equine Science may address topics related to horses, donkeys, and mules.

SMALL ANIMAL MANAGEMENT (1704)

TSDS PEIMS Code: 13000400 (SMANIMGT)
Grade Placement: 10–12
Credit: .5
Prerequisite: None.
In Small Animal Management, students will acquire knowledge and skills related to small animals and the small animal management industry. Small Animal Management may address topics related to small mammals such as dogs and cats, amphibians, reptiles, and birds.

ADVANCED ANIMAL SCIENCE (1705)

TSDS PEIMS Code: 13000700 (ADVANSCI)
Grade Placement: 11–12
Credit: 1
Prerequisites: Biology and Chemistry or Integrated Physics and Chemistry (IPC);
Algebra l and Geometry; and either Small Animal Management, Equine Science, or
Livestock Production.
Recommended Prerequisite: Veterinary Medical Applications.
Advanced Animal Science examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences.

Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

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FLORAL DESIGN (1706)
TSDS PEIMS Code: 13001800 (FLORAL)
Grade Placement: 9–12
Credit: 1
Prerequisite: None.
Floral Design is designed to develop students' ability to identify and demonstrate the principles and techniques related to floral design as well as develop an understanding of the management of floral enterprises. Through the analysis of artistic floral styles and historical periods, students will develop respect for the traditions and contributions of diverse cultures. Students will respond to and analyze floral designs, thus contributing to the development of lifelong skills of making informed judgments and evaluations.

Note: This course satisfies a fine arts credit requirement for students on the Foundation High School Program

HORTICULTURAL SCIENCE (1708)
TSDS PEIMS Code: 13002000 (HORTISCI)
Grade Placement: 10–12
Credit: 1
Prerequisite: None.
Horticultural Science is designed to develop an understanding of common horticultural management practices as they relate to food and ornamental plant production.

GREENHOUSE OPERATION AND PRODUCTION (1911)
TSDS PEIMS Code: 13002050 (GREOP)
Grade Placement: 10–12
Credit: 1
Prerequisite: None.
Greenhouse Operation and Production is designed to develop an understanding of greenhouse production techniques and practices. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations.

ADVANCED PLANT AND SOIL SCIENCE (1716)
TSDS PEIMS Code: 13002100 (ADVPSSCI)
Grade Placement: 11–12
Credit: 1
Prerequisite: None.
Recommended Prerequisites: Biology, Integrated Physics and Chemistry, Chemistry, or Physics and a minimum of one credit from the courses in the Agriculture, Food, and Natural Resources Career Cluster.
Advanced Plant and Soil Science provides a way of learning about the natural world.
Students should know how plant and soil science has influenced a vast body of knowledge, that there are still applications to be discovered, and that plant and soil science is the basis for many other fields of science. To prepare for careers in plant and soil science, students must attain academic skills and knowledge, acquire technical knowledge and skills related to plant and soil science and the workplace.

Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

AGRICULTURAL MECHANICS AND METAL TECHNOLOGIES (1711)
TSDS PEIMS Code: 13002200 (AGMECHMT)
Grade Placement: 10–12
Credit: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Agriculture, Food, and Natural Resources.
Agricultural Mechanics and Metal Technologies is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metal working techniques. To prepare for careers in agricultural power, structural, and technical systems, students must attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the industry; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations.

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AGRICULTURAL STRUCTURES DESIGN AND FABRICATION (1712)
TSDS PEIMS Code: 13002300 (AGSDF)
Grade Placement: 11–12
Credit: 1
Prerequisite: None.
Recommended Prerequisites: Agricultural Mechanics and Metal Technologies.
In Agricultural Structures Design and Fabrication, students will explore career opportunities, entry requirements, and industry expectations. To prepare for careers in mechanized agriculture and technical systems, students must attain knowledge and skills related to agricultural structures design and fabrication.

AGIRCULTURE EQUIPMENT DESING AND FABRICATION/AGRICULTURE LABORATORY FIELD EXPERIENCE (1946)
TSDS PEIMS Code:
13002350 (AGEQDF)
13002360 (AGEQDFLAB)
Grade Placement: 11–12
Credit: 2
Prerequisite: None.
Recommended Prerequisites: Agricultural Mechanics and Metal Technologies.
In Agricultural Equipment Design and Fabrication, students will acquire knowledge and skills related to the design and fabrication of agricultural equipment.

VETERINARY MEDICAL APPLICATIONS (1717)
TSDS PEIMS Code: 13000600 (VETMEDAP)
Grade Placement: 11–12
Credit: 1
Prerequisites: Equine Science, Small Animal Management, or Livestock Production.
Veterinary Medical Applications covers topics relating to veterinary practices, including practices for large and small animal species.

PRACTICUM IN AG, FOOD, AND NATURAL RESOURCES (1769)
TSDS PEIMS Code:
13002500 (First Time Taken) (PRACAFNR1)
13002510 (Second Time Taken) (PRACAFNR2)
Grade Placement: 11–12
Credit: 2
Prerequisite: None.
Recommended Prerequisite: A minimum of one credit from the courses in the
Agriculture, Food, and Natural Resources Career Cluster.
Practicum in Agriculture, Food, and Natural Resources is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internships, assistantships, mentorships, or laboratories. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Agriculture, Food, and Natural Resources Career Cluster.

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BUSINESS & INDUSTRY ENDORSEMENT – 3 or more courses for 4 or more credits

Cluster	Program of Study	9th Grade (Level 1)	10th Grade (Level 2)	11th Grade (Level 3)	12th Grade (Level 4)
	Architectural Design	1787 Principles of Architecture (1 Credit)	1784 Architectural Design I (1 Credit) *Autodesk Certified Professional or User in AutoCAD (IBC)*	1778 Architectural Design II (2 Credits) Autodesk Certified Professional AutoCAD or User in Revit Architecture (IBC)	1794 Practicum in Architectural Design (2 Credits) *Autodesk Certified User in Revit Architecture (IBC)* 1752 Career Prep (2 Credits) *OSHA 10 HR (Local)*

SkillsUSA

Participation in career and technical student organizations and other leadership or extracurricular organizations is encouraged.

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.

PRINCIPLES OF ARCHITECTURE (1787)

TSDS PEIMS Code: 13004210 (PRINARCH)
Grade Placement: 9–12
Credit: 1
Prerequisite: None.

Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management. Achieving proficiency in decision making and problem solving is an essential skill for career planning and lifelong learning. Students use self-knowledge, education, and career information to set and achieve realistic career and educational goals. Job-specific training can be provided through training modules that identify career goals in trade and industry areas. Classroom studies include topics such as safety, work ethics, communication, information technology applications, systems, health, environment, leadership, teamwork, ethical and legal responsibility, employability, and career development and include skills such as problem solving, critical thinking, and reading technical drawings.

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ARCHITECTURAL DESIGN I (1784)
TSDS PEIMS Code: 13004600 (ARCHDSN1)
Grade Placement: 10–12
Credit: 1
Prerequisites: Algebra l and English l.
Recommended Prerequisites: Geometry, Principles of Architecture
In Architectural Design I, students will gain knowledge and skills needed to enter a career in architecture or construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, or landscape architecture. Architectural Design I include the knowledge of the design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for nonresidential or residential architectural purposes.

ARCHITECTURAL DESIGN II (1778)
TSDS PEIMS Code: 13004700 (ARCHDSN2)
Grade Placement: 11–12
Credit: 2
Prerequisites: Architectural Design l or Advanced Interior Design and Geometry.
Recommended Prerequisites: Principles of Architecture and Principles of Construction.
In Architectural Design II, students will gain advanced knowledge and skills needed to enter a career in architecture or construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, or landscape architecture. Architectural Design II includes the advanced knowledge of the design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for nonresidential or residential architectural purposes.

PRACTICUM IN ARCHITECTURAL DESIGN (1794)
TSDS PEIMS Code:
13004800 (First Time Taken) (PRACADS1)
13004810 (Second Time Taken) (PRACADS2)
Grade Placement: 12
Credit: 2
Prerequisite: Architectural Design ll.
Practicum in Architectural Design is an occupationally specific course designed to provide technical instruction in architectural design. Safety and career opportunities are included in addition to work ethics and architectural design study.

