C. H. Yoe High School

Course Description Guide

2022-2023

Cameron Independent School District
Cameron, Texas 76520

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CTE Courses

General Information

CLASSIFICATION OF STUDENTS

Grade 9: Successful completion of Eighth Grade
Grade 10: 6 Credits
Grade 11: 12 Credits
Grade 12: 18 Credits

CREDITS REQUIRED FOR GRADUATION

Distinguished Foundation Plan with Endorsement

-26 Credits-must take Algebra II
-Foundation Plan with Endorsement

Foundation Plan

-22 Credit
-approval by an administrative committee only after sophomore year
-must sign Opt-Out Agreement

ENDORSEMENTS

An endorsement is defined as "a coherent sequence or series of courses" in one of five areas: STEM (Science, Technology, Engineering, and Mathematics), Business and Industry, Public Service, Arts and Humanities, and Multidisciplinary Studies. Yoe High School offers all five endorsements. You can find them on our website under the Counselors' Corner.

PERFORMANCE ACKNOWLEDGMENT

A student may earn a performance acknowledgment (requirements by SBOE):

- for outstanding performance in dual credit courses
- bilingualism and biliteracy
- AP test
- PSAT, the SAT, or the ACT
- for earning a nationally or internationally recognized business or industry certification or license.

DUAL CREDIT COURSES

Through an agreement with Temple College, students successfully completing a specified high school course will receive college credit as well as state or local high school credit. Students must meet college enrollment requirements. **Proof of registration must be provided to the Yoe High School counseling office**. Students must enroll in college classes that will not conflict with courses on this campus.
Refer to Board Policy EIC Local for Dual Credit Course GPA Calculation
https://pol.tasb.org/Policy/Download/889?filename=EIC(LOCAL).pdf

Please note that college level coursework is very rigorous and time intensive. There is a great deal of preparation outside of class that will be necessary in order to be successful.

Dual Credit Eligibility Requirements

PSAT/NMSQT:	Reading & Writing 460, Math 510
SAT:	Reading 480, Math 530
ACT:	Reading 19, Math 19, composite 23
TSI:	**ELAR** 945-990 AND Essay 5-8 **OR** Diagnostic Level 4-6 AND Essay 5-8
	Math 950-990 OR Diagnostic Level 6

- Cameron ISD will pay tuition for English 1301/1302 and US History 1301/1302, English 2322/2323, and Economics 2301/Government 2305. Current CTE Dual Credit courses may be paid by CISD upon approval from the counselor. The cost of all other college courses are the responsibility of the student's family. **Cameron ISD will not pay for courses taken during the summer or evening. Should a student be unsuccessful in a course or drops a course paid for by the district, it is the responsibility of the family to repay the district.**
- Temple College course offerings are contingent upon availability of staff, course schedule, and enrollment.
- Students must receive a grade of C or better(70 or better)to receive high school credit.

TEXAS VIRTUAL SCHOOL NETWORK (TxVSN)

Distance learning and correspondence courses include courses that encompass the state-required essential knowledge and skills but are taught through multiple technologies and alternative methodologies such as mail, satellite, Internet, video-conferencing, and instructional television. The Texas Virtual School Network (TxVSN) has been established as one method of distance learning. A student has the option, see counselor, to enroll in a course offered through the TxVSN to earn course credit for graduation. The financial cost of these courses are the responsibility of the student's family.

GIFTED AND TALENTED

Gifted and Talented students at the high school level are served through honors classes or dual credit courses. Students will be required to complete projects to the degree as stated by TEA. Participation in the program will give students an opportunity to fully develop their academic abilities, pursue their own research, and interact with others in an

intellectually challenging atmosphere.

EMERGENT BILINGUAL STUDENTS

Students who have been identified as Emergent Bilingual students may participate in a special language program that is an integral part of the total school program. The program emphasizes the mastery of basic English language skills in listening, speaking, reading, and writing, so the students will be able to participate effectively in the regular school program as soon as practical.

DYSLEXIA PROGRAM

The Dyslexia Program offers instruction in a small class setting that includes reading, writing, and spelling as appropriate. The major instructional strategies utilize individualized, intensive, and multisensory methods. The program emphasizes the mastery of basic English language skills so students will be able to participate effectively in the regular school program. See your counselor for more information.

