KELLER ISD CTE

INNOVATE • COLLABORATE • EDUCATE

CAREER AND TECHNICAL EDUCATION (CTE)

kellerisd.net/cte

Career and Technical Education (CTE) is a dynamic educational pathway designed to prepare high school students for a successful future in a wide range of industries. Unlike traditional classroom learning, CTE integrates academic knowledge with practical, hands-on skills, enabling students to explore their passions, gain valuable industry-specific experience, and chart a course toward a fulfilling career. At Keller ISD, we are committed to providing an enriching CTE program that opens doors to endless opportunities for our students.

CTE encompasses a variety of courses and programs that focus on specific career fields such as healthcare, engineering, business, information technology, culinary arts, and many others. These courses are carefully designed to equip students with the skills, knowledge, and attitudes necessary to thrive in the workforce. Through a blend of classroom instruction, real-world projects, internships, and mentorships, CTE empowers students to make informed decisions about their future careers.

Opportunities Through CTE:

- Hands-On Learning
- Industry-Relevant Skills
- Certifications and Credentials
- Career Exploration
- College Credit Opportunities
- Professional Networks
- Internships and Work Based Learning

In Keller ISD CTE, we recognize the immense potential of our students and are dedicated to nurturing their talents through our comprehensive CTE program. By engaging in hands-on learning, gaining industry-specific skills, and exploring diverse career options, our students are well-prepared to embark on successful and fulfilling careers. We invite students to explore the world of opportunities available through CTE, guiding them toward a future filled with achievement and personal growth.

CTE Programs of Study

Business & Industry Endorsement	Public Services Endorsement	STEM Endorsement
• Accounting & Financial Services • Architectural Design • Automotive • Business Management • Construction Technology • Culinary Arts • Design & Multimedia Arts • Digital Communications • Electrical Technology • Floral Design • HVAC (Heating, Ventilation & Air Conditioning) • Interior Design • Marketing • Networking & Cybersecurity • Plumbing Technology • Veterinary Studies • Welding	• Cosmetology • Health Science: Medical Lab Assistant • Health Science: Certified Nursing Assistant • Health Science: Clinical Rotations • Health Science: Emergency Medical Technician • Health Science: Pharmacy • Health Science: Exercise Science & Sports Medicine • Law Enforcement • Legal Studies • Teaching and Training	• Networking & Cybersecurity • Engineering • Programming & Software Development

Courses in CTE are offered at the following high school campuses:

- Keller Center for Advanced Learning (KCAL)
- Keller Collegiate Academy (KCA)
- Central High School (CHS)
- Fossil Ridge High School (FRHS)
- Keller High School (KHS)
- Timber Creek High School (TCHS)
- Keller Compass Center (KCC)

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade	Optional Electives
Veterinary Studies	**Principles of Agriculture, Food and Natural Resources** (1 credit)	**Veterinary Science** (1 credit)	**Advanced Animal Science** (1 credit) **AND Scientific Research & Design: Veterinary Clinical Skills** (1 credit)	**Practicum in Agriculture, Food and Natural Resources** (2 credits) **OR Career Preparation I** (2 or 3 credits) **OR Livestock and Poultry Production** (1 credit) **OR Wildlife, Fisheries, & Ecology Mgt** (1 credit) **OR Small Animal Management & Equine Science** (.5 credit each)	**Wildlife, Fisheries, and Ecology Management** (1 credit) **Small Animal Management** (.5 credit) **Equine Science** (.5 credit) **Agribusiness Mgmt. and Marketing** (1 credit) **Livestock and Poultry Production** (1 credit) **Introduction to Welding** (1 credit)
Floral Design	**Principles of Agriculture, Food and Natural Resources** (1 credit)	**Floral Design** (1 credit)	**Advanced Floral Design** (1 credit)	**Practicum in Agriculture, Food and Natural Resources** (2 credits) **OR Career Preparation I** (2 or 3 credits)	**Agribusiness Management and Marketing** (1 credit)

Optional electives **do not replace required pathway courses**

Industry Based Certification Opportunities
Certified Veterinary Assistant (CVA) Equine Specialist (iCEV) Elanco Veterinary Medical Applications (iCEV) Elanco Animal Science (iCEV) TSFA Level 1 Floral TSFA Knowledge Based Floral
Career and Technical Student Organization (CTSO)
National FFA Organization

Additional Course Information
Credits: Advanced Animal Science, Scientific Research & Design: Veterinary Clinical Skills can be used for science credit. Floral Design can be used for fine arts credit. Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Principles of Agriculture, Food, and Natural Resources

TEDS: 13000200 **KISD:** 81100
Credit: 1
Grade: 9-11
Prerequisite: None

To be prepared for careers in agriculture, food, and natural resources, students must attain academic skills and knowledge in agriculture. This course allows students to develop knowledge and skills regarding career opportunities, personal development, globalization, industry standards, details, practices, and expectations. To prepare for success, students need to have opportunities to learn, reinforce experience, apply, and transfer their knowledge and skills in a variety of settings.

Veterinary Science

TEDS: 13000600 **KISD:** 81105
Credit: 1
Grade: 11-12
Prerequisite: Principles of Agriculture, Food, and Natural Resources

To be prepared for careers in the field of animal science, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to animal systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills and technologies in a variety of settings. Topics covered in this course include, but are not limited to, veterinary practices as they relate to both large and small animal species.

Advanced Animal Science

TEDS: 13000700 **KISD:** 81106
Credit: 1
Grade: 11-12
Prerequisite: Veterinary Medical Applications

To be prepared for careers in the field of animal science, students need to attain academic skills and knowledge, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry standards. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. This course 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. This course counts as a science credit.

Advanced Animal Science Honors or Advanced Animal Science Dual

TEDS: 13000700 **KISD:** 82206
Credit: 1 **Dual Credit:** 81107
Grade: 11-12
Prerequisite: Veterinary Medical Applications

To be prepared for careers in the field of animal science, students need to attain academic skills and knowledge, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry standards. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. This course is a comprehensive examination of 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. This course is also offered as a dual credit course through Weatherford College: AGRI 1419 Animal Science. If enrolled in dual credit, students will receive both high school and college credit upon successful completion of the class. This is a college level class, which is designed for highly motivated students who are prepared to take a college course in high school. Students must register and pay for the course through Weatherford College. This course counts as a science credit.

Scientific Research and Design: Veterinary Clinical Skills or Scientific Research and Design: Veterinary Clinical Skills Honors

TEDS: 13037200 **KISD:** 81151
Credit: 1 **KISD Honors:** 82251
Grade: 11-12
Prerequisite: Veterinary Medical Applications

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. For Keller ISD, this course has been created to give students time to focus completely on veterinary clinical skills. Students will spend their time predominantly in a lab setting learning skills such as blood work, diagnostics, sterilization of equipment, bandaging and so on. Students should ideally take this course their junior year of high school as they prepare to do an internship through their senior practicum course. This course counts as a science credit.

Practicum in Agriculture, Food, and Natural Resources

TEDS: 13002500 **KISD:** 81161
Credit: 2
Grade: 11-12
Prerequisite: 3 credits of agriculture courses

This course is recommended for students in Grades 11-12. 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 cluster. Students can pursue externships at a variety of animal science related businesses in the Keller and Fort Worth area including, but not limited to, veterinary clinics, farms and ranches, equine facilities, dog grooming, and boarding facilities. Students may also choose to pursue an in-house internship housed at the Keller Center for Advanced Learning where they will work in the KCAL veterinary science lab with pets from the Keller community. Recommended Prerequisite: a minimum of three credits from the courses in the Agriculture, Food, and Natural Resources cluster.

Career Preparation or Career Preparation I/Extended Career Preparation

TEDS: 12701121 **KISD:** 82244
TEDS: 12701141 **KISD:** 82003
Credit: 3
Grade: 11-12
Prerequisite: 2 credits of agriculture courses

This course is a work-based instructional arrangement, which develops essential knowledge and skills through classroom, technical knowledge and on the job internships in any approved career-tech specific training area. Internship placement must be teacher approved and fall within the guidelines and requirements in order for students to qualify for enrollment in this program.

Wildlife, Fisheries, and Ecology Management

TEDS: 13001500 **KISD:** 81040
Credit: 1
Grade: 10-12
Prerequisite: Principles of Agriculture, Food, and Natural Resources

Wildlife, Fisheries, and Ecology Management examines the management of game and nongame wildlife species, fish, and aqua crops and their ecological needs as related to current agricultural practices. To prepare for careers in natural resource systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to natural resources, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

Small Animal Management

TEDS: 13000400 **KISD:** 81103
Credit: .5
Grade: 10-12
Prerequisite: Principles of Agriculture, Food, and Natural Resources

To be prepared for careers in the field of animal science, students need to enhance academic knowledge and skills, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills in a variety of settings. Suggested small animals which may be included in the course of study include, but are not limited to, small mammals, amphibians, reptiles, avian, dogs, and cats. Small Animal Management is taken concurrently with Equine Science.

Equine Science

TEDS: 13000500 **KISD:** 81104
Credit: .5
Grade: 10-12
Prerequisite: Principles of Agriculture, Food, and Natural Resources

To be prepared for careers in the field of animal science, students need to enhance academic knowledge and skills, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. Suggested animals which may be included in the course of study include, but are not limited to, horses, donkeys, and mules. Equine Science is taken concurrently with Small Animal Management.

Agribusiness Management and Marketing

TEDS: 13000900 **KISD:** 81060
Credit: 1
Grade: 11-12
Prerequisite: Principles of Agriculture, Food, and Natural Resources

This course will be taught as a junior and senior level FFA leadership class. The course is designed for those that are FFA officers or active in FFA to help develop their leadership and speaking potential. Students in this class will be expected to assist with the development, promotion, and everyday functioning of the KCAL FFA chapter.

Livestock and Poultry Production

TEDS: 13000300 **KISD:** 81108
Credit: 1
Grade: 10-12
Prerequisite: Principles of Agriculture, Food, and Natural Resources

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. To prepare for careers in the field of animal science, students must attain academic skills and knowledge, acquire knowledge and skills related to animal systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

Floral Design

TEDS: 13001800 **KISD:** 81800
Credit: 1
Grade: 9-12
Prerequisite: N/A

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. Floral Design satisfies a fine arts credit requirement for students on the Foundation High School Program.