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Career and Technical Education

Business & Industry Endorsement

Arts, A/V Technology & Communications

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BUSINESS & INDUSTRY ENDORSEMENT – 3 or more courses for 4 or more credits

Cluster	Program of Study	9th Grade (Level 1)	10th Grade (Level 2)	11th Grade (Level 3)	12th Grade (Level 4)
Arts, A/V Technology & Communications	**Digital Communications**	1902 Principles of Arts, Audio/Video Technology, and Communications (1 Credit)	1721 Audio/Video Production I (1 Credit) *Adobe Certified Associate (ACA) - Premiere Pro (IBC) Steele, Apple Final Cut Pro (IBC) Clemens*	1718 Audio/Video Production II/Audio/Video Production II Lab (2 Credits)	1921Practicum in Audio/Video Production (2 Credits)
Arts, A/V Technology & Communications	**Design and Multimedia Arts-Graphic Design** (Graphic Design)	1902 Principles of Arts, Audio/Video Technology, and Communications (1 Credit)	1722 Graphic Design and Illustration I (1 Credit) *Adobe Certified Associate (ACA) - Illustrator and Photo Shop (IBC)*	1914 Graphic Design and Illustration II with lab (2 Credits)	1915 Practicum in Graphic Design and Illustration (2 Credits)
Arts, A/V Technology & Communications	**Design and Multimedia Arts-** (Animation)	1902 Principles of Arts, Audio/Video Technology, and Communications (1 Credit)	1723 Animation I (1 Credit) *Auto Desk Maya (Local)*	1903 Animation II (1 Credit)	1905 Practicum in Animation (2 Credits)
Arts, A/V Technology & Communications	**Design and Multimedia Arts-Video Game Design** (Video Game Design)	1902 Principles of Arts, Audio/Video Technology, and Communications (1 Credit)	1724 Video Game Design I (1 Credit)	1989 Video Game Programing (2 Credit)	1990 Advanced Video Games Programming (1 Credits)
Arts, A/V Technology & Communications	**Fashion Design**	1902 Principles of Arts, Audio/Video Technology, and Communications (1 Credit)	1750 Fashion Design I (1 Credit)	1758 Fashion Design II (2 Credits)	1752 Career Prep (2 Credits) *OSHA 10 HR (Local)* 1752 Extended Career Prep (1 Credit)

SkillsUSA

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FCCLA – Family, Career and Community Leaders of America – The Ultimate Leadership Experience

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ARTS, A/V 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.

PRINCIPLES OF ARTS, A/V TECHNOLOGY, AND COMMUNICATIONS (1902)

TSDS PEIMS Code: 13008200 (PRINAAVTC)
Grade Placement: 9
Credits: 1
Prerequisite: None.
The goal of this course is for the student understands arts, audio/video technology, and communications systems. Within this context, students will be expected to develop an understanding of the various and multifaceted career opportunities in this cluster and the knowledge, skills, and educational requirements for those opportunities.

PROFESSIONAL COMMUNICATIONS (1700)

TSDS PEIMS Code: 13009900 (PROFCOMM)
Grade Placement: 9–12
Credits: .5
Prerequisite: None.
Professional Communications blends written, oral, and graphic communication in a career based environment. Careers in the global economy require individuals to be creative and have a strong background in computer and technology applications, a strong and solid academic foundation, and a proficiency in professional oral and written communication. Within this context, students will be expected to develop and expand the ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics, and conduct Internet research.

AUDIO/VIDEO PRODUCTION I (1721)

TSDS PEIMS Code: 13008500 (AVPROD1)
Grade Placement: 9–12
Credits: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Arts, Audio/Video Technology, and
Communications.
Recommended Corequisite: Audio/Video Production l Lab.
In addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the industry with a focus on pre-production, production, and post-production audio and video products.

AUDIO/VIDEO PRODUCTION II /AUDIO/VIDEO PRODUCTION II w/Lab (1718 & 1912)

TSDS PEIMS Code: 13008610 (AVPLAB2)
Grade Placement: 10–12
Credits: 2
Prerequisite: Audio/Video Production l.
Corequisite: Audio/Video Production ll.
Building upon the concepts taught in Audio/Video Production, in addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an advanced understanding of the industry with a focus on pre-production, production, and postproduction products. Through diverse forms of storytelling and production, students will exercise and develop creativity, intellectual curiosity, and critical-thinking, problem-solving, and collaborative skills. This course may be implemented in an audio format or a format with both audio and video. Requiring a lab requisite for the course affords necessary time devoted specifically to the production and post-production process.

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GRAPHIC DESIGN AND ILLUSTRATION I (1722)
TSDS PEIMS Code: 13008800 (GRAPHDI1)
Grade Placement: 10–12
Credits: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Arts, Audio/Video Technology, and Communications.
Recommended Corequisite: Graphic Design and Illustration l Lab.
Within this context, in addition to developing knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the industry with a focus on fundamental elements and principles of visual art and design.

GRAPHIC DESIGN AND ILLUSTRATION II /GRAPHIC DESIGN AND ILLUSTRATION II w/Lab (1914 & 1915)
TSDS PEIMS Code: 13008810 (GRDLAB1)
Grade Placement: 10–12
Credits: 2
Prerequisite: None.
Recommended Prerequisite: Principles of Arts, Audio/Video Technology, and Communications.
Corequisite: Graphic Design and Illustration l.
Within this context, in addition to developing knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the industry with a focus on fundamental elements and principles of visual art and design.

ANIMATION I (1723)
TSDS PEIMS Code: 13008300 (ANIMAT1)
Grade Placement: 10–12
Credits: 1
Prerequisite: None.
Recommended Prerequisite: Art l or Principles of Art, Audio/Video Technology, and Communications.
Recommended Corequisite: Animation I Lab.
In addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the history and techniques of the animation industry.

ANIMATION II/ ANIMATION II w/Lab (1903 &1917)
TSDS PEIMS Code: 13008410 (ANILAB2)
Grade Placement: 11–12
Credits: 2
Prerequisite: Animation l.
Corequisite: Animation ll.
In addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to create two- and three-dimensional animations. The instruction also assists students seeking careers in the animation industry. Districts are encouraged to offer this lab in a consecutive block with Animation II to allow students sufficient time to master the content of both courses.

FASHION DESIGN I (1750)
TSDS PEIMS Code: 13009300 (FASHDSN1)
Grade Placement: 10–12
Credits: 1
Prerequisites: None.
Recommended Prerequisite: Principles of Arts, Audio/Video Technology, and Communications.
Recommended Corequisite: Fashion Design l Lab.
Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the fashion industry with an emphasis on design and construction.

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FASHION DESIGN II /FASHION DESIGN II w/Lab (1758 & 1919)
Fashion Design II/Fashion Design II Lab
TSDS PEIMS Code: 13009410 (FASLAB2)
Grade Placement: 11–12
Credits: 2
Prerequisite: Fashion Design l.
Corequisite: Fashion Design ll.
Careers in fashion span all aspects of the textile and apparel industries. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the fashion industry with an emphasis on design and construction.

VIDEO GAME DESIGN I (1724)
TSDS PEIMS Code: 13009970 (VIDGD)
Grade Placement: 9–12
Credits: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Art, Audio/Video Technology, and
Communications.
Video Game Design will allow students to explore one of the largest industries in the global marketplace and the new emerging careers it provides in the field of technology. Students will learn gaming, computerized gaming, evolution of gaming, artistic aspects of perspective, design, animation, technical concepts of collision theory, and programming logic. Students will participate in a simulation of a real video game design team while developing technical proficiency in constructing an original game design.

VIDEO GAME PROGRAMMING (1989)
TSDS PEIMS Code: N1300994 (VIDEOGD2)
Grade Placement: 10–12
Credits: 1
Prerequisite: None.
Recommended Prerequisite: Video Game Design I
Video Game Programming expands on the foundation created in Video Game Design through programming languages such as: C# programming, XNA game studio, Java, and Android App. In this course, students will investigate the inner workings of a fully functional role-playing game (RPG) by customizing playable characters, items, maps, and chests and eventually applying customizations by altering and enhancing the core game code.

ADVANACED VIDEO GAME PROGRAMMING (1990)
TSDS PEIMS Code: N1300995 (VIDOGD3)
Grade Placement: 10-12
Credits: 2
Advanced Video Game Programming students will be introduced to mobile application design and programming using Java and Eclipse for Android devices. Time will be spent learning basic Java programming and working with Android Studio to develop real working apps. Using Unity as an introduction to 3D game development, students will have exposure to and an understanding of: object-oriented programming concepts; game development skill with programs such as Unity; 3D modeling with programs such as Blender; image manipulation with programs such as GIMP; concepts related to the design process; and the ability to communicate and collaborate on group-based projects.

PRACTICUM IN AUDIO/VIDEO PRODUCTION (1921)
TSDS PEIMS Code:
13008700 (First Time Taken) (PRACAVP1)
13008710 (Second Time Taken) (PRACAVP2)
Grade Placement: 11–12
Credits: 2
Prerequisites: Audio/Video Production II and Audio/Video Production II Lab.
Building upon the concepts taught in Audio/Video Production II and its corequisite Audio/Video Production II Lab, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an increasing understanding of the industry with a focus on applying pre-production, production, and post-production audio and video products in a professional environment. This course may be implemented in an advanced audio/video or audio format. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.