SPECIAL EDUCATION

Cameron I.S.D. is committed to the instruction of academic competencies, personal growth, skills, and decision-making and problem solving skills that are recognized as critical for success in high school and adult independent living. To achieve these goals, an Individual Education Plan (IEP) will be developed for each student, with special education and/or regular education staff working together to modify materials or instruction determined as appropriate by the Admission, Review and Dismissal (ARD) Committee. Should you have any questions concerning the special education program, please call your counselor or special education diagnostician.

COLLEGE ADMISSION REQUIREMENTS

Individual college websites and/or catalogs should be consulted for specific admission requirements. Certain college majors may require more math and science or foreign language. If you are considering applying to a selective college, consult with the **college** counselor about specific entrance requirements. Students are able to take 2 college days as a junior and 2 college days as a senior to visit choice campuses. The counselors' office has required documentation for your visit(s).

***Algebra II is required for automatic admission for top 10% in the state of Texas.**

SAT AND ACT TESTS

Students are encouraged to take the SAT and/or ACT Test by the second semester of their junior year. Fee waivers are available in the counselors' office for both tests for students who qualify.

www.collegeboard.org

www.actstudent.org

TEXAS SUCCESS INITIATIVE

The Texas Success Initiative (TSI) exam, also known as the Accuplacer, is a college readiness tool used to evaluate college preparedness.

ELAR-945-990 AND Essay 5-8 **OR** Diagnostic Level 4-6 AND Essay 5-8

Math-950-990 **OR** Diagnostic Level 6

ARMED SERVICES VOCATIONAL APTITUDE BATTERY

ASVAB stands for the Armed Services Vocational Aptitude Battery, which is a multiple-choice test that helps you identify which military jobs would be best for you. The ASVAB tests cover general science, arithmetic reasoning, word knowledge, paragraph comprehension, numerical operations, coding speed, auto and shop information, mathematics knowledge, mechanical comprehension and electronics information. The ASVAB is usually given on the YHS Campus in October.

FAFSA

Beginning in the 2021-2022 school year, all 12th grade students must do one of the following in order to graduate:

- Complete and submit a Free Application for Federal Student Aid (FAFSA)
- Complete and submit a Texas Application for State Financial Aid (TASFA)
- Submit a signed opt-out form

Resources for students and families completing these applications are provided on our website: https://www.cameronisd.net/page/cc.Financial%20Aid

HONORS and AP CALCULUS

***Students taking AP Calculus will be required to take the AP Exam.**

The following criteria will be used for placement of students in Honors/AP class sections for English, Science, Math and Social Studies:

1. Student must have successfully completed prerequisite coursework.
2. A student must have a minimum of "Masters" score on the latest STAAR/EOC of the related subject for automatic placement.
3. Students that wish to be in Honors/AP classes that have scored "Meets" on the latest STAAR/EOC must meet with the principal.
    - Information for the Honors/AP Committee to consider placement will be collected
    - PSAT and TSI scores will be taken into consideration for placement.

POST SECONDARY PREPARATION TIMELINE

8TH Grade

- ❑ Complete the career interest survey by December on *https://tinyurl.com/y9v6dpgv* and add to your profile and portfolio.
- ❑ Review choices offered under the Foundation High School Program and the Endorsements to decide on your future academic path.
- ❑ Attend the 8th grade parent night with your parents/guardian in February to learn more about your future.
- ❑ Determine a program of study that will help guide your academic choices.
- ❑ Select the endorsement based on your program of study that best fits your area of personal interest.
- ❑ Develop soft skills!!!!!!! https://tinyurl.com/yasnoasw

Paent/Guardians

- ❑ Discuss your child's career interest survey results and his/her future.
- ❑ Attend the 8th grade parent night with your child to learn more about their future.
- ❑ Review the Foundation High School Plan and programs of study offered at YHS.
- ❑ Do you need to start planning for your student's future schooling financially?
- ❑ Help your child develop soft skills!!!!! https://tinyurl.com/yasnoasw

9th Grade

- ❑ Create a basic resume.
- ❑ Get involved in the school and extracurricular activities.
- ❑ Remember to add your list of awards, honors, extracurricular, and community service activities to your resume as you apply for scholarship, college, and job applications.
- ❑ Work with your Career and Technical (CTE) teacher on your employability skills.
- ❑ Attend sessions on career counseling: *www.texasrealitycheck.com*
- ❑ Develop soft skills!!!!!!! https://tinyurl.com/yasnoasw

Parent/Guardians

- ❑ Research the leadership organizations, career and technical student organizations, athletic teams, and other activities available for your child to become a member to determine the best fit.
- ❑ Do you need to start planning for your student's future schooling financially?
- ❑ Help your child develop soft skills!!!!! https://tinyurl.com/yasnoasw