Advanced Floral Design

TEDS: 13001850 **KISD:** 81810
Credit: 1
Grade: 11-12
Prerequisite: Floral Design

In this course, students build on the knowledge from the Floral Design course and are introduced to more advanced floral design concepts, with an emphasis on specialty designs and specific occasion planning. This course focuses on building skills in advanced floral design and providing students with a thorough understanding of the design elements and planning techniques used to produce unique specialty floral designs that support the goals and objectives of a specific occasion or event. Through the analysis and evaluation of various occasion and event types, students explore the design needs and expectations of clients and propose and evaluate appropriate creations. From conception to evaluation, students are challenged to create and design appropriate specialty floral designs that meet the needs of the client. Furthermore, an emphasis on budgetary adherence and entrepreneurship equips students with many of the necessary skills needed for success in floral enterprises.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade	Optional Electives
Architectural Design	**Principles of Architecture** (1 credit)	**Architectural Design I** (1 credit)	**Architectural Design II** (2 credits)	**Practicum in Architectural Design** (2 credits)	**Civil Engineering (Design and Presentation II)** (2 credits but taught in 1 period) **SR &D: UAV** (1 credit)
Construction Technology	**Principles of Construction** (1 credit)	**Construction Technology I** (2 credits)	**Construction Technology II** (2 credits)	**Practicum in Construction Technology** (2 credits)	**Introduction to Welding** (1 credit) **Entrepreneurship** (1 credit but taught in 1 semester) **SR &D: UAV** (1 credit)
HVAC (Heating, Ventilation and Air Conditioning)	**Principles of Construction** (1 credit)	**HVAC and Refrigeration Technology I** (1 credit) **AND Electrical Technology I** (1 credit)	**HVAC and Refrigeration Technology II** (2 credits)	**Practicum in Construction Technology** (2 credits)	**Introduction to Welding** (1 credit) **Construction Technology I** (2 credits) **Entrepreneurship** (1 credit but taught in 1 semester)
Plumbing Technology	**Principles of Construction** (1 credit)	**Plumbing Technology I** (1 credit) **AND Pipefitting Technology I** (1 credit)	**Plumbing Technology II** (2 credits)	**Practicum in Construction Technology** (2 credits)	**Introduction to Welding** (1 credit) **Construction Technology I** (2 credits) **Entrepreneurship** (1 credit but taught in 1 semester)
Electrical Technology	**Principles of Construction** (1 credit)	**Electrical Technology I** (1 credit)	**Electrical Technology II** (2 credits)	**Practicum in Construction Technology** (2 credits)	**Introduction to Welding** (1 credit), **Construction Technology I** (2 credits) **Entrepreneurship** (1 credit but taught in 1 semester)
Interior Design	**Principles of Architecture** (1 credit)	**Interior Design I** (1 credit)	**Interior Design II** (2 credits)	**Practicum in Interior Design** (2 credits)	**Architectural Design I** (1 credit), **Civil Engineering (Design and Presentation II)** (2 credits but taught in 1 period)

Optional electives **do not replace required pathway courses**

Industry Based Certification Opportunities
Autodesk Revit Certified User (Architecture) NCCER Core (Construction) NCCER Electrical Level 1 NCCER HVACR EPA 608 (HVAC) Tradesman Plumber - Limited
Career and Technical Student Organization (CTSO)
TSA—Technology Student Association SkillsUSA FCCLA—Family Career & Community Leaders of America

Additional Course Information
Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Principles of Architecture

TEDS: 13004210 **KISD:** 81200
Credit: 1
Grade: 9-11
Prerequisite: None

Principles of Architecture provides an overview of the various fields of architecture and interior design. Achieving proficiency in decision making and problem solving is an essential skill for career planning and lifelong learning. Students use self-knowledge, educational, and career information to set and achieve realistic career and educational goals. Safety and career opportunities are included, in addition to work ethics and job-related study in the classroom such as communications; problem solving and critical thinking; Information Technology Applications; systems; safety, health, and environmental; leadership and teamwork; ethics and legal responsibilities; employability and career development; technical skills; and reading technical drawings.

Architectural Design I

TEDS: 13004600 **KISD:** 81210
Credit: 1
Grade: 10-12
Prerequisite: Principles of Architecture

In Architectural Design I, students gain knowledge and skills specific to those needed to enter a career in architecture and construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, and landscape architecture. Architectural design includes the knowledge of design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for residential architectural purposes.

Architectural Design II

TEDS: 13004700 **KISD:** 81211
Credit: 2
Grade: 11-12
Prerequisite: Architectural Design I

In Architectural Design II, students gain advanced knowledge and skills specific to those needed to enter a career in architecture and construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, and landscape architecture. Architectural Design II includes the advanced knowledge of design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for commercial or multi-family architectural purposes.

Practicum in Architectural Design

TEDS: 13004800 **KISD:** 81213
Credit: 2
Grade: 11-12
Prerequisite: 3 credits in architectural design program including Architectural Design II

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. Instruction may be delivered through laboratory training or through career preparation delivery arrangements.

Principles of Construction

TEDS: 13004220 **KISD:** 81220
Credit: 1
Grade: 9-11
Prerequisite: None

Principles of Construction provides an overview of the various fields of construction science and construction technology. Achieving proficiency in decision making and problem solving is an essential skill for career planning and lifelong learning. Safety and career opportunities are included, in addition to work ethics and job-related study in the classroom such as communications; problem solving and critical thinking; Information Technology Applications; systems; safety, health, and environmental; leadership and teamwork; ethics and legal responsibilities; employability and career development; technical skills; introduction to hand tools; introduction to power tools; basic rigging.

Construction Technology I

TEDS: 13005100 KISD: 8825
Credits: 2
Grade: 10-12
Prerequisite: Principles of Construction

In Construction Technology I, students gain knowledge and skills specific to those needed to enter the work force as carpenters or building maintenance supervisors, or prepare for a postsecondary degree in construction management, architecture, or engineering. Students acquire knowledge and skills in safety, tool usage, building materials, codes, and framing.

Construction Technology II

TEDS: 13005200 KISD: 8827
Credits: 2
Grade: 11-12
Prerequisite: Construction Technology I

In Construction Technology II, students gain knowledge and skills specific to those needed to enter the workforce as carpenters or building maintenance supervisors or build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. Construction

Technology includes the knowledge of the design, techniques, and tools related to the management of architectural and engineering projects. Students will build on the knowledge base from Construction Technology I and are introduced to exterior and interior finish out skills.

Practicum in Construction Technology

TEDS: 13005250 **KISD:** 81225
Credits: 2
Grade: 12
Prerequisite: HVAC II, or Plumbing Technology II, or Electrical Technology II, or Construction Technology II

In Practicum in Construction Technology, students will be challenged with the application of knowledge and skills gained in previous construction-related coursework. In many cases students will be allowed to work at a job (paid or unpaid) outside of school or be involved in local projects the school has approved for this class.

Introduction to Welding

TEDS: 13032250 KISD: 8884
Credit: 1
Grade: 9-12
Prerequisite: None

Introduction to Welding will introduce welding technology with an emphasis on basic welding laboratory principles and operating procedures. Students will be introduced to the three basic welding processes. Topics include industrial safety and health practices, hand tool and power machine use, measurement, laboratory operating procedures, welding power sources, welding career potentials, and introduction to welding codes and standards. Introduction to Welding will provide students with the knowledge, skills, and technologies required for employment in welding industries. Students will develop knowledge and skills related to welding and apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills will prepare students for future success.

Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology

TEDS: 13005800 **KISD:** 84011
Credit: 1
Grade: 10-12
Prerequisite: Principles of Construction

In Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology I, students will gain knowledge and skills needed to enter the industry as technicians in the HVAC and refrigeration industry or building maintenance industry, prepare for a postsecondary degree in a specified field of construction management, or pursue an approved apprenticeship program. Students will acquire knowledge and skills in safety, principles of HVAC theory, use of tools, codes, and installation of HVAC and refrigeration equipment.

Heating, Ventilation, and Air Conditioning (HVAC) & Refrigeration Technology II

TEDS: 13005900 **KISD:** 84012
Credits: 2
Grade: 11-12
Prerequisites: Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology I

In Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II, students will gain advanced knowledge and skills needed to enter the industry as HVAC and refrigeration technicians or building maintenance technicians or supervisors, prepare for a postsecondary degree in a specified field of construction or construction management, or pursue an approved apprenticeship program. Students will acquire knowledge and skills in safety, electrical theory, use of tools, codes, installation of commercial HVAC equipment, heat pumps, troubleshooting techniques, various duct systems, and maintenance practices.

Plumbing Technology I

TEDS: 13006000 **KISD:** 84014
Credit: 2
Grade: 10-12
Prerequisite: Principles of Construction

In Plumbing Technology, I, students will gain knowledge and skills needed to enter the industry as a plumbing apprentice, building maintenance technician, or supervisor or prepare for a postsecondary degree in construction management, architecture, or engineering. Students will acquire knowledge and skills in industry workplace basics and employer/customer expectations, including how to use a plumbing code book; how to identify and use power and hand tools; how to be safe on the job site and when using hand and power tools; how to apply basic plumbing mathematics and plumbing drawing; and how to identify, fit, and use plastic, copper, cast iron, carbon steel, and corrugated stainless steel pipe.

Plumbing Technology II

TEDS: 13006100 **KISD:** 84015
Credit: 2
Grade: 11-12
Prerequisite: Plumbing Technology I

In Plumbing Technology II, students will gain the advanced knowledge and skills needed to enter the industry as a plumber, building maintenance technician, or supervisor or prepare for a postsecondary degree in mechanical engineering. Students will acquire knowledge and skills in plumbing codes, industry workplace basics, and employer/customer expectations, including tool and jobsite safety, advanced plumbing mathematics, commercial drawings, basic electricity, hanger installation, supports and structural penetrations, roof drains, fixture installation, valves and faucets, and oxy-fuel safety. Students will also learn about setup, cutting, brazing, and welding water system sizing; gas, drain, waste and vent installation and testing; and water heater installation.

Pipefitting Technology I

TEDS: N1300425 **KISD:** 84016
Credit: 1
Grade: 10-12
Prerequisite: Principles of Construction

Students will learn the types of work performed, responsibilities and career opportunities within the industry, and safety principles associated with pipefitting. Additionally, students will learn care, selection, and use of hand and power tools of the trade and ladder and scaffold safety, selection, construction, and the associated hazards. Oxyfuel cutting and associated safety procedures will be reinforced. Students will learn the maintenance, operation, and safety of motorized equipment. This class may lead to the National Center for Construction Education and Research (NCCER) certification.

Electrical Technology I

TEDS: 13005600 **KISD:** 88820
Credit: 1
Grade: 10-12
Prerequisite: Principles of Construction

In Electrical Technology I, students will gain knowledge and skills needed to enter the workforce as an electrician or building maintenance supervisor, prepare for a postsecondary degree in a specified field of construction or construction management, or pursue an approved apprenticeship program. Students will acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, and the reading of electrical drawings, schematics, and specifications.

Electrical Technology II

TEDS: 13005700 **KISD:** 88821
Credits: 2
Grade: 11-12
Prerequisite: Electrical Technology I

In Electrical Technology II, students will gain advanced knowledge and skills needed to enter the workforce as an electrician, a building maintenance technician, or a supervisor; prepare for a postsecondary degree in a specified field of construction or construction management; or pursue an approved apprenticeship program. Students will acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, alternating current and direct current motors, conductor installation, installation of electrical services, and electric lighting installation.

Interior Design I

TEDS: 13004300 **KISD:** 81202
Credit: 1
Grade: 10-12
Prerequisite: Principles of Architecture

Interior Design I is a technical course that addresses psychological, physiological, and sociological needs of individuals by enhancing the environments in which they live and work. Individuals use knowledge and skills related to interior and exterior environments, construction, and furnishings to make wise consumer decisions, increase productivity, and compete in industry.