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PRACTICUM IN ANIMATION (1905)
TSDS PEIMS Code:
13008450 (First Time Taken) (PRACANI1)
13008460 (Second Time Taken) (PRACANI2)
Grade Placement: 11–12
Credits: 2
Prerequisites: Animation ll and Animation ll Lab.
Building upon the concepts taught in Animation II and its corequisite Animation II Lab, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an increasing understanding of the industry with a focus on applying pre-production, production, and post-production animation products in a professional environment. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities

PRACTICUM IN GRAPHIC DESING AND ILLUSTRATION (1915)
TSDS PEIMS Code:
13009000 (First Time Taken) (PRACGRD1)
13009010 (Second Time Taken) (PRACGRD2)
Grade Placement: 10–12
Credits: 2
Prerequisites: Graphic Design and Illustration ll and Graphic Design and Illustration ll Lab.
In addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop a technical understanding of the industry with a focus on skill proficiency. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities

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Business Management & Administration

Marketing

Finance

Career and Technical Education

Business & Industry Endorsement

Levels*: refer to the recommended order for stackable knowledge and skills a student should obtain as they progress through the sequence. They do not represent grade bands and there is flexibility in how districts can offer courses between levels. Local Implementation Considerations:

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

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

BUSINESS & INDUSTRY ENDORSEMENT – 3 or more courses for 4 or more credits

Cluster	Program of Study	9th Grade (Level 1)	10th Grade (Level 2)	11th Grade (Level 3)	12th Grade (Level 4)
	**Marketing and Sales**	1728 Principles of Business, Marketing, & Finance (1 Credit)	1746 Fashion Marketing (.5 Credit)	1938 Social Media Marketing (.5 Credit) *Virtual Business-Social Media, Snap Chat Advertising Competencies (Local)*	1926 Practicum in Marketing (2 Credits)
			1747 Sports & Entertainment Marketing (.5 Credit)	1748 Advertising (.5 Credit)	1752 Career Prep (2 Credits) *OSHA 10 HR (Local)*
			Virtual Business-Sports & Entertainment Marketing (Local)		1752 Extended Career Prep (1 Credit)
	(Marketing)				1726 Project Based Research (1 Credit)
	**Accounting and Financial Services**	1728 Principles of Business, Marketing, and Finance (1 Credit)	1735 Accounting I (1 Credit) *Virtual Business-Accounting (Local)*	1736 Accounting II (1 Credit) * Math credit, *Intuit QuickBooks Certified User (QBCU) (IBC)*	1904 Practicum in Business Management (2 Credits)
		1733 Business Information Management I (1 Credit)	1900 Financial Mathematics (1 Credit) * Math credit		1752 Career Prep (2 Credits) *OSHA 10 HR (Local)*
	(Finance)		1737 Money Matters (1 Credit)		1752 Extended Career Prep (1 Credit)
	**Business Management**	1728 Principles of Business, Marketing, and Finance (1 Credit)	1734 Business Information Management II (1 Credit)- *Microsoft Office Specialist Word, Microsoft Office Specialist Excel (IBC)*	1732 Business Law (1 Credit)	1904 Practicum in Business Management (2 Credits)
		1733 Business Information Management I (1 Credit)	1729 Business Management (1 Credit)		1752 Career Prep (2 Credits) *OSHA 10 HR (Local)*
					1752 Extended Career Prep (1 Credit)
	**Entrepreneurship**	1728 Principles of Business, Marketing, and Finance (1 Credit)	1749 Entrepreneurship (1 Credit)	1726 Project Based Research (1 Credit)	1904 Practicum in Business Management (2 Credits)
					1752 Career Prep (2 Credits) *OSHA 10 HR (Local)*

DECA

Participation in career and technical student organizations and other leadership or extracurricular organizations is encouraged.

BUSINESS PROFESSIONALS of AMERICA
Giving Purpose to Potential

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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.

PRINCIPLES OF BUSINESS, MARKETING, AND FINANCE (1728)

TSDS PEIMS Code: 13011200 (PRINBMF)
Grade Placement: 9–11
Credits: 1
Prerequisite: None.
In Principles of Business, Marketing, and Finance, students gain knowledge and skills in economies and private enterprise systems, the impact of global business, the marketing of goods and services, advertising, and product pricing. Students analyze the sales process and financial management principles. This course allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings in business, marketing, and finance.

SPORTS AND ENTERTAINMENT MARKETING (1747)

TSDS PEIMS Code: 13034600 (SPORTSEM)
Grade Placement: 9–12
Credit: .5
Prerequisite: None.
Recommended Prerequisite: Principles of Business, Marketing, and Finance.
Sports and Entertainment Marketing will provide students with a thorough understanding of the marketing concepts and theories that apply to sports and entertainment. The areas this course will cover include basic marketing concepts, publicity, sponsorship, endorsements, licensing, branding, event marketing, promotions, and sports and entertainment marketing strategies.

SOCIAL MEDIA MARKETING (1938)

TSDS PEIMS Code: 13034650 (SMEDMKTG)
Grade Placement: 9–12
Credit: .5
Prerequisite: None.
Recommended Prerequisite: Principles of Business, Marketing and Finance or any marketing course.
Social Media Marketing is designed to look at the rise of social media and how marketers are integrating social media tools in their overall marketing strategy. The course will investigate how the marketing community measures success in the new world of social media. Students will manage a successful social media presence for an organization, understand techniques for gaining customer and consumer buy-in to achieve marketing goals, and properly select social media platforms to engage consumers and monitor and measure the results of these efforts.

ADVERTISING (1748)

TSDS PEIMS Code: 13034200 (ADVERTIS)
Grade Placement: 9–12
Credit: .5
Prerequisite: None.
Recommended Prerequisite: Principles of Business, Marketing, and Finance.
Advertising is designed as a comprehensive introduction to the principles and practices of advertising. Students will gain knowledge of techniques used in current advertising, including print, broadcast, and digital media. The course explores the social, cultural, ethical, and legal issues of advertising, historical influences, strategies, media decision processes as well as integrated marketing communications, and careers in advertising and sales promotion. The course provides an overview of how communication tools can be used to reach target audiences and increase consumer knowledge.

ENTREPRENEURSHIP (1749)

TSDS PEIMS Code: 13034400 (ENTREP)
Grade Placement: 10–12
Credit: 1
Prerequisite: None.
Recommended Prerequisites: Principles of Business, Marketing, and Finance.
Students will learn the principles necessary to begin and operate a business. The primary focus of the course is to help students understand the process of analyzing a business opportunity, preparing a business plan, determining feasibility of an idea using research, and developing a plan to organize and promote the business and its products and services.

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BUSINESS LAW (1732)
TSDS PEIMS Code: 13011700 (BUSLAW)
Grade Placement: 11–12
Credits: 1
Prerequisite: None.
Business Law is designed for students to analyze various aspects of the legal environment, including ethics, the judicial system, contracts, personal property, sales, negotiable instruments, agency and employment, business organization, risk management, and real property.

BUSINESS MANAGEMENT (1729)
TSDS PEIMS Code: 13012100 (BUSMGT)
Grade Placement: 10–12
Credits: 1
Prerequisite: None.
Business Management is designed to familiarize students with the concepts related to business management as well as the functions of management, including planning, organizing, staffing, leading, and controlling. Students will also demonstrate interpersonal and project-management skills.

BUSINESS INFORMATION MANAGEMENT 1 (BIM I) (1733)
TSDS PEIMS Code: 13011400 (BUSIM1)
Grade Placement: 9–12
Credits: 1
Prerequisite: None.
Recommended Prerequisite: Touch System Data Entry.
Recommended Corequisite: Business Lab.
In Business Information Management I, students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, create word processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software.

BUSINESS INFORMATION MANAGEMENT 2 (BIM II) (1734)
TSDS PEIMS Code: 13011500 (BUSIM2)
Grade Placement: 10–12
Credits: 1
Prerequisite: Business Information Management l.
Recommended Prerequisite: Touch System Data Entry.
Recommended Corequisite: Business Lab.
In Business Information Management II, students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce or postsecondary education. Students apply technical skills to address business applications of emerging technologies, create complex word-processing documents, develop sophisticated spreadsheets using charts and graphs, and make an electronic presentation using appropriate multimedia software.

ACCOUNTING I (1735)
TSDS PEIMS Code: 13016600 (ACCOUNT1)
Grade Placement: 10–12
Credit: 1
Prerequisites: None.
Recommended Prerequisites: Principles of Business, Marketing, and Finance.
In Accounting I, students will investigate the field of accounting, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal, and ethical factors. Students will reflect on this knowledge as they engage in the process of recording, classifying, summarizing, analyzing, and communicating accounting information. Students will formulate and interpret financial information for use in management decision making. Accounting includes such activities as bookkeeping, systems design, analysis, and interpretation of accounting information.

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ACCOUNTING II (1736)
TSDS PEIMS Code: 13016700 (ACCOUNT2)
Grade Placement: 11–12
Credit: 1
Prerequisites: Accounting I.
In Accounting II, students will continue the investigation of the field of accounting, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal, and ethical factors. Students will reflect on this knowledge as they engage in various managerial, financial, and operational accounting activities. Students will formulate, interpret, and communicate financial information for use in management decision making. Students will use equations, graphical representations, accounting tools, spreadsheet software, and accounting systems in real-world situations to maintain, monitor, control, and plan the use of financial resources.