10th Grade

- ❑ Update your resume and make it your own.
- ❑ Remember to add your list of awards, honors, extracurricular, and community service activities to your resume as you go for scholarship, college, and job applications.
- ❑ Work with your Career and Technical (CTE) teacher on your employability skills.
- ❑ Research colleges, universities, technical schools or programs, or employers you are interested in attending or working for. Check admission and application requirements and timeline.
- ❑ Attend college nights and talk with school representatives about the types of financial aid available.
- ❑ Take the PSAT for practice.
- ❑ Develop soft skills!!!!!!! https://tinyurl.com/yasnoasw

Parents/Guardians

- ❑ Attend college nights with your child.
- ❑ Do you need to start planning for your student's future financially?
- ❑ Help your child develop soft skills!!!!! https://tinyurl.com/yasnoasw

11th Grade

- ❑ Update your resume and tailor it for your post-secondary future.
- ❑ Remember to add your list of awards, honors, extracurricular, and community service activities to your resume as you for scholarships, college, and job applications.
- ❑ Work with your Career and Technical (CTE) teacher on your employability skills.
- ❑ **College Bound:**
  - ❑ Tour campus(es) you are interested in attending.
  - ❑ Consider SAT/ACT prep class. Sign up and take the PSAT in the fall.
  - ❑ Sign up and take the ACT and/or SAT in the spring.
  - ❑ Develop soft skills!!!!!!! https://tinyurl.com/yasnoasw
- ❑ **Technical School Bound:**
  - ❑ Tour campuses you are interested in attending.
  - ❑ Consider taking TSI.
  - ❑ Develop soft skills!!!!!!! https://tinyurl.com/yasnoasw
- ❑ **Military Bound**
  - ❑ Consider SAT/ACT prep class. Sign up and take the PSAT in the fall.
  - ❑ Take the ASVAB (if you are at least 16 years old)
  - ❑ Meet with a recruiter.
  - ❑ Develop soft skills!!!!!!! https://tinyurl.com/yasnoasw
- ❑ **Workforce Bound**
  - ❑ Tour job sites of places you are interested in being employed by after high school.
  - ❑ Consider doing an internship or volunteer to gain job experience.
  - ❑ Develop soft skills!!!!!!! https://tinyurl.com/yasnoasw
- ❑ Update your personal graduation plan(PGP) with the counselor at the end of the year after completing year three in your program of study.

Parents/Guardians

- ❑ Attend campus tours with your child.
- ❑ Discuss financial options with financial aid advisors.

- ❑ Help your child develop soft skills!!!!! https://tinyurl.com/yasnoasw

12th Grade

- ❑ Review credits to make sure you are on track for graduation.
- ❑ Finalize your high school resume for your post-secondary future.
- ❑ Work with your Career and Technical (CTE) teacher on your employability skills.
- ❑ Check with the counselor's office to learn about available scholarships. Be sure to apply early and for as many scholarships as possible.
- ❑ Ask for 2 letters of reference/recommendation from teachers.
- ❑ **College Bound:**
  - ❑ Sign up and take the ACT and/or SAT.
  - ❑ Sign up and take the TSI.
  - ❑ Apply for admission to selected schools in the fall. Use *www.applytexas.org* or *www.commonapp.com* for many college applications.
  - ❑ Complete the FAFSA.
  - ❑ Confirm acceptance to college of choice in spring or as soon as possible.
  - ❑ Develop soft skills!!!!!!! https://tinyurl.com/yasnoasw
- ❑ **Technical School Bound:**
  - ❑ Sign up and take the TSI.
  - ❑ Apply for admission to selected schools. Use *www.applytexas.org* or *www.commonapp.com* for many college applications.
  - ❑ Complete the FAFSA.
  - ❑ Develop soft skills!!!!!!! https://tinyurl.com/yasnoasw
- ❑ **Military Bound:**
  - ❑ Take or retake the ASVAB (if you did not when you were a junior).
  - ❑ Complete paperwork with the recruiter.
  - ❑ Develop soft skills!!!!!!! https://tinyurl.com/yasnoasw
- ❑ **Workforce Bound:**
  - ❑ Find job openings.
  - ❑ Apply for internships.
  - ❑ Update your resume.
  - ❑ Develop soft skills!!!!!!! https://tinyurl.com/yasnoasw

Parent/Guardians

- ❑ Discuss and support post-secondary choices with your child.
- ❑ Help your child develop soft skills!!!!! https://tinyurl.com/yasnoasw

PLANNING YOUR HIGH SCHOOL PROGRAM

Yoe High School offers extensive opportunities for all students and their post-high school goals. It is recommended that students and their parents plan with the end goal in mind whether that be trade school or community college, military, or a four year university.