Interior Design II

TEDS: 13004400 **KISD:** 81203
Credit: 2
Grade: 11-12
Prerequisite: Interior Design I

Interior Design II is a technical laboratory course that includes the knowledge of the employability characteristics, principles, processes, technologies, communication, tools, equipment, and materials related to interior spatial design.

Practicum in Interior Design

TEDS: 13004800 **KISD:** 81212
Credit: 2
Grade: 11-12
Prerequisite: Interior Design II

Practicum in Interior Design is an occupationally specific course designed to provide job-specific skills through laboratory training, job shadowing, or work situations in areas compatible with identified career goals in interior design. In addition, students will be expected to develop knowledge and skills related to housing, furnishings, and equipment construction. Students will take the Revit User or Professional Certification test at the end of the course.

Civil Engineering (Design and Presentation II)

TEDS: 13036500 **KISD:** 82646
Credit: 1
Grade: 11-12
Prerequisite: Interior Design I or Architectural Design I

In this course, students will learn important aspects of building and site design, and then they apply what they know to design a building. They will use math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3-D architectural design software.

Scientific Research & Design: Introduction to Unmanned Aerial Vehicles

TEDS: 13037200 **KISD:** 82733
Credit: 1
Grade: 10-12

Prerequisite: Interior Design I or Architectural Design I

The Introduction to Unmanned Aerial Vehicle course is designed to prepare students for entry-level employment or continuing education in piloting UAV operations. The course is designed to instruct students in UAV flight navigation, industry law and regulations, and safety regulations. Students are also exposed to mission planning procedures, environmental factors, and human factors involved in the UAV industry.

Entrepreneurship

TEDS: 13011101 **KISD:** 82533
Credit: 1
Grade: 9-12
Prerequisite: None

Students will gain the knowledge and skills needed to become an entrepreneur. 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. In addition, students understand the capital required, the return on investment desired, and the potential for profit. Students earn 1 credit for this course, but the course is taught in 1 semester.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade	Optional Electives
Welding	**Introduction to Welding** (1 credit)	**Welding I** (2 credits)	**Welding II** (2 credits)	**Practicum in Manufacturing** (2 credits)	**Construction Technology I** (2 credits)

Optional electives **do not replace required pathway courses**

Industry Based Certification Opportunities
AWS D1.1 Structural Steel Welding Level 1
Career and Technical Student Organization (CTSO)
National FFA Organization

Additional Course Information
Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Introduction to Welding

TEDS: 13032250 **KISD:** 8884
Credit: 1
Grade: 9-12
Prerequisite: None

Introduction to Welding will provide an introduction to welding technology with an emphasis on basic welding laboratory principles and operating procedures. Students will be introduced to the three basic welding processes. Topics include: industrial safety and health practices, hand tool and power machine use, measurement, laboratory operating procedures, welding power sources, welding career potentials, and introduction to welding codes and standards. Introduction to Welding will provide students with the knowledge, skills, and technologies required for employment in welding industries. Students will develop knowledge and skills related to welding and apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills will prepare students for future success.

Welding I

TEDS: 13032300 **KISD:** 88830
Credits: 2
Grade: 10-12
Prerequisite: Introduction to Welding

Welding I provide the knowledge, skills, and technologies required for employment in metal technology systems. Students will develop knowledge and skills related to this system and apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for future success.

Welding II

TEDS: 13032400 **KISD:** 88831
Credits: 2
Grade: 11-12
Prerequisite: Welding I

Welding II builds on the knowledge and skills developed in Welding I. Students will develop advanced welding concepts and skills related to personal and career development. Students will integrate academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to various settings and problems.

Practicum in Manufacturing

TEDS: 13033000 **KISD:** 88801
Credits: 2
Grade: 12
Prerequisite: Welding II

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.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade	Optional Electives
Design & Multimedia Arts	**Principles of Arts, Audio/Video Technology and Communications** (1 credit) **OR** **Animation I** (1 credit) **OR** **Graphic Design & Illustration I** (1 credit)	**Animation I** (1 credit) **OR** **Graphic Design and Illustration I** (1 credit) **OR** **Animation II** (2 credits) **Graphic Design & Illustration II** (2 credits)	**Choose 1 or more of the following courses:** **Animation I** (1 credit) **Animation II** (2 credits) **Graphic Design & Illustration I** (1 credit) **Graphic Design & Illustration II** (2 credits) **Practicum in Animation** (2 credits) **Practicum in Graphic Design and Illustration** (2 credits)	**Choose 1 or more of the following courses:** **Animation II** (2 credits) **Graphic Design & Illustration II** (2 credits) **Practicum in Animation (I or II)** (2 credits) **Practicum in Graphic Design and Illustration (I or II)** (2 credits)	**Commercial Photography I** (1 credit) **Social Media Marketing** (.5 credit)
Digital Communications	**Principles of Arts, Audio / Video Technology and Communication** (1 credit) **OR** **Audio / Video Production I** (1 credit)	**Audio / Video Production I** (1 credit) **OR** **Audio / Video Production II** (2 credits)	**Audio / Video Production II** (2 credits) **OR** **Practicum in Audio/Video Production** (2 credits)	**Practicum in Audio/Video Production** (2 credits) **OR** **Practicum in Audio/Video Production II** (2 credits)	**Commercial Photography I** (1 credit) **SR &D: UAV** (1 credit)

Optional electives **do not replace required pathway courses*

Industry Based Certification Opportunities
Adobe Premiere Pro (Audio/Video) Adobe InDesign (Graphic Design) Adobe Photoshop (Graphic Design/Commercial Photography) Adobe Illustrator (Graphic Design)
Career and Technical Student Organization (CTSO)
SkillsUSA TSA—Technology Student Association

Additional Course Information
Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Principles of Arts, Audio/Video Technology, and Communications

TEDS: 13008200 **KISD:** 81300
Credit: 1
Grade: 9-11
Prerequisite: None

Careers in the Arts, Audio/Video Technology, and Communications career cluster require, in addition to creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication. 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. Topics such as introductions to graphic design and audio/video production will be included.

Animation I

TEDS: 13008300 **KISD:** 81302
Credit: 1
Grade: 9-12
Prerequisite: None

Careers in animation span all aspects of motion graphics. 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 history and techniques of the animation industry.

Animation II/Animation II Lab

TEDS: 13008410 **KISD:** 81306
Credit: 2
Grade: 10-12
Prerequisite: Animation I

Careers in animation span all aspects of motion graphics. Within this context, 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.

Practicum in Animation

TEDS: 13008450 I **KISD:** 81308
TEDS: 13008460 II **KISD:** 82308
Credit: 2
Grade: 11-12
Prerequisite: Animation II/Animation II Lab

Careers in animation span all aspects of the motion graphics industry. Within this context, students will develop technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster. Building upon the concepts taught in previous animation courses, 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 and a focus on skill proficiency. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities. Students will also have the opportunity to earn certifications in Adobe ACA After Effects, Adobe ACA Animate, and Autodesk Certified User (ACU) – Maya in this class.

Graphic Design and Illustration I

TEDS: 13008800 **KISD:** 81322
Credit: 1
Grade: 9 -12
Prerequisite: None

Careers in graphic design and illustration span all aspects of the advertising and visual communications industries. 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, principles of visual art and design, copyright law, and color theory and audience awareness. Students will work toward obtaining entry-level industry certifications for Adobe applications, including Photoshop, Illustrator, and InDesign.

Graphic Design and Illustration II/Graphic Design and Illustration II Lab

TEDS: 13008910 **KISD:** 81326
Credit: 2
Grade: 10 -12
Prerequisite: Graphic Design I

Careers in graphic design and illustration span all aspects of the advertising and visual communications industries. 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. Students will learn about and use industry level print equipment including sublimation, plotter, digital print press, UV, laser, large format, and more.

Practicum in Graphic Design and Illustration

TEDS: 13009000 I **KISD:** 81328
TEDS: 13009010 II **KISD:** 81329
Credit: 2
Grade: 11-12
Prerequisite: Graphic Design II/ Graphic Design II Lab

Careers in graphic design and illustration span all aspects of the advertising and visual communications industry. 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 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. Students will take the knowledge and skills learned in levels I and II and use them to take job requests from start to finish with both internal and external customers. These job requests will include job receipt, customer contact (email and/or phone), design, production, product delivery, and invoicing.

Audio/Video Production I

TEDS: 13008500 **KISD:** 81312
Credit: 1
Grade: 9 -12
Prerequisite: None

Careers in audio and video technology and film production span all aspects of the audio/video communications industry. 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 industry with a focus on pre-production, production, and post-production audio and video activities.

Audio Video Production II/Lab

TEDS: 13008610 **KISD:** 81316
Credit: 2
Grade: 10-12
Prerequisite: Audio/Video Production I

Careers in audio and video technology and film production span all aspects of the audio/video communications industry. Within this context, 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 post-production activities. This course may be implemented in an advanced audio format or an advanced format, including audio, video, and radio.

Practicum in Audio/Video Production

TEDS: 13008700 I **KISD:** 81318
TEDS: 13008710 II **KISD:** 81319
Credit: 2
Grade: 11-12
Prerequisite: Audio/Video Production II/Audio/Video Production II Lab

Careers in audio and technology and film production span all aspects of the audio/video communications industry. Within this context, 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 advanced understanding of the industry with a focus on applying pre-production, production, and post-production audio, video, radio, or animation format.

Commercial Photography I

TEDS: 13009100 **KISD:** 81332
Credit: 1
Grade: 10-12
Prerequisite: None

Careers in commercial photography require skills that span all aspects of the industry from setting up a shot to delivering products in a competitive market. 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 commercial photography industry with a focus on creating quality photographs.

Social Media Marketing

TEDS: 13034650 **KISD:** 82505
Credit: .5
Grade: 10-12
Prerequisite: None

Social Media Marketing is designed to look at the rise of social media and how it has transformed the business arena. Students will learn about the multi-disciplinary implications and how to manage a successful social media presence for an organization.