Note: This course satisfies a math credit requirement for students on the Foundation High School Program.

FINANCIAL MATHEMATICS (1900)
TSDS PEIMS Code: 13018000 (FINMATH)
Grade Placement: 10–12
Credit: 1
Prerequisite: Algebra l.
Financial Mathematics is a course about personal money management. Students will apply critical-thinking skills to analyze personal financial decisions based on current and projected economic factors.

Note: This course satisfies a math credit requirement for students on the Foundation High School Program.

FASHION MARKETING (1746)
TSDS PEIMS Code: 13034300 (FASHMKTG)
Grade Placement: 9–12
Credit: .5
Prerequisite: None.
Recommended Prerequisite: Principles of Business, Marketing, and Finance.
Fashion Marketing is designed to provide students with knowledge of the various business functions in the fashion industry. Students in Fashion Marketing will gain a working knowledge of promotion, textiles, merchandising, mathematics, selling, visual merchandising, and career opportunities.

MONEY MATTERS (1737)
TSDS PEIMS Code: 13016200 (MONEYM)
Grade Placement: 9–12
Credit: 1
Prerequisite: None.
Recommended Prerequisites: Principles of Business, Marketing, and Finance.
In Money Matters, students will investigate money management from a personal financial perceptive. Students will apply critical-thinking skills to analyze financial options based on current and projected economic factors. Students will gain knowledge and skills necessary to establish short-term and long-term financial goals. Students will examine various methods of achieving short-term and long-term financial goals through various methods such as investing, tax planning, asset allocating, risk management, retirement planning, and estate planning.

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PRACTICUM IN BUSINESS MANAGEMENT (1904)
TSDS PEIMS Code:
13012200 (First Time Taken) (PRACBM)
13012210 (Second Time Taken) (PRACBM2)
Grade Placement: 11–12
Credits: 2
Prerequisite: None.
Recommended Prerequisites: Touch System Data Entry and Business Management or
Business Information Management ll.
Practicum in Business Management is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences occur in a paid or unpaid arrangement and a variety of locations appropriate to the nature and level of experience. Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and to make a successful transition to the workforce or postsecondary education. Students apply technical skills to address business applications of emerging technologies. Students develop a foundation in the economic, financial, technological, international, social, and ethical aspects of business to become competent consumers, employees, and entrepreneurs. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make appropriate business decisions.

PRACTICUM IN MARKETING (1926)
TSDS PEIMS Code:
13034800 (First Time Taken) (PRACMKT1)
13034810 (Second Time Taken) (PRACMKT2)
Grade Placement: 11–12
Credit: 2
Prerequisite: None.
Recommended Prerequisite: Principles of Business, Marketing, and Finance.
Practicum in Marketing is a series of dynamic activities that focus on the customer to generate a profitable exchange. Students will gain knowledge and skills that help them to be proficient in one or more of the marketing functional areas associated with distribution, financing, marketing information management, pricing, product planning, promotion, purchasing, risk management, and selling skills. Students will integrate skills from academic subjects, information technology, interpersonal communication, and management training to make responsible decisions. The practicum course is a paid or unpaid experience for students participating in a coherent sequence of career and technical courses in marketing.

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Hospitality & Tourism

Levels*: refer to the recommended order for stackable knowledge and skills a student should obtain as they progress through the sequence. They do not represent grade bands and there is flexibility in how districts can offer courses between levels. Local Implementation Considerations:
**Students completing two or more courses for at least two credits within a program of study earn concentrator status for Perkins V federal accountability reporting.*
**Proposed Indicator: Students finishing three or more courses for four or more credits with one course from level 3 or 4 within a program of study earn completer status for federal accountability reporting.*

BUSINESS & INDUSTRY ENDORSEMENT – 3 or more courses for 4 or more credits

Cluster	Program of Study	9th Grade (Level 1)	10th Grade (Level 2)	11th Grade (Level 3)	12th Grade (Level 4)
Hospitality & Tourism	**Culinary Arts**	1909 Introduction to Culinary Arts (1 Credit)	1774 Culinary Arts (2 Credits) *ServSafe Food Handlers (Local)*	1775 Advanced Culinary (2 Credits)	1789 Practicum in Culinary Arts (2 Credits)
					1906 Food Science (1 Credit) * Science credit
					1752 Career Prep (2 Credits) *OSHA 10 HR (Local)*
					1752 Extended Career Prep (1 Credit)

Participation in career and technical student organizations and other leadership or extracurricular organizations is encouraged.

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.

INTRODUCTION TO CULINARY ARTS (1909)

TSDS PEIMS Code: 13022550 (INCULART)
Grade Placement: 9–10
Credit: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Hospitality and Tourism.
Introduction to Culinary Arts will emphasize the principles of planning, organizing, staffing, directing, and controlling the management of a variety of food service operations. The course will provide insight into the operation of a well-run restaurant. Introduction to Culinary Arts will provide insight into food production skills, various levels of industry management, and hospitality skills. This is an entry level course for students interested in pursuing a career in the food service industry. This course is offered as a classroom and laboratory-based course.

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FOOD SCIENCE (1906)
TSDS PEIMS Code: 13023000 (FOODSCI)
Grade Placement: 11–12
Credit: 1
Prerequisites: Three units of science, including Chemistry and Biology.
Recommended Prerequisite: Principles of Hospitality and Tourism.
In Food Science students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Food Science is the study of the nature of foods, the causes of deterioration in food products, the principles underlying food processing, and the improvement of foods for the consuming public.
Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

CULINARY ARTS (1774)
TSDS PEIMS Code: 13022600 (CULARTS)
Grade Placement: 10–12
Credit: 2
Prerequisite: None.
Recommended Prerequisites: Principles of Hospitality and Tourism and Introduction to
Culinary Arts.
Culinary Arts begins with the fundamentals and principles of the art of cooking and the science of baking and includes management and production skills and techniques. Students can pursue a national sanitation certification or other appropriate industry certifications. This course is offered as a laboratory-based course.

ADVANCED CULINARY ARTS (1775)
TSDS PEIMS Code: 13022650 (ADCULART)
Grade Placement: 10–12
Credit: 2
Prerequisite: Culinary Arts.
Advanced Culinary Arts will extend content and enhance skills introduced in Culinary Arts by in-depth instruction of industry-driven standards to prepare students for success in higher education, certifications, and/or immediate employment.

PRACTICUM IN CULINARY ARTS (1789)
TSDS PEIMS Code:
13022700 (First Time Taken) (PRACCUL1)
13022710 (Second Time Taken) (PRACCUL2)
Grade Placement: 11–12
Credit: 2
Prerequisite: Culinary Arts.
Practicum in Culinary Arts is a unique practicum that provides occupationally specific opportunities for students to participate in a learning experience that combines classroom instruction with actual business and industry career experiences. Practicum in Culinary Arts integrates academic and career and technical education; provides more interdisciplinary instruction; and supports strong partnerships among schools, businesses, and community institutions with the goal of preparing students with a variety of skills in a fast-changing culinary art based workplace.

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Levels*: refer to the recommended order for stackable knowledge and skills a student should obtain as they progress through the sequence. They do not represent grade bands and there is flexibility in how districts can offer courses between levels. Local Implementation Considerations:
**Students completing two or more courses for at least two credits within a program of study earn concentrator status for Perkins V federal accountability reporting.*
**Proposed Indicator: Students finishing three or more courses for four or more credits with one course from level 3 or 4 within a program of study earn completer status for federal accountability reporting.*

BUSINESS & INDUSTRY ENDORSEMENT – 3 or more courses for 4 or more credits					
Cluster	**Program of Study**	**9th Grade (Level 1)**	**10th Grade (Level 2)**	**11th Grade (Level 3)**	**12th Grade (Level 4)**
	Information Technology Support and Services	1743 Principles of Information Technology (1 Credit)	1740 Computer Maintenance/Computer Maintenance Lab (2 Credits)	1741 Computer Technician Practicum (2 Credits)	1719 Practicum in Information Technology (2 Credits) 1752 Career Prep (2 Credits) *OSHA 10 HR (Local)* 1726 Project Based Research (1 Credit)

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

PRINCIPLES OF INFORMATION TECHNOLOGY (1743)

TSDS PEIMS Code: 13027200 (PRINIT)
Grade Placement: 9–10
Credit: 1
Prerequisites: None
In Principles of Information Technology, students will develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students will enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment.

COMPUTER MAINTENANCE w/Lab (1740 & 1923)

TSDS PEIMS Code: 13027310 (COMMTLAB)
Grade Placement: 10–12
Credit: 2
Prerequisite: None.
Recommended Prerequisite: Principles of Information Technology.
Corequisite: Computer Maintenance.
In Computer Maintenance Lab, students will acquire knowledge of computer maintenance and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer maintenance. Students will apply technical skills to address the IT industry and emerging technologies. Districts are encouraged to offer this course in a consecutive block with Computer Maintenance to allow students sufficient time to master the content of both courses.