College Entrance Requirements:

The student who plans to attend college should begin freshman year to develop a course of study to assure acceptance by the college or university of their choice. Once a school has been selected, it is advisable for students and their parents to get in touch with and stay in contact with the college admissions office in order to be knowledgeable of entrance requirements and any changes that may occur, thus knowing well in advance of any changes.

Practical suggestions for student and parents:

Considering University:

Take the Preliminary Scholastic Aptitude Test (PSAT) the freshman, sophomore and/or junior years. Taking the PSAT sophomore year exposes students to the format used and allows the school and parents to identify areas of strengths and weaknesses. National Merit Scholarship recipients are taken from PSAT candidates that take the test during their junior year only.

Take the SAT/ACT examinations multiple times.

Students' academic skills vay and some may do better on the ACT than the SAT. It is recommended that students take both exams at least once and then retake the one in which they do best. Most colleges accept applications in the fall of a student's senior year; therefore it is important to have multiple test scores documented before the end of a seniors fall semester. Please check the school website of the college you plan to attend for minimum score requirements as they will vary from one school to another.

Plan a senior year filled with rigorous coursework and activities.

A student's senior year should propel them to the next academic level. This is the time to focus and put into motion future plans.

Participate in school-related activities and community service.

Being involved in school organizations and community service contributes to developing a well-rounded, sensitive, and compassionate citizen. Colleges and universities looking for well-rounded individuals. Twenty hours of community service is required for the Callaway Foundation Scholarship beginning after the junior year.

Considering Junior College or Trade School:

Take the Texas Success Initiative (TSI) assessment to show college readiness.
The Texas Success Initiative, also known as the Accuplacer, is a college readiness tool used to evaluate college preparedness. A minimum score of:

ELAR-945-990 AND Essay 5-8 **OR** Diagnostic Level 4-6 AND Essay 5-8

Math-950-990 **OR** Diagnostic Level 6

Plan a senior year filled with rigorous coursework and activities.
A student's senior year should propel them to the next academic level. Advanced CTE level courses are recommended for juniors and seniors with this goal. This is the time to focus and put into motion future plans.

Participate in school-related activities and community service.
Being involved in school organizations and community service contributes to developing a well-rounded, sensitive, and compassionate citizen. Colleges and universities looking for well-rounded individuals. Twenty hours of community service is required for the Callaway Foundation Scholarship beginning after the junior year.

RECOMMENDED SEQUENCE FOR TAKING REQUIRED COURSES

Students should be familiar with graduation requirements and take care in planning course selections. Although counselors work with students to ensure that students are enrolled in courses relevant to graduation requirements, it is ultimately the responsibility of each student to verify all credit requirements are met for the individual's graduation plan. The 4-Year Plan below suggests a sequence for taking required courses:

Discipline	Foundation High School Program	Foundation High School Program+Endorsement (Distinguished)
English Language Arts	**Four credits:** English I English II English III An advanced course	**Four credits:** English I English II English III An advanced course
Mathematics	**Three credits:** Algebra I Geometry An advanced math course	**Four credits:** Algebra I Geometry Algebra II* An additional math credit
Science	**Three credits:** Biology IPC/Chemistry/Physics An advanced science	**Four credits:** Biology IPC/Chemistry/Physics 2 Advanced sciences
Social Studies	**Three credits:** World History **OR** World Geography U.S. History Government (one-half credit) Economics (one-half credit)	**Three credits:** World History **OR** World Geography U.S. History Government (one-half credit) Economics (one-half credit)
Physical Education	**One credit**	**One credit**
Languages other than English	Spanish I Spanish II	Spanish I Spanish II
Fine Arts	**One credit**	**One credit**
Endorsement		**Students must choose one of five endorsements with 4 credits in the endorsement. (One credit being in an advanced course)**
Electives	**Five credits**	**Three credits**
Total Credits	**22**	**26**

***Algebra II is required for automatic admission for top 10% in the state of Texas**

***TIER III on GPA Chart**
****TIER IV on GPA Chart**

ENGLISH

ENGLISH 1 (ENG1)

Credits: 1.0 Grade Level: 9th
Tier II on GPA Chart

Students enrolled in English I will continue to review their grammar skills. They are expected to plan, draft and complete written compositions. In English I, emphasis is placed on the organization of logical ideas with an expressed main idea and supporting evidence.