Scientific Research & Design: Introduction to Unmanned Aerial Vehicles

TEDS: 13037200 **KISD:** 82733
Credit: 1
Grade: 10-12
Prerequisite: None

The Introduction to Unmanned Aerial Vehicle course is designed to prepare students for entry-level employment or continuing education in piloting UAV operations. The course is designed to instruct students in UAV flight navigation, industry law and regulations, and safety regulations. Students are also exposed to mission planning procedures, environmental factors, and human factors involved in the UAV industry.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade	Optional Electives
Business Management	**Principles of Business, Marketing, and Finance** (1 credit)	**Choose 1 of the following courses:** **Foundations of Business Communication and Technologies** (1 credit) **Business Management** (1 credit)	**Choose 2 of the following courses:** **Foundations of Business Communication and Technologies** (1 credit) **Business Communication and Technologies** (1 credit) **Business Management** (1 credit) **Statistics and Business Decision Making** (1 credit)	**Choose 1 or more from the following courses:** **Practicum in Business Management** (2 credits) **Business Management** (1 credit) **Business Communication and Technologies** (1 credit) **Statistics and Business Decision Making** (1 credit) **Career Preparation I** (2 or 3 Credits)	**Entrepreneurship** (1 credit but taught in 1 semester) **Money Matters** (1 credit)
Accounting and Financial Services	**Principles of Business, Marketing, and Finance** (1 credit)	**Accounting I** (1 credit)	**Foundations of Business Communication and Technologies** (1 credit) **AND** **Accounting II Honors** (1 credit)	**Practicum in Business Management** (2 credits) **OR** **Career Preparation I** (2 or 3 Credits)	**Entrepreneurship** (1 credit but taught in 1 semester) **Money Matters** (1 credit) **Business Communication and Technologies** (1 credit) **Statistics and Business Decision Making** (1 credit)
Marketing	**Principles of Business, Marketing & Finance** (1 credit)	**Advertising** (.5 credit) **AND** **Choose 1 or more of the following courses:** **Fashion Marketing** (.5 credit) **Sports & Entertainment Marketing** (.5 credit) **Social Media Marketing** (.5 credit)	**Advanced Marketing** (2 credits)	**Practicum in Marketing** (2 credits) **AND/OR** **Statistics and Business Decision Making** (1 credit) **OR** **Career Preparation I** (2 or 3 Credits)	**Money Matters** (1 credit) **Entrepreneurship** (1 credit but taught in 1 semester) **Foundations of Business Communication and Technologies** (1 credit)

Optional electives **<u>do not</u> replace required pathway courses**

Industry Based Certification Opportunities
Microsoft Office Specialist (MOS) Excel Expert Microsoft Office Specialist (MOS) Word Expert Microsoft Office Specialist (MOS) Access Expert Microsoft Office Specialist (MOS) 2016 Master NOCTI Accounting Foundations NOCTI General Management Stukent
Career and Technical Student Organization (CTSO)
BPA—Business Professionals of America DECA—Academic Marketing Association FBLA—Future Business Leaders of America

Additional Course Information
Credits: Accounting II Honors and Statistics and Business Decision Making can be used for math credit. Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply.

Principles of Business, Marketing, and Finance

TEDS: 13011200 **KISD:** 81400
Credit: 1
Grade: 9-11
Prerequisite: None

In Principles of Business, Marketing, and Finance, students gain knowledge and skills in economics and private enterprise systems, the impact of global business, 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.

Foundations of Business Communication and Technologies

TEDS: 13011400 **KISD:** 81401
Credit: 1
Grade: 9-12
Prerequisite: Principles of Business, Marketing, and Finance

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 Communication and Technologies

TEDS: 13011500 **KISD:** 81402
Credit: 1
Grade: 10-12
Prerequisite: 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 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. Students will also have the opportunity to earn their Microsoft Office Specialist (MOS) certification in this class.

Business Management

TEDS: 13012100 **KISD:** 81405
Credit: 1
Grade: 10-12
Prerequisite: Principles of Business, Marketing, and Finance

Students recognize, evaluate and prepare for a rapidly evolving global business environment that requires flexibility and adaptability. Students analyze the primary functions of management and leadership, which are planning, organizing, staffing, directing or leading, and controlling. Topics will incorporate social responsibility of business and industry. Students develop a foundation in the economic, financial, technological, international, social, and ethical aspects of business to become competent managers, employees, and entrepreneurs. Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make appropriate management decisions.

Practicum in Business Management

TEDS: 13012200 **KISD:** 81414
Credit: 2
Grade: 12
Prerequisite: 2 credits of business courses

The Practicum 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.

Statistics and Business Decision Making

TEDS: 13016900 **KISD:** 81621
Credit: 1
Grade: 11-12
Prerequisite: Principles of Business, Marketing, and Finance

Students will use a variety of graphical and numerical techniques to analyze patterns and departures from patterns to identify and manage risk that could impact an organization. Students will use probability as a tool for anticipating and forecasting data within business models to make decisions. Students will explore careers in risk management and will learn to plan, monitor, and control day-to-day activities to enable continued functioning in finance. Students will analyze accounting systems to examine financial stability. Students will explain the role and impact of dividends in corporate finance. Students will access, process, maintain, evaluate, and disseminate financial information to assist business decision-making. This course counts as a math credit.

Career Preparation or Career Preparation I/Extended Career Preparation

TEDS: 12701121 **KISD:** 82244
TEDS: 12701141 **KISD:** 82003
Credit: 3
Grade: 11-12
Prerequisite: 2 credits of business courses

This course is a work-based instructional arrangement, which develops essential knowledge and skills through classroom, technical knowledge and on the job internships in any approved career-tech specific training area. Internship placement must be teacher approved and fall within the guidelines and requirements in order for students to qualify for enrollment in this program.

Money Matters

TEDS: 13016200 **KISD:** 81600
Credit: 1
Grade: 9-12
Prerequisite: None

Students will investigate global economics with emphasis on the free enterprise system and its impact on consumers and businesses. Students apply critical thinking skills to analyze financial options based on current and projected economic factors. Students will gain knowledge and skills necessary to set long term financial goals based on those options. Students will determine methods of achieving long term financial goals through investment, tax planning, asset allocation, risk management, retirement planning, and estate planning.

Entrepreneurship

TEDS: 13011101 **KISD:** 82533
Credit: 1
Grade: 9-12
Prerequisite: None

Students will gain the knowledge and skills needed to become an entrepreneur. 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. In addition, students understand the capital required, the return on investment desired, and the potential for profit. Students earn 1 credit for this course, but the course is taught in 1 semester.

Accounting I

TEDS: 13016600 **KISD:** 81610
Credit: 1
Grade: 10-12
Prerequisite: Principles of Business, Marketing, and Finance

Students 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 reflect on this knowledge as they engage in the process of recording, classifying, summarizing, analyzing, and communicating accounting information. Students formulate and interpret financial information for use in management decision making.

Accounting II Honors

TEDS: 13016700 **KISD:** 81622
Credit: 1
Grade: 10-12
Prerequisite: Accounting I

Students 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 reflect on this knowledge as they engage in various managerial and cost accounting activities. Students formulate and interpret financial information for use in management decision-making. Students will be expected to show commitment to the course work and be motivated to utilize higher-level thinking skills. The course will also include special projects and a more in-depth study of accounting concepts. This course counts as a weighted math credit. This course receives Honors weight for the class of 2025 and beyond.

Advertising

TEDS: 13034200 **KISD:** 82501
Credit: .5
Grade: 10-12
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, ethical, and legal issues of advertising; historical influences, strategies, and media decision processes as well as integrated marketing communications. The course provides an overview of how communication tools can be used to reach target audiences and increase consumer knowledge.

Fashion Marketing

TEDS: 13034300 **KISD:** 82502
Credit: .5
Grade: 10-12
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.

Sports and Entertainment Marketing

TEDS: 13034600 **KISD:** 82504
Credit: .5
Grade: 10-12
Prerequisite: Principles of Business, Marketing, and Finance

This course will provide students with a thorough understanding of the marketing concepts and theories that apply to sports and sporting events and entertainment. The areas this course will cover include basic marketing, target marketing and segmentation, sponsorship, event marketing, promotions, sponsorship proposals, and implementation of sports and entertainment marketing plans. This course will also provide students an opportunity to develop promotional plans, sponsorship proposals, endorsement contracts, sports and entertainment marketing plans, and evaluation and management techniques.

Social Media Marketing

TEDS: 13034650 **KISD:** 82505
Credit: .5
Grade: 10-12
Prerequisite: Principles of Business, Marketing, and Finance

Social Media Marketing is designed to look at the rise of social media and how it has transformed the business arena. Students will learn about the multi-disciplinary implications and how to manage a successful social media presence for an organization.

Advanced Marketing

TEDS: 13034700 **KISD:** 82511
Credit: 2
Grade: 11-12
Prerequisite: Advertising

Advanced Marketing is a series of activities that focus on the customer to generate a profitable exchange. Students 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 integrate skills from academic subjects, information technology, interpersonal communication, and management training to make responsible decisions. This course may include paid or unpaid career preparation experience.

Practicum in Marketing

TEDS: 13034800 **KISD:** 82513
Credit: 2
Grade: 12
Prerequisite: Advanced Marketing

Through course-required employment, students gain knowledge and skills that help them become proficient in one or more of the marketing functional areas. Students will illustrate appropriate management and research skills to create the marketing mix. This course covers technology, communication, and customer-service skills. The practicum 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. The practicum course is a paid or unpaid experience for students participating in a coherent sequence of career and technical education courses in marketing education.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade	Optional Electives
Culinary Arts	**Introduction to Culinary Arts** (1 credit)	**Culinary Arts** (2 credits but taught in 1 period)	**Advanced Culinary Arts** (2 credits)	**Practicum in Culinary Arts** (2 credits) **OR** **Career Preparation I** (2 or 3 Credits)	**Lifetime Nutrition & Wellness** (.5 credit)

Optional electives **do not replace required pathway courses**

Industry Based Certification Opportunities
ServSafe Food Manager
Career and Technical Student Organization (CTSO)
FCCLA—Family Career & Community Leaders of America National High School Barbecue Team

Additional Course Information
Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Introduction to Culinary Arts

TEDS: 13022550 **KISD:** 81901
Credit: 1
Grade: 9-12
Prerequisite: None

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. This course will emphasize the principles of planning, organizing, staffing, directing, and controlling the management of a variety of food service operations. It 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.

Culinary Arts

TEDS: 13022600 **KISD:** 81902
Credit: 2
Grade: 10-12
Prerequisite: 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 and safety certification or other appropriate industry certification. This course will be offered as a classroom and laboratory-based course. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other

leadership or extracurricular organizations. Students earn 2 credits for this course, but the course is taught in 1 class period.

Advanced Culinary Arts

TEDS: 13022650 **KISD:** 81903
Credit: 2
Grade: 11-12
Prerequisite: Culinary Arts

Advanced Culinary Arts focuses on the management, marketing, and operations of restaurants and other food/beverage services. This course will extend content and enhance skills introduced in Culinary Arts by in-depth instruction of industry-driven standards in order to prepare students for success in higher education, certifications, and/or immediate employment. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations. Students can pursue a national certification as a food protection manager.

Practicum in Culinary Arts

TEDS: 13022700 I **KISD:** 81905
TEDS: 13022710 II **KISD:** 81906
Credit: 2
Grade: 11-12
Prerequisite: Advanced Culinary Arts

This course 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 workplace.

Career Preparation or Career Preparation I/Extended Career Preparation

TEDS: 12701121 **KISD:** 82244
TEDS: 12701141 **KISD:** 82003
Credit: 3
Grade: 11-12
Prerequisite: 2 credits of culinary courses

This course is a work-based instructional arrangement, which develops essential knowledge and skills through classroom, technical knowledge and on the job internships in any approved career-tech specific training area. Internship placement must be teacher approved and fall within the guidelines and requirements in order for students to qualify for enrollment in this program.