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COMPUTER TECHNICIAN PRACTICUM (1741)
TSDS PEIMS Code:
13027500 (First Time Taken) (COMPT1)
13027510 (Second Time Taken) (COMPT2)
Grade Placement: 10–12
Credit: 2
Prerequisite: None.
Recommended Prerequisites: Principles of Information Technologies, Computer Maintenance, and Computer Maintenance Lab.
In the Computer Technician Practicum, students will gain knowledge and skills in computer technologies, including advanced knowledge of electrical and electronic theory, computer principles, and components related to the installation, diagnosis, service, and repair of computer-based technology systems. Students will reinforce, apply, and transfer their knowledge and skills to a variety of settings and problems. Proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an instructor, with an industry mentor, or both.

PRACTICUM IN INFORMATION TECHNOLOGY (1719)
TSDS PEIMS Code:
13028000 (First Time Taken) (PRACIT1)
13028010 (Second Time Taken) (PRACIT2)
Grade Placement: 12
Credit: 2
Prerequisite: A minimum of two high school information technology (IT) courses.
In the Practicum in Information Technology, students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an industry mentor, as an unpaid or paid internship, as part of a capstone project, or as career preparation.

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Levels*: refer to the recommended order for stackable knowledge and skills a student should obtain as they progress through the sequence. They do not represent grade bands and there is flexibility in how districts can offer courses between levels. Local Implementation Considerations:
Students completing two or more courses for at least two credits within a program of study earn concentrator status for Perkins V federal accountability reporting.
Proposed Indicator: Students finishing three or more courses for four or more credits with one course from level 3 or 4 within a program of study earn completer status for federal accountability reporting.

BUSINESS & INDUSTRY ENDORSEMENT – 3 or more courses for 4 or more credits					
Cluster	**Program of Study**	**9th Grade (Level 1)**	**10th Grade (Level 2)**	**11th Grade (Level 3)**	**12th Grade (Level 4)**
Manufacturing	**Advanced Manufacturing and Machinery Mechanics** (Robotics)	1788 Principles of Applied Engineering (1 Credit)	1907 Robotics I (1 Credit)	1929 Robotics II (1 Credit)	1933 Practicum in Manufacturing (2 Credits) 1752 Career Prep (2 Credits) *OSHA 10 HR (Local)* 1752 Extended Career Prep (1 Credit)

Participation in career and technical student organizations and other leadership or extracurricular organizations is encouraged.

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.

PRINCIPLES OF APPLIED ENGINEERING (1788)

TSDS PEIMS Code: 13036200 (PRAPPENG)
Grade Placement: 9–10
Credit: 1
Prerequisite: None.
Principles of Applied Engineering provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will develop engineering communication skills, which include computer graphics, modeling, and presentations, by using a variety of computer hardware and software applications to complete assignments and projects. Upon completing this course, students will understand the various fields of engineering and will be able to make informed career decisions. Further, students will have worked on a design team to develop a product or system. Students will use multiple software applications to prepare and present course assignments.

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ROBOTICS I (1907)
TSDS PEIMS Code: 13037000 (ROBOTIC1)
Grade Placement: 9–10
Credit: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Applied Engineering.
In Robotics I, students will transfer academic skills to component designs in a project based environment through implementation of the design process. Students will build prototypes or use simulation software to test their designs. Additionally, students will explore career opportunities, employer expectations, and educational needs in the robotic and automation industry.

ROBOTICS II (1929)
TSDS PEIMS Code: 13037050 (ROBOTIC2)
Grade Placement: 10–12
Credit: 1
Prerequisite: Robotics l.
In Robotics II, students will explore artificial intelligence and programming in the robotic and automation industry. Through implementation of the design process, students will transfer academic skills to component designs in a project-based environment. Students will build prototypes and use software to test their designs.

PRACTICUM IN MANUFACTURING (1933)
TSDS PEIMS Code:
13033000 (First Time Taken) (PRACMAN1)
13033010 (Second Time Taken) (PRACMAN2)
Grade Placement: 12
Credit: 2
Prerequisite: None.
The Practicum in Manufacturing course is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

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Career and Technical Education

Public Service Endorsement

Education & Training

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

PUBLIC SERVICES ENDORSEMENT – 3 or more courses for 4 or more credits

Cluster	Program of Study	9th Grade (Level 1)	10th Grade (Level 2)	11th Grade (Level 3)	12th Grade (Level 4)
Education & Training	**Teaching and Training** (Teaching/Education)	1768 Principles of Human Services (1 Credit)	1779 Child Development (1 Credit)	1771 Instructional Practices in Education (2 Credits) (Ready, Set, Teach) *Tx Agri-Life (Local), CPR*	1772 Practicum in Education & Training (2 Credits) (Ready, Set, Teach) Tx Agri-Life (Local) 1752 Career Prep (2 Credits) *OSHA 10 HR (Local)* 1752 Extended Career Prep (1 Credit) 1726 Project Based Research (1 Credit)

Participation in career and technical student organizations and other leadership or extracurricular organizations is encouraged.

TAFE Texas Association of Future Educators

FCCLA Family, Career and Community Leaders of America — The Ultimate Leadership Experience

EDUCATION & 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.

PRINCIPLES OF HUMAN SERVICES (1768)

TSDS PEIMS Code: 13024200 (PRINHUSR)
Grade Placement: 9–12
Credit: 1
Prerequisite: None.
Principles of Human Services is a laboratory course that will enable students to investigate careers in the Human Services Career Cluster, including counseling and mental health, early childhood development, family and community, personal care, and consumer services. Each student is expected to complete the knowledge and skills essential for success in high-skill, high-wage, or high-demand human services careers.

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CHILD DEVELOPMENT (1779)
TSDS PEIMS Code: 13024700 (CHILDDEV)
Grade Placement: 10–12
Credit: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Human Services.
Child Development is a technical laboratory course that addresses knowledge and skills related to child growth and development from prenatal through school-age children, equipping students with child development skills. Students use these skills to promote the well-being and healthy development of children and investigate careers related to the care and education of children.

INSTRUCTIONAL PRACTICES (1771 – Ready, Set, Teach I)
TSDS PEIMS Code: 13014400 (INPRAC)
Grade Placement: 11–12
Credit: 2
Prerequisite: None.
Recommended Prerequisites: Principles of Education and Training and Human Growth and Development.
Instructional Practices is a field-based (practicum) internship that provides students with background knowledge of child and adolescent development as well as principles of effective teaching and training practices. Students work under the joint direction and supervision of both a teacher with knowledge of early childhood, middle childhood, and adolescence education and exemplary educators or trainers in direct instructional roles with elementary-, middle school-, and high school-aged students.
Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, develop materials for educational environments, assist with record keeping, and complete other responsibilities of teachers, trainers, paraprofessionals, or other educational personnel.

PRACTICUM IN EDUCATION AND TRAINING (1772 – Ready, Set, Teach II)
TSDS PEIMS Code:
13014500 (First Time Taken) (PRACEDT1)
13014510 (Second Time Taken) (PRACEDT2)
Grade Placement: 12
Credit: 2
Prerequisite: Instructional Practices.
Recommended Prerequisites: Principles of Education and Training and Human Growth and Development.
Practicum in Education and Training is a field-based internship that provides students background knowledge of child and adolescent development principles as well as principles of effective teaching and training practices. Students in the course work under the joint direction and supervision of both a teacher with knowledge of early childhood, middle childhood, and adolescence education and exemplary educators in direct instructional roles with elementary-, middle school-, and high school-aged students. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, assist with record keeping, make physical arrangements, and complete other responsibilities of classroom teachers, trainers, paraprofessionals, or other educational personnel.

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Career and Technical Education

Public Service Endorsement

Human Services

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

PUBLIC SERVICES ENDORSEMENT – 3 or more courses for 4 or more credits

Cluster	Program of Study	9th Grade (Level 1)	10th Grade (Level 2)	11th Grade (Level 3)	12th Grade (Level 4)
Human Services	Family and Community Services	1768 Principles of Human Services (1 Credit)	1779 Child Development (1 Credit)	1757 Counseling and Mental Health (1 Credit)	1786 Practicum in Human Services II (PALs) (2 Credits) *Tx Agri-Life (Local), CPR (Local)*
			1773 Lifetime Nutrition and Wellness (.5 Credit)	1781 Practicum in Human Services I (PALs) (2 Credits) *Tx Agri-Life (Local), CPR (Local)*	1752 Career Prep (2 Credits) *OSHA 10 HR (Local)*
			1715 Dollar and Sense (.5 Credit)		1752 Extended Career Prep (1 Credit)
	(Counseling/Mentor)				1726 Project Based Research (1 Credit)

TAFE
Texas Association of Future Educators

FCCLA
Family, Career and Community Leaders of America
The Ultimate Leadership Experience

Participation in career and technical student organizations and other leadership or extracurricular organizations is encouraged.

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.