***HONORS ENGLISH 1 (ENG1)**

Credits: 1.0 Grade Level: 9th
Tier III on GPA Chart

Honors English 1 is designed for students with high academic interest and a strong work ethic in English Language Arts. Emphasis is placed on developing students' skills in critical, analytical and creative thinking, close reading, grammar and composition. Students will read and write extensively in multiple genres and keep a portfolio of written work.
***Honors courses address learning objectives at greater depth and faster pace along with higher expectations for student performance.**

ENGLISH 2 (ENG2)

Credits: 1.0 Grade Level: 10th
Tier II on GPA Chart

Students enrolled in English 2 continue to increase and refine their communication skills. High school students are expected to plan, draft, and complete their written compositions on a regular basis. Students edit their papers for clarity, engaging language, and the correct use of the conventions and mechanics of written English and produce final, error-free drafts. In English II, students practice all forms of writing. These personal forms of writing may include a response to literature, a reflective essay, or an autobiographical narrative. English II students read extensively in multiple genres from world literature.

***HONORS ENGLISH 2 (ENG2)**

Credits: 1.0 Grade Level: 10th
Tier III on GPA Chart

Honors English 2 is designed for students with high academic interest and a strong work ethic in English Language Arts. Emphasis is placed on developing students' skills in critical, analytical and creative thinking, close reading, grammar, and composition. Students will read and write extensively in multiple genres and keep a portfolio of written work.
***Honors courses address learning objectives at greater depth and faster pace along with higher expectations for student performance.**

ENGLISH 3 (ENG3)

Credits: 1.0 Grade Level: 11th
Tier II on GPA Chart

Students enrolled in English 3 and 4 will continue to increase and refine their communication skills. Emphasis is placed on the personal narrative and students will be expected to plan, draft and complete written assignments. In addition, students read extensively in multiple genres from American literature and other world literature.

****DUAL CREDIT ENGLISH COMPOSITION I (Eng 1301) AND II (Eng 1302) /High School English 3**

Credits: 0.5 per semester Grade Level: 11th
Tier IV on GPA Chart

Intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individual and collaboratively. Emphasis on effective rhetorical choices, including audience, purpose, arrangement and style. Focus on writing the academic essay as a vehicle for learning, communicating and critical analysis.

ENGLISH 4 (ENG4)

Credits: 1.0 Grade Level: 12th
Tier II on GPA Chart

In English 4, students are expected to write in a variety of forms for a variety of audiences and purposes. English 4 students will research a topic and produce a formal research draft. English 4 students read and interpret various selections from British literature. In addition, emphasis is placed on preparation for the Texas Success Initiative exams.

****DUAL CREDIT BRITISH LITERATURE I (Eng 2322) and II (Eng 2323)/High School English 4**

Credits: 0.5 per semester Grade Level: 12th
Tier IV on GPA Chart

A survey of the development of British literature from the Anglo-Saxon period to the Eighteenth Century. Students will study works of prose, poetry, drama, and fiction in relation to their historical, linguistic, and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

INDEPENDENT STUDY IN ENGLISH (IND ENG)

Credits: 0.5-1.0 Grade Level: 12th

Students enrolled in Independent Study in English will focus on a specialized area of study such as the work of a particular author or genre. Students will read and write in multiple forms for a variety of audiences and purposes. High school students are expected to plan, draft, and complete written compositions on a regular basis and carefully examine their papers for clarity, engaging language, and the correct use of the conventions and mechanics of written English.

COLLEGE PREPARATORY COURSE ENGLISH LANGUAGE ARTS (CPELA)

Credits 1.0 Grade Level: 12th

Students will learn to investigate academic texts, construct supported interpretations and arguments for an authentic audience, and acquire academic habits of thought. Reading instruction will focus on developing critical reading skills for comprehension, interpretation, and analysis. In writing, students will develop skills through composing with specific purpose, situation, genre, and audience in mind. Students will write a variety of effective formal and informal texts. To learn to integrate reading and writing, students will use an inquiry approach to analyze, synthesize, and make value judgments regarding text and writing. This course is designed to prepare students for college-level reading and writing intensive courses. Successful completion of this course, as defined by the memorandum of understanding (MOU) with Temple College, grants the student an exemption to TSI requirements for reading and writing at Temple College.