Lifetime Nutrition and Wellness

TEDS: 13024500 **KISD:** 82101
Credit: .5
Grade: 9-12
Prerequisite: None

This laboratory course allows students to use principles of lifetime wellness and nutrition, including knowledge of nutritionally balanced diets, to help them make informed choices that promotes wellness, as well as pursues careers related to human services. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extra-curricular organizations.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade	Optional Electives
Networking & Cybersecurity	**Principles of Information Technology** (1 credit)	**Networking** (1 credit)	**Digital Forensics** (1 credit) *Prerequisite: Networking* **AND Cybersecurity Capstone** (1 credit)	**Practicum in IT: Networking & Cybersecurity** (2 credits) **OR Practicum in IT: Internships** (2 credits) **OR Career Preparation I** (2 or 3 Credits)	**Computer Maintenance** (1 credit)

Optional electives **do not replace required pathway courses**

Industry Based Certification Opportunities
NOCTI Cybersecurity Fundamentals Comp Tia IT Fundamentals Comp Tia Network + Comp Tia Security +
Career and Technical Student Organization (CTSO)
SkillsUSA

Additional Course Information
Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Principles of Information Technology

TEDS: 13027200 **KISD:** 82300
Credit: 1
Grade: 9-12
Prerequisite: None

In this course, students will build foundational skills essential for success in the dynamic fields of Networking and Cybersecurity. They will gain proficiency in computer literacy, focusing on emerging technologies and their applications in global networks and secure environments. Through hands-on projects, students will develop key personal and interpersonal skills, preparing them for the challenges of the rapidly evolving cybersecurity landscape. The course also emphasizes critical thinking, problem-solving, and effective communication, ensuring that students are well-equipped to navigate and excel in the information technology sector.

Networking

TEDS: 13027400 **KISD:** 82321
Credit: 1
Grade: 10-12
Prerequisite: Principles of IT

This course equips students with in-depth knowledge and practical skills in data networking technologies, preparing them for careers in the rapidly growing field of network infrastructure and management. Students will explore core networking concepts, including the design, implementation, and maintenance of networks, with an emphasis on real-world applications. Through hands-on labs and projects, they will reinforce their understanding by applying and transferring their skills to various scenarios and problem-solving tasks, ensuring they are ready for both personal growth and professional success in networking.

Digital Forensics

TEDS: 3580360 **KISD:** 82375
Credit: 1
Grade: 11-12
Prerequisite: Networking

Digital forensics is an evolving discipline concerned with analyzing anomalous activity on computers, networks, programs, and data. As a discipline, it has grown with the emergence of a globally connected digital society. As computing has become more sophisticated, so too have the abilities of malicious agents to access systems and private information. By evaluating prior incidents, digital forensics professionals have the ability to investigate and craft appropriate responses to disruptions to corporations, governments, and individuals. Whereas cybersecurity takes a proactive approach to information assurance to minimize harm, digital forensics takes a reactive approach to incident response. The course provides a survey of the field of digital forensics and incident response, including ethics and laws and digital citizenship.

Cybersecurity Capstone

TEDS: 3580855 **KISD:** 82336
Credit: 1
Grade: 11-12
Prerequisite: Networking

Cybersecurity is an evolving discipline concerned with safeguarding computers, networks, programs, and data from unauthorized access. The field has gained prominence with the emergence of a globally connected society. As computing has become more sophisticated, so too have the abilities of malicious agents looking to penetrate networks and seize private information. By evaluating prior incidents, cybersecurity professionals have the ability to craft appropriate responses to minimize disruptions to corporations, governments, and individuals. 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.

Practicum in Information Technology: Networking & Cybersecurity

TEDS: 13028000 **KISD:** 82366
Credit: 2
Grade: 11-12
Prerequisite: Digital Forensics and Cybersecurity Capstone

As the capstone course for the Networking and Cybersecurity program, this practicum provides students with advanced expertise in the design, implementation, and management of IT systems and services. Students will engage in real-world projects that enhance their skills in network security, data protection, and systems evaluation. Emphasis is placed on critical thinking, problem-solving, and the practical application of IT standards. This hands-on experience can take place in various settings, including classrooms, internships, capstone projects, or career preparation with industry mentors, equipping students with the knowledge and experience needed to thrive in the technology-driven workforce.

Practicum in Information Technology: Internships

TEDS: 13028000 **KISD:** 82368
Credit: 2
Grade: 11-12
Prerequisite: Digital Forensics, Cybersecurity Capstone, Computer Science 2, or Computer Science 3

This capstone course is designed for students in the Networking and Cybersecurity program who are seeking hands-on, real-world experience through an internship. Students will gain advanced skills in the application, design, and management of IT systems, with a strong emphasis on network security and data protection. The course focuses on critical thinking, problem-solving, and the practical application of industry standards, all within the context of a professional internship. Under the guidance of industry mentors, students will apply their knowledge in real-world settings, gaining invaluable experience that prepares them for a successful career in technology. Please note that internships are limited and cannot be guaranteed. Placement is competitive, and opportunities are available on a first-come, first-served basis each school year.

Career Preparation or Career Preparation I/Extended Career Preparation

TEDS: 12701121 **KISD:** 82244
TEDS: 12701141 **KISD:** 82003
Credit: 3
Grade: 11-12
Prerequisite: 2 credits of networking/cybersecurity courses

This course is a work-based instructional arrangement, which develops essential knowledge and skills through classroom, technical knowledge and on the job internships in any approved career-tech specific training area. Internship placement must be teacher approved and fall within the guidelines and requirements in order for students to qualify for enrollment in this program.

Computer Maintenance

TEDS: 13027300 **KISD:** 82311
Credit: 1
Grade: 10-12
Prerequisite: None

Students acquire principles of computer maintenance, including electrical and electronic theory, computer hardware principles, and broad level components related to the installation, diagnosis, service, and repair of computer systems. To prepare for success, students must have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade	Optional Electives
Automotive	**Automotive Basics** (1 credit)	**Automotive Technology I: Maintenance and Light Repair** (2 credits)	**Automotive Technology II: Automotive Service** (2 credits)	**Practicum in Transportation Systems** (2 credits) **or** **Career Preparation I** (2 or 3 Credits)	**Introduction to Welding** (1 credit), **Computer Maintenance** (1 credit)

Optional electives **do not replace required pathway courses**

Industry Based Certification Opportunities
ASE Student Certifications
Career and Technical Student Organization (CTSO)
Automotive Technology Club SkillsUSA

Additional Course Information
Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Automotive Basics

TEDS: 13039550 **KISD:** 82730
Credit: 1
Grade: 9-11
Prerequisite: None

Automotive Basics includes knowledge of the basic automotive systems and the theory and principles of the components that make up each system and how to service these systems. Automotive Basics includes applicable safety and environmental rules and regulations. In Automotive Basics, students will gain knowledge and skills in the repair, maintenance, and servicing of vehicle systems. This study allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. The focus of this course is to teach safety, tool identification, proper tool use, and employability.

Automotive Technology I

TEDS: 13039600 **KISD:** 82731
Credit: 2
Grade: 10-12
Prerequisite: Automotive Basics

This course is designed to include knowledge of the major automotive systems and the principles of diagnosing and servicing these systems. It includes applicable safety and environmental rules and regulations. Students will gain knowledge and skills in the repair, maintenance, and diagnosis of vehicle systems. This study will allow students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. The focus of this course is to teach safety, tool identification, proper tool use, and employability.

Automotive Technology II

TEDS: 13039700 **KISD:** 82732
Credit: 2
Grade: 11-12
Prerequisite: Automotive Technology I: Maintenance and Light Repair

This course is designed to include knowledge of the major automotive systems and the principles of diagnosing and servicing these systems. It includes applicable safety and environmental rules and regulations. Students will gain knowledge and skills in the repair, maintenance, and diagnosis of vehicle systems. This study will allow students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. The focus of this course is to teach safety, tool identification, proper tool use, and employability.

Practicum in Transportation Systems

TEDS: 13040450 **KISD:** 82762
Credit: 2
Grade: 12
Prerequisite: Automotive Technology II: Automotive Services

The Transportation Career Cluster focuses on planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also covers related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment, and facility maintenance. This practicum 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 experience such as internships, mentorships, independent study, or laboratories. The Practicum can be either school lab-based or work-based.

Career Preparation or Career Preparation I/Extended Career Preparation

TEDS: 12701121 **KISD:** 82244
TEDS: 12701141 **KISD:** 82003
Credit: 3
Grade: 11-12
Prerequisite: 2 credits of automotive courses

This course is a work-based instructional arrangement, which develops essential knowledge and skills through classroom, technical knowledge and on the job internships in any approved career-tech specific training area. Internship placement must be teacher approved and fall within the guidelines and requirements in order for students to qualify for enrollment in this program.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade	Optional Electives
Teaching and Training	**Principles of Education and Training** (1 credit)	**Child Development** (1 credit)	**Instructional Practices** (2 credits)	**Practicum in Education & Training** (2 credits)	**Counseling and Mental Health** (1 credit)

Optional electives **do not replace required pathway courses**

Industry Based Certification Opportunities
Educational Aide I
Career and Technical Student Organization (CTSO)
FCCLA—Family Career & Community Leaders of America TAFE—Texas Association of Future Educators

Additional Course Information
Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply.

Principles of Education and Training

TEDS: 13014200 **KISD:** 81500
Credit: 1
Grade: 9-11
Prerequisite: None

Principles of Education and Training is designed to introduce learners to the various careers available within the education and training career cluster. Students use self-knowledge and educational and career information to analyze various careers essential to careers within the education and training career cluster.

Child Development

TEDS: 13024700 **KISD:** 82103
Credit: 1
Grade: 10-12
Prerequisite: Principles of Education and Training

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

TEDS: 13014400 **KISD:** 81502
Credit: 2
Grade: 11-12
Prerequisite: Child Development

Instructional Practices in Education and Training is a field-based 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 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

TEDS: 13014500 **KISD:** 81504
Credit: 2
Grade: 12
Prerequisite: Instructional Practices

Practicum in Education and Training is a field-based internship that provides students with 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 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.