PRINCIPLES OF HUMAN SERVICES (1768)

TSDS PEIMS Code: 13024200 (PRINHUSR)
Grade Placement: 9–12
Credit: 1
Prerequisite: None.
Principles of Human Services is a laboratory course that will enable students to investigate careers in the Human Services Career Cluster, including counseling and mental health, early childhood development, family and community, personal care, and consumer services. Each student is expected to complete the knowledge and skills essential for success in high-skill, high-wage, or high-demand human services careers.

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CHILD DEVELOPMENT (1779)
TSDS PEIMS Code: 13024700 (CHILDDEV)
Grade Placement: 10–12
Credit: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Human Services.
Child Development is a technical laboratory course that addresses knowledge and skills related to child growth and development from prenatal through school-age children, equipping students with child development skills. Students use these skills to promote the well-being and healthy development of children and investigate careers related to the care and education of children.

LIFETIME NUTRITION and WELLNESS (1773)
TSDS PEIMS Code: 13024500 (LNURTWEL)
Grade Placement: 9–12
Credit: .5
Prerequisite: None.
Recommended Prerequisite: Principles of Human Services, Principles of Hospitality and Tourism, or Principle of Health Science.
Lifetime Nutrition and Wellness is a laboratory course that allows students to use principles of lifetime wellness and nutrition to help them make informed choices that promote wellness as well as pursue careers related to hospitality and tourism, education and training, human services, and health sciences.

COUNSELING AND MENTAL HEALTH (1757)
TSDS PEIMS Code: 13024600 (COUNSMH)
Grade Placement: 11–12
Credit: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Human Services.
In Counseling and Mental Health, students model the knowledge and skills necessary to pursue a counseling and mental health career through simulated environments. Students are expected to apply knowledge of ethical and legal responsibilities, limitations on their actions and responsibilities, and the implications of their actions. Students understand how professional integrity in counseling and mental health care is dependent on acceptance of ethical and legal responsibilities.

DOLLARS AND SENSE (1715)
TSDS PEIMS Code: 13024300 (DOLLARSE)
Grade Placement: 11–12
Credit: .5
Prerequisite: None.
Recommended Prerequisite: Principles of Human Services.
Dollars and Sense focuses on consumer practices and responsibilities, money-management processes, decision-making skills, impact of technology, and preparation for human services careers.

PRACTICUM IN HUMAN SERVICES I AND II (1781/1786) – PALS I and PALS II)
TSDS PEIMS Code:
13025000 (First Time Taken) (PRACHUS1)
13025010 (Second Time Taken) (PRACHUS2)
Grade Placement: 11–12
Credit: 2
Prerequisite: None.
Practicum in Human Services provides background knowledge and occupation-specific training that focuses on the development of consumer services, early childhood development and services, counseling and mental health services, and family and community-services careers. Content for Practicum in Human Services is designed to meet the occupational preparation needs and interests of students and should be based upon the knowledge and skills selected from two or more courses in a coherent sequence in the human services cluster. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

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Career and Technical Education

Public Service Endorsement

Health Science

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PUBLIC SERVICES ENDORSEMENT – 3 or more courses for 4 or more credits

Cluster	Program of Study	9th Grade (Level 1)	10th Grade (Level 2)	11th Grade (Level 3)	12th Grade (Level 4)
Human Services / Health Science	**Health Informatics (MBC)**	1754 Principles of Health Science (1 Credit)	1733 Business Information Management I (1 Credit)	1738 Health Informatics (1 Credit) Medical Coding and Billing Specialist (IBC), First AID, HIPAA, CPR, Bloodborne Pathogens (Local)	1726 Project Based Research (1 Credit)
	(Medical Billing and Coding)	1755 Medical Terminology (1 Credit)			
Health Science	**Nursing Science (CNA)**	1754 Principles of Health Science (1 Credit)	1755 Medical Terminology (1 Credit)	1756 Health Science Theory (1 Credit) * Required for Practicum Classes	1930 Practicum in Health Science (2 Credits) *Certified Nurse Aide/Assistant (CNA) (IBC)*, *First AID, HIPAA, CPR, Bloodborne Pathogens (Local)*
				1790 Anatomy & Physiology (1 Credit) * Science credit	1760 Pathophysiology (1 Credit) * Science credit
	(Certified Nurse Aide/Assistant)			1759 Medical Microbiology (1 Credit)	
Health Science	**Healthcare Therapeutic Services (CCMA)**	1754 Principles of Health Science (1 Credit)	1755 Medical Terminology (1 Credit)	1756 Health Science Theory (1 Credit) * Required for Practicum Classes	1931 Practicum in Health Science (2 Credits) *Clinical Medical Assistant (IBC)*, *First AID, HIPAA, CPR, Bloodborne Pathogens (Local)*
				1790 Anatomy & Physiology (1 Credit) * Science credit	1760 Pathophysiology (1 Credit) * Science credit
				1759 Medical Microbiology (1 Credit) * Science credit	
Health Science	**Healthcare Diagnostics (Radiology)**	1754 Principles of Health Science (1 Credit)	1755 Medical Terminology (1 Credit)	1756 Health Science Theory (1 Credit) * Required for Practicum Classes	1791 Practicum in Health Science (2 Credits) *Radiology Technician (IBC)*, *First AID, HIPAA, CPR, Bloodborne Pathogens (Local)*
				1759 Medical Microbiology (1 Credit) * Science credit	1790 Anatomy & Physiology (1 Credit) * Science credit
	(Radiology)				1760 Pathophysiology (1 Credit) * Science credit

Participation in career and technical student organizations and other leadership or extracurricular organizations is encouraged.

hosa
future health professionals

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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.

PRINCIPLES OF HEALTH SCIENCE (1754)

TSDS PEIMS Code: 13020200 (PRINHLSC)
Grade Placement: 9–10
Credit: 1
Prerequisite: None.
The Principles of Health Science course is designed to provide an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the health care industry.

MEDICAL TERMINOLOGY (1755)

TSDS PEIMS Code: 13020300 (MEDTERM)
Grade Placement: 9–12
Credit: 1
Prerequisite: None.
The Medical Terminology course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

HEALTH SCIENCE THEORY (1756)

TSDS PEIMS Code: 13020400 (HLTHSCI)
Grade Placement: 10–12
Credit: 1
Prerequisites: Biology.
Recommended Corequisite: Health Science Clinical.
The Health Science Theory course is designed to provide for the development of advanced knowledge and skills related to a wide variety of health careers. Students will employ hands-on experiences for continued knowledge and skill development.

MEDICAL MICROBIOLOGY (1759)

TSDS PEIMS Code: 13020700 (MICRO)
Grade Placement: 10–12
Credit: 1
Prerequisites: Biology and Chemistry.
Recommended Prerequisites: A course from the Health Science Career Cluster.
The Medical Microbiology course is designed to explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug resistant organisms, and emerging diseases. Students must meet the 40% laboratory and fieldwork requirement. This course satisfies a high school science graduation requirement.
Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

MEDICAL MICROBIOLOGY DUAL CREDIT (1761)

Grade Placement: 10-12
Credit: 1
Prerequisite: successful completion of Biology AND Chemistry.
Recommended: Successful completion of another Health Science course
The Medical Microbiology course is designed to explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug resistant organisms, and emerging diseases. Students must meet the 40% laboratory and fieldwork requirement. This course satisfies a high school science graduation requirement.
*Please see the information about Dual Credit at the end of the Course Description section to learn about college application and testing requirements.

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PATHOPHYSIOLOGY (1760)
TSDS PEIMS Code: 13020800 (PATHO)
Grade Placement: 11–12
Credit: 1
Prerequisites: Biology and Chemistry.
Recommended Prerequisite: A course from the Health and Science Career Cluster.
The Pathophysiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Pathophysiology will study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of disease. Students will differentiate between normal and abnormal physiology.
Students should know that some questions are outside the realm of science because they deal with phenomena that are not scientifically testable. Note: This course satisfies a science credit requirement for students on the Foundation
High School Program.

HEALTH INFORMATICS (1738) (MEDICAL BILLING AND CODING)
TSDS PEIMS Code: 13020960 (HLTHINF)
Grade Placement: 11–12
Credit: 1
Prerequisites: Business Management l and Medical Terminology.
The Health Informatics course is designed to provide knowledge of one of the fastest growing areas in both academic and professional fields. The large gap between state of the art computer technologies and the state of affairs in health care information technology has generated demand for information and health professionals who can effectively design, develop, and use technologies such as electronic medical records, patient monitoring systems, and digital libraries, while managing the vast amount of data generated by these systems.

BUSINESS INFORMATION MANAGEMENT 1 (BIM I) (1733)
TSDS PEIMS Code: 13011400 (BUSIM1)
Grade Placement: 9–12
Credits: 1
Prerequisite: None.
Recommended Prerequisite: Touch System Data Entry.
Recommended Corequisite: Business Lab.
In Business Information Management I, students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, create word processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software.