Counseling and Mental Health

TEDS: 13024600 **KISD:** 82102
Credit: 1
Grade: 11-12
Prerequisite: Principles of Education and Training

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, and the implications of their actions. Professional integrity in counseling and mental health care is dependent on acceptance of ethical and legal responsibilities.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade	Optional Electives
Health Science: Medical Laboratory Assistant	**Medical Terminology** (1 credit)	**Health Science Theory** (1 credit)	**Anatomy and Physiology or Anatomy and Physiology Honors** (1 credit) AND **Medical Microbiology or Medical Microbiology Honors** (1 credit)	**Practicum in Health Science: MLA** (2 credits) **OR** **Practicum in Health Science: PCT** (2 credits) **OR** **Practicum in Health Science: CMA** (2 credits)	**Pathophysiology or Pathophysiology Honors** (1 credit), **Pharmacology** (1 credit)
Health Science: Clinical Rotations	**Medical Terminology** (1 credit)	**Health Science Theory** (1 credit)	**Anatomy and Physiology or Anatomy and Physiology Honors** (1 credit) **AND** **Practicum in Health Science I: Clinical Rotations** (2 Credits)	**Practicum in Health Science: PCT** (2 credits) **OR** **Practicum in Health Science: CMA** (2 credits)	**Medical Microbiology or Medical Microbiology Honors** (1 credit), **Pathophysiology or Pathophysiology Honors** (1 credit), **Pharmacology** (1 credit)
Health Science: Certified Nursing Assistant (CNA)	**Medical Terminology** (1 credit)	**Health Science Theory** (1 credit)	**Anatomy and Physiology or Anatomy and Physiology Honors** (1 credit) **AND** **Practicum in Health Science I: CNA** (2 credits)	**Practicum in Health Science: PCT** (2 credits) **OR** **Practicum in Health Science: CMA** (2 credits)	**Medical Microbiology or Medical Microbiology Honors** (1 credit), **Pathophysiology or Pathophysiology Honors** (1 credit), **Pharmacology** (1 credit)
Health Science: Emergency Medical Technician (EMT)	**Medical Terminology** (1 credit)	**Health Science Theory** (1 credit)	**Anatomy and Physiology or Anatomy and Physiology Honors** (1 credit) **AND** **Pathophysiology or Pathophysiology Honros** (1 credit)	**Practicum in Health Science: EMT** (2 credits) **OR** **Practicum in Health Science: PCT** (2 credits) **OR** **Practicum in Health Science: CMA** (2 credits)	**Medical Microbiology or Medical Microbiology Honors** (1 credit), **Pharmacology** (1 credit)
Health Science: Pharmacy	**Medical Terminology** (1 credit)	**Health Science Theory** (1 credit)	**Anatomy and Physiology or Anatomy and Physiology Honors** (1 credit) **AND** **Pharmacology** (1 credit)	**Practicum in Health Science: Pharmacy** (2 credits) **OR** **Practicum in Health Science: PCT** (2 credits) **OR** **Practicum in Health Science: CMA** (2 credits)	**Medical Microbiology 81821 or Medical Microbiology Honors** (1 credit), **Pathophysiology or Pathophysiology Honors** (1 credit)

Health Science: Exercise Science and Sports Medicine	Medical Terminology (1 credit)	Health Science Theory (1 credit) AND Kinesiology I (1 credit)	Anatomy and Physiology or Anatomy and Physiology Honors (1 credit) AND Kinesiology II (1 credit)	Practicum in Health Science I: Sports Medicine (2 credits) OR Practicum in Health Science: PCT (2 credits) OR Practicum in Health Science: CMA (2 credits)	Medical Microbiology or Medical Microbiology Honors (1 credit), Pathophysiology or Pathophysiology Honors (1 credit), Pharmacology (1 credit)

Industry Based Certification Opportunities
Certified Nursing Aide
Certified Patient Care Technician
Emergency Medical Technician
Certified Pharmacy Technician
Certified Medical Assistant
Certified Personal Trainer
Certified EKG Technician
Certified Phlebotomist
Career and Technical Student Organization (CTSO)
HOSA—Health Occupation Students of America

Additional Course Information
Credits: Anatomy & Physiology, Medical Microbiology, Pathophysiology can be used as a science credit. Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Medical Terminology

TEDS: 13020300 **KISD:** 81801
Credit: 1
Grade: 9-12
Prerequisite: None

This course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, combining forms, and singular and plural forms, plus medical abbreviations and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

Health Science Theory

TEDS: 13020400 **KISD:** 81803
Credit: 1
Grade: 10-12
Prerequisite: Medical Terminology

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 have hands-on experiences for continued knowledge and skills development. The course may be taught by different methodologies such as clinical rotation and career preparation learning.

Anatomy and Physiology or Anatomy and Physiology Honors

TEDS: 13020600 **KISD:** 3203
Credit: 1 **KISD Honors:** 3204
Grade: 10-12
Prerequisite: Biology

This course offers a comprehensive study of the structures and functions of the human body. It will include dissections and the study of the organization of organs and organ systems. Students will utilize critical thinking skills and scientific problem solving as they conduct lab investigations. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum). This course counts as a science credit. It is taught at all main campuses and at the Keller Center for Advanced Learning.

Medical Microbiology or Medical Microbiology Honors

TEDS: 13020700 **KISD:** 81821
Credit: 1 **KISD Honors:** 82821
Grade: 10-12
Prerequisite: Biology

This science elective course is designed to explore medical based microbiology. The student will discover relationships between microbes and health maintenance as well as the role of microbes in infectious diseases. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum). This course counts as a science credit.

Pathophysiology or Pathophysiology Honors

TEDS: 13020800 **KISD:** 81822
Credit: 1 **KISD Honors:** 82822
Grade: 11-12
Prerequisite: Biology

In this course students conduct laboratory investigations and fieldwork, use scientific methods during investigations, and make informed decisions using critical thinking and problem solving. Students study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of diseases. Students will differentiate between normal and abnormal physiology. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum). This course counts as a science credit.

Practicum in Health Science: Medical Laboratory Assistant (MLA)

TEDS: 13020500 I **KISD:** 81850
TEDS: 13020510 II **KISD:** 82850
Credit: 2
Grade: 11-12
Prerequisite: Medical Microbiology

The Practicum in Health Science is designed to give students practical applications of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. Medical Laboratory Assistants are healthcare professionals who can be found working both on the frontlines and behind the scenes. Medical Lab Assistants typically

work in lab settings such as those within a hospital, physician's office, or urgent care facility. The work they do is important for both patients and the healthcare field overall. Their duties may include:

- Drawing blood from patients (also called phlebotomy)
- Properly labeling and handling samples ahead of lab tests
- Preparing lab equipment for tests and research
- Using various pieces of lab equipment such as microscopes
- Performing lab tests
- Reporting test results to doctors or other healthcare personnel

Practicum in Health Science: Clinical Rotations (CR)

TEDS: 13020500 I **KISD:** 81812
TEDS: 13020510 II **KISD:** 81842
Credit: 2
Grade: 11-12
Prerequisite: Health Science Theory

The Practicum in Health Science is designed to give students practical applications of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. The clinical rotations class will occur in various settings including hospital, clinical, and classroom. Students will be required to comply with HIPAA requirements.

Practicum in Health Science: Certified Nursing Assistant (CNA)

TEDS: 13020500 I **KISD:** 81816
TEDS: 13020510 II **KISD:** 81846
Credit: 2
Grade: 11-12
Prerequisite: Health Science Theory

The Practicum in Health Science is designed to give students practical applications of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. The Certified Nursing Assistant (CNA) practicum is designed to provide an opportunity to gain a nationally recognized certification after passing the CNA certification examination. To qualify for the examination, one must be able to pass a criminal background/drug screening and have successfully passed the classroom portion of the class. Students will be required to comply with HIPAA requirements.

Practicum in Health Science: Patient Care Technician (PCT)

TEDS: 13020500 I **KISD:** 82818
TEDS: 13020510 II **KISD:** 81849
Credit: 2
Grade: 12
Prerequisite: Practicum in CNA or Practicum in Clinical Rotations or Pharmacology or Pathophysiology or Medical Microbiology or Kinesiology II

The Practicum in Health Science is designed to give students practical applications of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. Doctors, nurses, and other healthcare professionals rely on patient care technicians to assist with the critical day to day care some patients require. They provide hands-on assistance to serve patients' basic needs, which greatly impacts the lives of their patients and their patients' families. As a patient care tech, you may be able to perform some or all of the following tasks:

- Provide basic patient care bathing, feeding, catheter care, etc.
- Acquire, distribute and administer patient care supplies
- Perform safety checks and ensure cleanliness in patient rooms
- Accommodate any additional patient needs
- Obtain EKG readings and monitor vital signs
- Perform phlebotomy procedures
- Provide emotional support to patients and families, particularly coping with grief and death

Practicum in Health Science II: Clinical Medical Assistant (CMA)

TEDS: 13020500 I **KISD:** 82816
TEDS: 13020510 II **KISD:** 82940
Credits: 2
Grade: 12
Prerequisite: Practicum in CNA or Practicum in Clinical Rotations or Pharmacology or Pathophysiology or Medical Microbiology or Kinesiology II

A Clinical Medical Assistant is a multi-skilled allied health care professional that specializes in procedures commonly performed in the ambulatory health care setting. The Clinical Medical Assistant performs both clinical and administrative duties and assists a variety of providers including physicians, nurse practitioners and physician assistants. They typically work in medical offices, clinics, urgent care centers and may work in general medicine or specialty practices. Common duties of a medical assistant include administrative and clinical tasks such as checking patients in and out upon arrival and departure, taking patient vital signs, administering injections or medications, use aseptic laboratory techniques and protocols, working in the electronic health record (EHR), understand and use medical terminology and understand and use office procedures including HIPAA, OSHA, medical insurance billing and medical coding, and answering phone calls and questions. All students will become certified in American Heart Association BLS CPR. Students who successfully complete the course and are on track to graduate will have the opportunity to sit for the Medical Assistant Certification Exam offered by the National Healthcareer Association.

Practicum in Health Science: Emergency Medical Technician (EMT)

TEDS: 13020500 I **KISD:** 81815
TEDS: 13020510 II **KISD:** 82842
Credit: 2
Grade: 11-12
Prerequisite: Health Science Theory; Pathophysiology (can be take concurrently with EMT Practicum)

The Practicum in Health Science is designed to give students practical applications of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be

asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. In the E.M.T. program, students will be provided opportunities to work in hospital settings, ambulance services, and may be assigned to firehouses in order to experience first-hand the challenges of Emergency Medical Technicians. Students enrolled in this course will be provided the knowledge and skills training to prepare and successfully complete the exam required for E.M.T. Upon completion of the course and successfully passing the national exam, students will be eligible to continue to the next level of training at Tarrant County College. Students will be required to comply with HIPAA requirements.

Pharmacology

TEDS: 13020950 **KISD:** 81813
Credit: 1
Grade: 11-12
Prerequisite: Health Science Theory

The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development. The Pharmacology course is designed to study how natural and synthetic chemical agents such as drugs affect biological systems. Knowledge of the properties of therapeutic agents is vital in providing quality health care. It is an ever-changing, growing body of information that continually demands greater amounts of time and education from health care workers.

Practicum in Health Science: Pharmacy

TEDS: 13020500 I **KISD:** 81818
TEDS: 13020510 II **KISD:** 81848
Credit: 2
Grade: 11-12
Prerequisite: Pharmacology

The Practicum in Health Science is designed to give students practical applications of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. The Pharmacy Technician practicum is designed to provide an opportunity to gain a nationally recognized certification after passing the Pharmacy Technician Certification Board examination. To qualify for the examination, students must be able to pass a criminal background screening and have graduated from high school. Students will be required to comply with HIPAA requirements.