ANATOMY AND PHYSIOLOGY (1790)
TSDS PEIMS Code: 13020600 (ANATPHYS)
Grade Placement: 10–12
Credit: 1
Prerequisite: Biology and a second science credit.
Recommended Prerequisite: A course from the Health and Science Career Cluster.
The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.
Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

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PRACTICUM IN HEALTH SCIENCE (1791) – Radiology (Course location - Clemens)
PRACTICUM IN HEALTH SCIENCE (1930) Certified Nursing Assistant (Course location - Steele)
PRACTICUM IN HEALTH SCIENCE (1931) Certified Clinical Medical Assistant (Course location - Steele)
TSDS PEIMS Code:
13020500 (First Time Taken) (PRACHLS1)
13020510 (Second Time Taken) (PRACHLS2)
Grade Placement: 11–12
Credit: 2
Prerequisites: Health Science Theory and Biology.
The Practicum in Health Science course is designed to give students practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

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Law, Public Safety, Corrections & Security

Career and Technical Education

Public Service Endorsement

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

PUBLIC SERVICES ENDORSEMENT – 3 or more courses for 4 or more credits

Cluster	Program of Study	9th Grade (Level 1)	10th Grade (Level 2)	11th Grade (Level 3)	12th Grade (Level 4)
Human Services / Law, Public Safety, Corrections & Security	**Law Enforcement**	1762 Principles of Law, Public Safety, Corrections, & Security (1 Credit), *CPR & First AID (Local)*	1763 Law Enforcement I (1 Credit)	1764 Law Enforcement II (1 Credit) *TABC (Local)*	1765 Forensic Science (1 Credit) * Science credit 1940 Practicum in LPSCS (2 Credit) 1757 Counseling and Mental Health (1 Credit)
Law, Public Safety, Corrections & Security	**Legal Studies**	1762 Principles of Law, Public Safety, Corrections, & Security (1 Credit), CPR & First AID (Local)	1732 Business Law (1 Credit)	1767 Courts Systems (1 Credit)	1940 Practicum in LPSCS (2 Credit) *Stenography (LOCAL)*

Texas Public Service Association T.P.S.A.

Participation in career and technical student organizations and other leadership or extracurricular organizations is encouraged.

SkillsUSA

LAW, PUBLIC SAFETY, CORRECTIONS & SECURITIES CAREER CLUSTER

Careers in planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical services.

PRINCIPLES OF LAW, PUBLIC SAFETY, CORRECTIONS AND SECURITY (1762)

TSDS PEIMS Code: 13029200 (PRINLPCS)
Grade Placement: 9–12
Credit: 1
Prerequisite: None.

Principles of Law, Public Safety, Corrections, and Security introduces students to professions in law enforcement, protective services, corrections, firefighting, and emergency management services. Students will examine the roles and responsibilities of police, courts, corrections, private security, and protective agencies of fire and emergency services. The course provides students with an overview of the skills necessary for careers in law enforcement, fire service, protective services, and corrections.

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LAW ENFORCEMENT I (1763)
TSDS PEIMS Code: 13029300 (LAWENF1)
Grade Placement: 10–12
Credit: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Law, Public Safety, Corrections, and Security.
Law Enforcement I is an overview of the history, organization, and functions of local, state, and federal law enforcement. Students will understand the role of constitutional law at local, state, and federal levels; the U.S. legal system; criminal law; and law enforcement terminology and the classification and elements of crime.

LAW ENFORCEMENT II (1764)
TSDS PEIMS Code: 13029400 (LAWENF2)
Grade Placement: 10–12
Credit: 1
Prerequisite: None.
Recommended Prerequisite: Law Enforcement l.
Law Enforcement II provides the knowledge and skills necessary to prepare for a career in law enforcement. Students will understand ethical and legal responsibilities, patrol procedures, first responder roles, telecommunications, emergency equipment operations, and courtroom testimony.

FORENSIC SCIENCE (1765)
TSDS PEIMS Code: 13029500 (FORENSCI)
Grade Placement: 11–12
Credit: 1
Prerequisites: Biology and Chemistry.
Recommended Prerequisite or Corequisite: Any Law, Public Safety, Corrections, and
Security Career Cluster course.
Forensic Science is a course that introduces students to the application of science to connect a violation of law to a specific criminal, criminal act, or behavior and victim. Students will learn terminology and procedures related to the search and examination of physical evidence in criminal cases as they are performed in a typical crime laboratory. Using scientific methods, students will collect and analyze evidence such as fingerprints, bodily fluids, hairs, fibers, paint, glass, and cartridge cases. Students will also learn the history and the legal aspects as they relate to each discipline of forensic science. Scientific methods of investigation can be experimental, descriptive, or comparative. The method chosen should be appropriate to the question being asked.

Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

COUNSELING AND MENTAL HEALTH (1757)
TSDS PEIMS Code: 13024600 (COUNSMH)
Grade Placement: 11–12
Credit: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Human Services.
In Counseling and Mental Health, students model the knowledge and skills necessary to pursue a counseling and mental health career through simulated environments. Students are expected to apply knowledge of ethical and legal responsibilities, limitations on their actions and responsibilities, and the implications of their actions. Students understand how professional integrity in counseling and mental health care is dependent on acceptance of ethical and legal responsibilities.

BUSINESS LAW (1732)
TSDS PEIMS Code: 13011700 (BUSLAW)
Grade Placement: 11–12
Credits: 1
Prerequisite: None.
Business Law is designed for students to analyze various aspects of the legal environment, including ethics, the judicial system, contracts, personal property, sales, negotiable instruments, agency and employment, business organization, risk management, and real property.

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COURT SYSTEMS AND PRACTICES (1767)
TSDS PEIMS Code: 13029600 (COURTSP)
Grade Placement: 10–12
Credit: 1
Prerequisite: None.
Recommended Prerequisite: Law Enforcement l or Principles of Government or Public Administration.
Court Systems and Practices is an overview of the federal and state court systems. The course identifies the roles of judicial officers and the trial processes from pretrial to sentencing and examines the types and rules of evidence. Emphasis is placed on constitutional laws for criminal procedures such as search and seizure, stop and frisk, and interrogation.

PRACTICUM IN LAW (1940)
TSDS PEIMS Code:
13030100 (First Time Taken) (PRACLPS1)
13030110 (Second Time Taken) (PRACLPS2)
Grade Placement: 11–12
Credit: 2
Prerequisite: None.
The practicum course is designed to give students supervised practical application of previously studied knowledge and skills in law, public safety, corrections, and security. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

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Science, Technology, Engineering & Mathematics

Career and Technical Education

STEM Endorsement

Levels*: refer to the recommended order for stackable knowledge and skills a student should obtain as they progress through the sequence. They do not represent grade bands and there is flexibility in how districts can offer courses between levels. Local Implementation Considerations:

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

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

STEM ENDORSEMENT – 3 or more courses for 4 or more credits

Cluster	Program of Study	9th Grade (Level 1)	10th Grade (Level 2)	11th Grade (Level 3)	12th Grade (Level 4)
	Engineering Design	1788 Principles of Applied Engineering (1 Credit)	1785 Engineering Design & Presentation I (1 Credit) *Autodesk Certified User: Auto CAD and Inventor (Local)*	1744 Engineering Design & Presentation II (2 Credit)	1745 Engineering Design & Problem Solving (1 Credit) * Science credit
				Autodesk Certified User: Auto CAD and Inventor (Local)	1908 Practicum in STEM (2 Credit)
					1752 Career Prep (2 Credits) *OSHA 10 HR (Local)*
					1752 Extended Career Prep (1 Credit)
	Programming and Software Development	1282 Computer Science I (1 Credit)	1916 AP Computer Science Principles (1 Credit) College Credit	1283 AP Computer Science A (2 Credits) College Credit	1741 Practicum in Information Technology (2 Credits)
					1921 Practicum in Audio/Video Production (2 Credits)
	(Computer Science)			1992 Computer Science II (1 Credit)	1752 Career Prep (2 Credits) *OSHA 10 HR (Local)*
	Cyber Security	1743 Principles of Information Technology (1 Credit)	1913 Foundation of Cybersecurity (1 Credit)	1918 Networking with Lab (2 Credits) *CompTIA Security+ (IBC)*	1741 Practicum in Information Technology (2 Credits)
					1934 Cybersecurity Capstone (1 Credit), *Cisco Certified Network Associate (CCNA 1 Credit and CCNA 2 Credits) (Local)*
					1726 Project Based Research (1 Credit)

SkillsUSA

Participation in career and technical student organizations and other leadership or extracurricular organizations is encouraged.

CYBER PATRIOT — NATIONAL HIGH SCHOOL CYBER DEFENSE COMPETITION

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SCIENCE, TECHNOLOGY, ENGINEERING and MATHEMATICS (STEM) CAREER CLUSTER

Careers in planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services

PRINCIPLES OF APPLIED ENGINEERING (1788)

TSDS PEIMS Code: 13036200 (PRAPPENG)
Grade Placement: 9–10
Credit: 1
Prerequisite: None.
Principles of Applied Engineering provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will develop engineering communication skills, which include computer graphics, modeling, and presentations, by using a variety of computer hardware and software applications to complete assignments and projects. Upon completing this course, students will understand the various fields of engineering and will be able to make informed career decisions. Further, students will have worked on a design team to develop a product or system. Students will use multiple software applications to prepare and present course assignments.

FOUNDATIONS OF CYBERSECURITY (1913)

TSDS PEIMS Code: N13002810 (CYBRSEC)
Grade Placement: 9–12
Credit: 1
Prerequisite: None.
This course develops the knowledge and skills needed to master fundamental concepts of cybersecurity. Students in the course will develop a basic foundation for continuing their cybersecurity education and choosing a career in the cybersecurity field. Students will explore the challenges facing information security professionals related to ethics, system security, network security, and application security. Students will conduct risk assessments and develop and implement security policies to mitigate those risks. Students will examine trends in cyberattacks, common vulnerabilities, and the emergence of cyber terrorism.

PRINCIPLES OF INFORMATION TECHNOLOGY (1743)

TSDS PEIMS Code: 13027200 (PRINIT)
Grade Placement: 9–10
Credit: 1
Prerequisites: None
In Principles of Information Technology, students will develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students will enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment

COMPUTER SCIENCE I (1282)

TSDS PEIMS Code: 03580200
Grade Placement: 9–12
Credit: 1
Prerequisite: Algebra I
Computer Science I will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations, systems, and concepts.

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COMPUTER SCIENCE II (1992)
TSDS PEIMS Code: 03580300
Grade Placement: 11–12
Credit: 1
Prerequisite: Algebra I and either Computer Science I or Fundamentals of Computer Science
Computer Science II will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of computer science through the study of technology operations, systems, and concepts.

NETWORKING w/Lab (1918)
Networking/Networking Lab
TSDS PEIMS Code: 13027410 (NETWRLAB)
Grade Placement: 10–12
Credit: 2
Prerequisite: None.
Recommended Prerequisites: Principles of Information Technology, Computer Maintenance, and Computer Maintenance Lab.
Corequisite: Networking.
In Networking Lab, students will develop knowledge of the concepts and skills related to telecommunications and data networking technologies and practices to apply them to personal or career development. To prepare for success, students must have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. This course must be taken concurrently with Networking and may not be taken as a stand-alone course. Districts are encouraged to offer this course in a consecutive block with Networking to allow students sufficient time to master the content of both courses.

CYBERSECUIRTY CAPSTONE (1934)
TSDS PEIMS Code: 03580855
Grade Placement: 11–12
Credit: 1
Prerequisite: Foundations of Cyber Security
Recommended Prerequisites:
In the Cybersecurity Capstone course, students will develop the knowledge and skills needed to explore advanced concepts related to the ethics, laws, and operations of cybersecurity. Students will examine trends and operations of cyberattacks, threats, and vulnerabilities. Students will develop security policies to mitigate risks. The skills obtained in this course prepare students for additional study toward industry certification. A variety of courses are available to students interested in the cybersecurity field. Cybersecurity Capstone may serve as a culminating course in this field of study

PRACTICUM IN INFORMATION TECHNOLOGY (1719)
TSDS PEIMS Code:
13028000 (First Time Taken) (PRACIT1)
13028010 (Second Time Taken) (PRACIT2)
Grade Placement: 12
Credit: 2
Prerequisite: A minimum of two high school information technology (IT) courses.
In the Practicum in Information Technology, students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an industry mentor, as an unpaid or paid internship, as part of a capstone project, or as career preparation.

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ENGINEERING DESIGN AND PRESENTATION I (1785)
TSDS PEIMS Code: 13036500 (ENGDSPR1)
Grade Placement: 10–12
Credit: 1
Prerequisite: Algebra l.
Recommended Prerequisite: Principles of Applied Engineering.
Engineering Design and Presentation I is a continuation of knowledge and skills learned in
Principles of Applied Engineering. Students enrolled in this course will demonstrate knowledge and skills of the design process as it applies to engineering fields using multiple software applications and tools necessary to produce and present working drawings, solid model renderings, and prototypes. Students will use a variety of computer hardware and software applications to complete assignments and projects. Through implementation of the design process, students will transfer advanced academic skills to component designs. Additionally, students explore career opportunities in engineering, technology, and drafting and what is required to gain and maintain employment in these areas.

ENGINEERING DESIGN AND PRESENTATION II (1744)
TSDS PEIMS Code: 13036600 (ENGDSPR2)
Grade Placement: 11–12
Credit: 2
Prerequisites: Algebra l and Geometry.
Recommended Prerequisite: Principles of Applied Engineering or Engineering Design and Presentation l.
Engineering Design and Presentation II is a continuation of knowledge and skills learned in Engineering Design and Presentation I. Students enrolled in this course will demonstrate knowledge and skills of the design process as it applies to engineering fields using multiple software applications and tools necessary to produce and present working drawings, solid model renderings, and prototypes. Students will use a variety of computer hardware and software applications to complete assignments and projects. Through implementation of the design process, students will transfer advanced academic skills to component designs. Emphasis will be placed on using skills from ideation through prototyping.

ENGINEERING DESIGN AND PROBLEM SOLVING (1745)
TSDS PEIMS Code: 13037300 (ENGDPRS)
Grade Placement: 11–12
Credit: 1
Prerequisites: Algebra l and Geometry.
Recommended Prerequisites: two Science, Technology, Engineering, and Mathematics
Career Cluster credits.
The Engineering Design and Problem-Solving course is the creative process of solving problems by identifying needs and then devising solutions. The solution may be a product, technique, structure, or process depending on the problem. Science aims to understand the natural world, while engineering seeks to shape this world to meet human needs and wants. Engineering design takes into consideration limiting factors or "design under constraint." Various engineering disciplines address a broad spectrum of design problems using specific concepts from the sciences and mathematics to derive a solution. The design process and problem solving are inherent to all engineering disciplines. This course satisfies a high school science graduation requirement. Students shall be awarded one credit for successful completion of this course.
Note: This course satisfies a science credit requirement for students on the Foundation
High School Program.

SCIENTIFIC RESEARCH AND DESIGN (1799)
TSDS PEIMS Code:
13037200 (First Time Taken) (SCRID)
13037210 (Second Time Taken) (SCRID2)
13037220 (Third Time Taken) (SCRID3)
Grade Placement: 11–12
Credit: 1
Prerequisite: Biology, Chemistry, Integrated Physics, and Chemistry (IPC), or Physics.
Scientific Research and Design is a broad-based course designed to allow districts and schools considerable flexibility to develop local curriculum to supplement any program of study or coherent sequence. The course has the components of any rigorous scientific or engineering program of study from the problem identification, investigation design, data collection, data analysis, formulation, and presentation of the conclusions. These components are integrated with the career and technical education emphasis of helping students gain entry-level employment in high-skill, high-wage jobs and/or continue their education. Students must meet the 40% laboratory and fieldwork requirement. This course satisfies a high school science graduation requirement. Students may take this course with different course content for a maximum of three credits.

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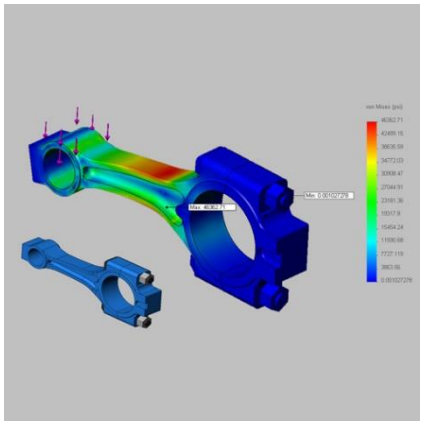
AP COMPUTER SCIENCE PRINCIPLES (1916)
TSDS PEIMS Code:A3580300
Grade Placement: 9-12
Credit: 1
Prerequisites: Algebra
The AP computer science principles course is designed to be equivalent to a firs-semester introductory college computing course. Students will develop computational thinking skills vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course engages students in the creative aspects of the field by allowing them to develop computational artifacts based on their interests.

AP COMPUTER SCIENCE A (1283)
TSDS PEIMS Code: A3580100 (APTACSA)
Grade Placement: 9-12
Credit: 2
Prerequisites: Algebra l and Geometry.
As introductory course to computer science, students will learn the basic structure and theories of computer programming to solve problems and create software. The course focuses on the AP Java subset (standard Java) programing language and no previous computer knowledge is required. This course counts as a fourth year math course and is recommended for any student pursuing a STEM career.

PRACTICUM IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (1908)
TSDS PEIMS Code:
13037400 (First Time Taken) (PRCSTEM1)
13037410 (Second Time Taken) (PRCSTEM2)
Grade Placement: 12
Credit: 2
Prerequisites: Algebra l and Geometry.
Recommended Prerequisites: two Science, Technology, Engineering, and Mathematics (STEM) Career Cluster credits. Practicum in STEM is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.



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