Kinesiology I

TEDS: N1302104 **KISD:** 8930
Credit: 1
Grade: 9-12
Prerequisite: None

This course is designed to introduce students to the basic concepts of kinesiology. Students will gain an understanding of body mechanics, physiological functions of muscles and movements, the history of kinesiology, and the psychological impact of sports and athletic performance. Students will also explore careers within the kinesiology field and be able to explain the societal demand for kinesiology-related jobs. Students will develop a foundation in Kinesiology I that will prepare them for upper-level courses that will dive deeper into the anatomical and physiological functions of the body and provide opportunities for an industry-certified exam such as a certified personal trainer.

Kinesiology II

TEDS: N1302124 **KISD:** 8932
Credit: 1
Grade: 11-12
Prerequisite: Kinesiology I

The Kinesiology II course is designed to provide students an advanced level of knowledge, skills, and understanding of body composition and the effect on health, nutritional needs of physically active individuals, qualitative biomechanics, application of therapeutic modalities, appropriate rehabilitation services, and aerobic training intensity programs.

Practicum in Health Science: Sports Medicine

TEDS: 13020500 I **KISD:** 81817
TEDS: 13020510 II **KISD:** 81827

Credit: 2
Grade: 12
Prerequisite: Kinesiology II

The Practicum in Health Science is designed to give students practical applications of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. The Sports Medicine Practicum course will provide an opportunity for the study and application of the components of sports medicine, including but not limited to sports medicine-related careers; organizational and administrative considerations; prevention of athletic injuries; recognition, evaluation, and immediate care of athletic injuries; rehabilitation and management skills; taping and wrapping techniques; first aid/CPR/AED; emergency procedures; nutrition; sports psychology; human anatomy and physiology; therapeutic modalities; and therapeutic exercise.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade
Cosmetology		**Professional Communications** (.5 credit) **AND Entrepreneurship**	**Cosmetology I/Cosmetology I Lab** (3 credits)	**Cosmetology II** (2 credits) **AND Practicum in Entrepreneurship** (2 credits)

Industry Based Certification Opportunities
TDLR—Texas Department of License and Regulation Cosmetology License
Career and Technical Student Organization (CTSO)
SkillsUSA

Additional Course Information
Fees Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Cosmetology- 4 Year Plan								
Freshman	English I	Algebra I	Biology	World Geography	Language Level 1	Fine Art	Elective	Elective
Sophomore	English II	Geometry	IPC, Physics, Chemistry	World History	Language Level 2	PE	Professional Communications/ Entrepreneurship	Elective
Junior	English III	Algebra II	Advanced 3rd Science	U.S. History	Elective	Cosmetology I	Cosmetology I	Cosmetology I
Senior	Advanced English Course	Algebra II or Advanced 4th Math	Advanced 4th Science	Government / Economics	Cosmetology II	Cosmetology II	Practicum in Entrepreneurship	Practicum in Entrepreneurship
In order to be eligible for the Cosmetology program of study, it is suggested that you have an intentional four-year plan. Above you will find the recommended sequence for high school graduation and completion of the cosmetology program.								

Professional Communications

TEDS: 13009900 **KISD:** 1465
Credit: 0.5
Grade: 9-12
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 text, 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.

Entrepreneurship

TEDS: 13011101 **KISD:** 82533
Credit: 1
Grade: 9-12
Prerequisite: None

Students will gain the knowledge and skills needed to become an entrepreneur. 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. In addition, students understand the capital required, the return on investment desired, and the potential for profit. Students earn 1 credit for this course, but the course is taught in 1 semester.

Cosmetology I/Cosmetology I Lab

TEDS: 13025210 **KISD:** 8320
Credit: 3
Grade: 11-12
Prerequisite: None

Students coordinate integration of academic, career, and technical knowledge and skills in this laboratory instructional sequence course designed to provide job-specific training for employment in cosmetology careers. Instruction includes sterilization and sanitation procedures, hair care, nail care, and skin care and meets the Texas Department of Licensing and Regulation requirements for licensure upon passing the state examination. Analysis of career opportunities, requirements, expectations, and development of workplace skills are included.

Cosmetology II

TEDS: 13025300 **KISD:** 82202
Credit: 2
Grade: 11-12
Prerequisite: Cosmetology I

Students review academic knowledge and skills related to cosmetology. This course is designed to provide advanced training for employment in cosmetology careers. Instruction includes training in sterilization and sanitation processes, hair care, nail care and skin care and meets the Texas Department of Licensing and Regulation requirements for licensure upon passing the state examination. Students apply, combine, and justify knowledge skills to a variety of settings and problems.

Practicum in Entrepreneurship

TEDS: 13011111 **KISD:** 82347
Credit: 2
Grade: 12
Prerequisite: Cosmetology I

The Practicum in Entrepreneurship is designed to give students practical applications of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Practicum in Entrepreneurship provides background knowledge and occupation-specific training that focuses on the development of consumer services and family and community services careers. Content for Practicum in Entrepreneurship is designed to meet the occupational preparation needs and interests of students.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade	Optional Electives
Legal Studies	**Principles of Law, Public Safety, Corrections, and Security** (1 credit)	**Court Systems and Practices** (1 credit)	**Advanced Legal Skills and Professions** (1 credit)	**Practicum in Law, Public Safety, Corrections, and Security: Legal** (2 credits)	**Forensic Science** (1 credit) **Forensic Psychology** (1 credit)
Law Enforcement: Police	**Principles of Law, Public Safety, Corrections, and Security** (1 credit)	**Law Enforcement I** (1 credit)	**Forensic Science** (1 credit) **AND Forensic Psychology** (1 credit)	**Practicum in Law, Public Safety, Corrections, and Security: Law** (2 credits)	**Court Systems and Practices** (1 credit)

Industry Based Certification Opportunities
Non-commissioned Security Officer 2 IAED Emergency Telecommunicator
Career and Technical Student Organization (CTSO)
SkillsUSA

Additional Course Information
Credits: Forensic Science can be used as a science credit. Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Principles of Law, Public Safety, Corrections, and Security

TEDS: 13029200 **KISD:** 82400
Credit: 1
Grade: 9-11
Prerequisite: None

Principles of Law, Public Safety, Corrections, and Security introduce students to professions in law enforcement, security, corrections, and fire 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, security, and corrections.

Law Enforcement I

TEDS: 13029300 **KISD:** 82411
Credit: 1
Grade: 10-12
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. This course includes the role of constitutional law, the United States legal system, criminal law, law enforcement terminology, and the classification and elements of crime.

Court Systems and Practices

TEDS: 13029600 **KISD:** 82422
Credit: 1
Grade: 10-12
Prerequisite: Principles of Law, Public Safety, Corrections, and Security

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. Class is taught at the Keller Center for Advanced Learning.

Advanced Legal Skills and Professions

TEDS: N1303016 **KISD:** 82436
Credit: 1
Grade: 11-12
Prerequisite: 2 credits in the legal program

This course offers a comprehensive exploration of the U.S. legal system, providing students with advanced insights into legal procedures and professions. Throughout this course, students will delve into the complexities of civil and criminal procedures, the nuances of the attorney-client relationship, and the critical importance of confidentiality. From the intricacies of investigating cases (discovery) to the art of presenting persuasive court arguments (closing arguments), students will engage in immersive, hands-on learning experiences. The course culminates in dynamic mock trials, where students will assume roles such as attorneys, witnesses, and jurors. Through these simulations, students will refine their critical thinking, public speaking, and teamwork skills as they develop and execute winning trial strategies. Advanced Legal Skills and Professions goes beyond theoretical knowledge, offering students a practical understanding of the legal field. Join us for a stimulating journey through the legal system, where learning is not just about comprehension but also about application and skill development.

Forensic Science or Forensic Science Honors

TEDS: 13029500 **KISD:** 88370
Credit: 1 **KISD Honors**: 88371
Grade: 11-12
Prerequisite: Biology

Forensic Science is a course that uses a structured and scientific approach to the investigation of crimes of assault, abuse and neglect, domestic violence, accidental death, homicide, and the psychology of criminal behavior. Students will learn terminology and investigative procedures related to crime scenes, questioning, interviewing, criminal behavior characteristics, truth detection, and scientific procedures used to solve crimes. Using scientific methods, students will collect and analyze evidence through case studies and simulated crime scenes such as fingerprint analysis, ballistics, and blood spatter analysis. Students will learn the history, legal aspects, and career options for forensic science. This course counts as a science credit.

Forensic Psychology

TEDS: N1303012 **KISD:** 82424
Credit: 1
Grade: 10-12
Prerequisite: Law Enforcement I

Forensic Psychology utilizes and applies basic skills developed in psychology to criminal behavior and criminal scenarios resulting in a structured and scientific approach to investigative analysis, which enables police or law enforcement officials to predict criminal activity based upon mathematical/scientific data versus abstract intuition.

Practicum in Law, Public Safety, Corrections and Security

TEDS: 13030100 **Legal Studies KISD:** 82461
Credit: 2 **Law Enforcement KISD:** 82462
Grade: 12
Prerequisite: 2 credits in the law program

The Practicum is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in various locations appropriate to the nature and level of experience.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade
Programming and Software Development	**Computer Science I Honors** (1 credit)	**AP Computer Science** (2 credits but taught in 1 period)	**Computer Science II: Python Programming AND/OR Computer Science III: Video Game Design**	**Practicum in IT: Video Game Design** (2 credits) **OR Practicum in IT: Internships** (2 credits)

Industry Based Certification Opportunities
Information Technology Specialist Java Certified Entry-Level Python Programmer (PCEP)
Career and Technical Student Organization (CTSO)
SkillsUSA

Additional Course Information
Credits: AP Computer Science can be used for math and LOTE credit. Computer Science I Honors, Computer Science II, and Computer Science III can be used for LOTE credit. Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Computer Science I Honors

TEDS: 3580200 **KISD:** 82301
Credit: 1
Grade: 9-12
Prerequisite: Completed or concurrent enrollment in 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. This course's purpose is to continue to AP Computer Science and prepare for the AP exam. This course may count as a **LOTE** credit.

AP Computer Science

TEDS: A3580110, A3580120 **KISD:** 82340
Credit: 2
Grade: 10-12
Prerequisite: Computer Science I Honors

AP Computer Science A is equivalent to a first-semester, college-level course in computer science and is a continuation of Computer Science I. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. **AP students prepare to take the Advanced Placement Exam in May for possible college credit.** This course counts as a **math** credit. This course may also count as a **LOTE** credit. Students earn 2 credits for this course, but the course is taught in 1 class period.

Computer Science II: Python Programming

TEDS: 3580300 **KISD:** 82342
Credit: 1
Grade: 10-12
Prerequisite: AP Computer Science

In this course, students will deepen their understanding of computer science by focusing on Python, one of the most widely used programming languages in the industry. Through hands-on projects, students will design, implement, and present meaningful programs, fostering creativity and innovation. Collaboration with peers and instructors is encouraged to solve complex problems using Python. Students will engage in data analysis, develop search strategies, and apply computer science concepts to access, analyze, and evaluate information. The course emphasizes the importance of selecting appropriate technologies, synthesizing knowledge, creating solutions, and evaluating results. Additionally, students will explore digital citizenship by understanding current laws, regulations, and ethical practices. Upon successful completion, students will have the opportunity to earn a certification in Python programming, enhancing their readiness for careers in software development. This course counts as a Language Other Than English (LOTE) credit and receives Advanced Placement (AP) weight in GPA calculations.

Computer Science III: Video Game Design

TEDS: 03580350 **KISD:** 82343
Credit: 1
Grade: 10-12
Prerequisite: AP Computer Science

This advanced course in computer science centers on the exciting field of video game design, with a focus on utilizing Unreal Engine, a leading industry tool. Students will enhance their creativity and innovation by designing, implementing, and presenting meaningful video game projects. Through hands-on experiences, they will collaborate with peers and instructors to solve complex challenges using advanced computer science concepts. The course emphasizes the importance of data analysis, task planning, and selecting the appropriate technologies for game development. Students will develop and apply their skills in areas such as game mechanics, 3D modeling, and interactive storytelling, while also learning about digital citizenship, including the ethical use of technology and adherence to current laws and regulations. By mastering advanced data structures and technology operations, students will be well-prepared for careers in game design and software development.

This course counts as a Language Other Than English (LOTE) credit and receives Advanced Placement (AP) weight in GPA calculations.

Practicum in Information Technology: Video Game Design

TEDS: 13028000 **KISD:** 82361
Credit: 2
Grade: 12
Prerequisite: Computer Science II or Computer Science III

This capstone course is designed to teach the foundational concepts of computer programming in a fun and interactive environment, using video game design as a medium to engage students. While the course focuses on the development process of video games, the primary goal is to equip students with the essential programming skills and knowledge necessary for success in the broader field of software development. Students will explore the application, design, production, implementation, and maintenance of software using industry-standard tools like Unreal Engine, with an emphasis on critical thinking, problem-solving, and the application of IT concepts. By the end of the course, students will have a solid foundation in programming and software development, preparing them for various careers in the technology industry.

Practicum in Information Technology: Internships

TEDS: 13028000 **KISD:** 82368
Credit: 2
Grade: 11-12
Prerequisite: Digital Forensics, Cybersecurity Capstone, Computer Science 2, or Computer Science 3

This capstone course is tailored for students in the Programming pathway who are seeking to gain hands-on, real-world experience through an internship. Students will develop advanced skills in software development, application design, and systems analysis, with a focus on coding, debugging, and implementing software solutions. The course emphasizes critical thinking, problem-solving, and the practical application of programming standards, all within the context of a professional internship. Under the guidance of industry mentors, students will apply their programming knowledge in real-world settings, gaining invaluable experience that prepares them for a successful career in software development. Please note that internships are limited and cannot be guaranteed. Placement is competitive, and opportunities are available on a first-come, first-served basis each school year.

Program of Study	9th Grade	10th Grade	11th Grade	12th Grade
Engineering	**Engineering Design Process** (1 credit)	**Engineering Science** (1 credit)	**Choose 2 credits from the following courses:** **Aerospace Engineering (Design and Presentation I)** (1 credit) **Digital Electronics Honors** (1 credit) **Civil Engineering (Design and Presentation II)** (2 credits but taught in 1 period) **Robotics I** (1 credit) **Scientific Research & Design: Introduction to Unmanned Aerial Vehicles** (1 credit)	**<u>Option 1:</u>** **Practicum in Engineering** (2 credits) **<u>Option 2:</u>** **Engineering Design and Problem-Solving Honors** (1 credit) **AND** **1 credit from the following courses:** **Robotics** (1 credit) **Computer Integrated Manufacturing** (1 credit) **Aerospace Engineering (Design and Presentation I)** (1 credit) **Digital Electronics Honors** (1 credit) **Civil Engineering (Design and Presentation II)** (2 credits but taught in 1 period)

Industry Based Certifications
FAA Part 107 Remote Drone Pilot NOCTI Engineering Technology Foundations
Career and Technical Student Organization (CTSO)
KCAL Robotics (Local Chapter)-VEX, BEST, FIRST TSA Bell Robotics Challenge WIT (Workforce Industry Training

Additional Course Information
Credits: Digital Electronics and Robotics II can be used as math credits. Engineering Science, Scientific R&D: Unmanned Aerial Vehicles, and Engineering Design & Problem Solving can be used as science credits. Fees: Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply. Location: Courses shaded in gray will be taught at the Keller Center for Advanced Learning.

Engineering Design Process

TEDS: 12756001 **KISD:** 82647
Credit: 1
Grade: 9-10
Prerequisite: Complete or concurrent enrollment in Algebra I
This is the foundation course in a series of Project Lead the Way pre-engineering courses designed to introduce the student to the field of engineering. Students will develop problem-solving skills, with emphasis placed upon the concept of developing 3-D models. The course will emphasize the design development process of a product and a model of the product is produced, analyzed, and evaluated, using a Computer Aided Design System. Various design applications will be explored with discussion of possible career opportunities.

Engineering Science

TEDS: 13037500 **KISD:** 82642
Credit: 1
Grade: 10-12
Prerequisite: Introduction to Engineering Design

This foundation course is designed to help students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes helps students learn how engineers and technicians use math, science and technology in an engineering problem solving process to benefit people. The course also includes concerns about the social and political consequences of technological change. This course counts as a science credit.

Aerospace Engineering (Design and Presentation I)

TEDS: 13036600 **KISD:** 82664
Credit: 1
Grade: 11-12
Prerequisite: Engineering Science

This specialization PLTW course applies principles of aeronautics, flight, and engineering. The course will include experiences from diverse fields of aeronautics, aerospace engineering, and related areas of study. It will cover many areas including the following: history of flight; airfoil design, construction, and testing; rocket engine thrust; rocket trajectory; effects of gravity; navigation systems; glider design; intelligent vehicles; and remote sensing.

Digital Electronics Honors

TEDS: 13037600 **KISD:** 8787
Credit: 1
Grade: 11-12
Prerequisite: Engineering Science

This is a course in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry before the construction of circuits and devices. Students will be expected to show commitment to the Honors course work and be motivated to utilize higher-level thinking skills. The course will also include special projects and a more in-depth study of the foundations in electronics, combinational logic, sequential logic, and controlling real-world systems. This course counts as a weighted math credit and receives Honors weight for the class of 2025 and beyond.

Civil Engineering (Design and Presentation II)

TEDS: 13036500 **KISD:** 82646
Credit: 1
Grade: 11-12
Prerequisite: Engineering Science

In this course, students will learn important aspects of building and site design, and then they apply what they know to design a building. They will use math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3-D architectural design software.

Robotics I

TEDS: 13037000 **KISD:** 82651
Credit: 1
Grade: 11-12
Prerequisite: Engineering Science

Students enrolled in this course will demonstrate knowledge and skills necessary for the robotic and automation industry. Through implementation of the design process, students will transfer advanced academic skills to component designs in a project-based environment. Students will build prototypes or use simulation software to test their designs. Additionally, students explore career opportunities, employer expectations, and educational needs in the robotic and automation industry.

Scientific Research & Design: Introduction to Unmanned Aerial Vehicles

TEDS: 13037200 **KISD:** 82733
Credit: 1
Grade: 10-12
Prerequisite: Engineering Science

The Introduction to Unmanned Aerial Vehicle course is designed to prepare students for entry-level employment or continuing education in piloting UAV operations. The course is designed to instruct students in UAV flight navigation, industry law and regulations, and safety regulations. Students are also exposed to mission planning procedures, environmental factors, and human factors involved in the UAV industry. This course counts as a science credit.

Robotics II

TEDS: 13037050 **KISD:** 82652
Credit: 1
Grade: 12
Prerequisite: Robotics I

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. This course counts as a math credit.

Computer Integrated Manufacturing

TEDS: N1303748 **KISD:** 82645
Credit: 1
Grade: 11-12
Prerequisite: Engineering Science

Manufactured items are part of everyday life, and this course illuminates the opportunities related to understanding manufacturing. In this Project Lead the Way course, students discover and explore manufacturing processes, product design, robotics, and automation, and then they apply what they have learned to design solutions for real-world manufacturing problems.

Engineering Design and Problem-Solving Honors

TEDS: 13037300 **KISD:** 83644
Credit: 1
Grade: 11-12
Prerequisite: 3 credits in the engineering program

This course is the senior capstone course of the Project Lead the Way pre-engineering sequence. Students will work in teams to research, design, and construct a solution to an open-ended engineering problem. Students apply principles developed in the four preceding courses and are guided by an engineering mentor. Students will present progress reports, submit a final written report, and present their solutions to a panel of outside reviewers at the end of the course. This course counts as a science credit. *This course receives Honors weight for the class of 2025 and beyond.*

Practicum in Engineering (Mobile Classroom)

TEDS: 12756080 **KISD:** 82470
Grade: 12
Prerequisite: 3 credits in the engineering program

The Practicum in STEM: Mobile Classroom offers students a unique opportunity to apply their knowledge and skills in an innovative, real-world setting. In this course, students manage and operate a fully equipped CTE Mobile Classroom—a large trailer outfitted with state-of-the-art technology and its own network. The mobile classroom travels to elementary and middle schools on a scheduled basis, where practicum students lead younger students in engaging, hands-on activities designed to showcase different programs of study within STEM. As part of the practicum, students are responsible for planning, organizing, and executing these educational activities, gaining valuable experience in teaching, project management, and technical support. This course allows students to deepen their understanding of STEM concepts while fostering an interest in STEM among younger students in the community.

Practicum in Engineering (Electric Vehicles)

TEDS: 12756080 **KISD:** 82373 (1st time taken); 82386 (2nd time taken)
Grade: 12
Prerequisite: 3 credits in the engineering program

This year-long practicum offers students a hands-on, immersive experience in the design and construction of an electric vehicle powered by solar energy and batteries. Throughout the course, students will build a vehicle from the ground up, with the goal of competing against others in races to determine which car can achieve the greatest speed and distance using sustainable energy. Students will design every component of the vehicle, manufacture parts using both power and hand tools, and gain practical skills in welding, soldering, and basic wiring. In addition to developing essential automotive knowledge, this practicum provides supervised, practical application of the engineering concepts and skills students have previously studied. The experience is tailored to engage students in real-world problem-solving and innovation in a collaborative, competitive environment.

Practicum in Engineering (Internships)

TEDS: 12756080 **KISD:** 82376
Credit: 2
Grade: 12
Prerequisite: 3 credits in the engineering program

This practicum is designed for students who are interested in internships with corporate and local engineering partners. The course provides a unique opportunity for students to apply their previously acquired knowledge and skills in a real-world setting, gaining hands-on experience in various engineering fields such as mechanical, electrical, civil, aeronautical, and computer engineering. Before beginning their internships, students will receive comprehensive soft skills training, preparing them for professional environments. Throughout the practicum, students will continue to refine these skills within the classroom, ensuring they are well-equipped for future career opportunities. Internship experiences are carefully supervised and take place in locations appropriate to the nature and level of the student's experience. Please note that internship placements are limited and not guaranteed for all students.