Business English (BUSENGL)

Credits: 1.0 Grade Level: 12th
Prerequisite: English 3

In Business English, students enhance communication and research skills by applying them to the business environment, in addition to exchanging information and producing properly formatted business documents using emerging technology.

Note: This course satisfies an English credit requirement for students on the Foundation High School Program

MATH

Courses that satisfy the advanced math requirement for the Foundation High School Program are:

Algebra II
Algebraic Reasoning
AP Calculus
Independent Study in Mathematics
College Preparatory Course in Mathematics
Dual Credit Independent Study in Mathematics
Financial Mathematics
Math Models
Pre-Calculus

ALGEBRA I (ALG I)

Credits: 1.0 Grade Level: 9th
Tier II on GPA Chart (only in high school)

Algebra is a powerful mathematical tool, and all advanced courses depend on student mastery of its principles and strategies. Algebra I lays the foundation for the concepts required, with a strong emphasis on multiple representations of linear functions. While learning the material required by the TEKS (Texas Essential Knowledge and Skills), students will use graphing calculators, web-based programs and other technology, and will be exposed to real-world applications of the various methodologies.

GEOMETRY (GEOM)

Credits: 1.0 Grade Level: 10th
Tier II on GPA Chart

A study of geometric terms, symbols, and characters such as points, lines, angles, polygons, curves, etc. and their relationships to one another. Students must be able to set up and solve basic equations.

*HONORS GEOMETRY (GEOM)

Credits: 1.0 Grade Level: 9th-10th
Tier III on GPA Chart

In Honors Geometry, students will be engaged in the study of Inductive and Deductive Reasoning, Mathematical Modeling, Angle Relationships, Lines, Constructions, Triangle Properties, Polygon Properties, Circle Properties, Transformations, Tessellations, Area, Properties of 3D Geometric Figures, Surface Area of Solids, Pythagorean Theorem, Volume of Solids, Similarity and Introductory Trigonometry. Students will use high order thinking skills to solve problems and apply the mathematics they learn to real world application problems. Students will utilize technology, such as graphing calculators and specialized math software.

***Honors courses address learning objectives at greater depth and faster pace along with higher expectations for student performance.**

ALGEBRAIC REASONING (ALGREA)

Credit: 1.0 Grade Level: 11th-12th
Prerequisite: Algebra I

In Algebraic Reasoning, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra I, continue with the development of mathematical reasoning related to algebraic understandings and processes, and deepen a foundation for studies in subsequent mathematics courses. Students will broaden their knowledge of functions and relationships, including linear, quadratic, square root, rational, cubic, cube root, exponential, absolute value, and logarithmic functions. Students will study these functions through analysis and application that includes explorations of patterns and structure, number and algebraic methods, and modeling from data using tools that build workforce and college readiness such as probes, measurement tools, and software tools, including spreadsheets.

MATH MODELS (MTHMOD)

Credit: 1.0 Grade Level: 11th
Tier II on GPA Chart

In Math Models, students continue to build on the K-8 and Algebra I foundations as they expand their understanding through other mathematical experiences. Students use algebraic, graphical and geometric reasoning to recognize patterns and structure, to model information and to solve problems from various disciplines. Students use mathematical methods to model and solve real-life applied problems involving money, data, chance, patterns, music, design and science.

FINANCIAL MATHEMATICS (FINMATH)

Credits: 1.0 Grade Level: 10th-12th
Prerequisite: Algebra I

Financial Mathematics is a course about personal money management. Students will apply critical-thinking skills to analyze personal financial decisions based on current and projected economic factors.

ALGEBRA II (ALG 2)

Credits: 1.0 Grade Level: 10th-12th

Tier II on GPA Chart

Algebra II advances skills learned in Algebra I and integrates Geometry and Algebra II. Use of the graphing calculator is expanded and students are encouraged to become proficient at using the graphing calculator for recording gathered data, preparing graphs and making real-world decisions. The Algebra II curriculum, or TEKS, is extensive, emphasizes higher level thinking skills and encourages students to recognize a variety of methods for solving real-world problems.

***Algebra II is required for automatic admission for top 10% in the state of Texas. It is also required to graduate on the Distinguished Plan of graduation.**

***HONORS ALGEBRA II (ALG 2)**

Credits: 1.0 Grade Level:10th

Tier III on GPA Chart

The primary focus for students in this course is developing logical reasoning by making and justifying generalizations based on their experiences with fundamental as well as advanced algebraic concepts, especially functional relationships and problem solving in real situations. Building on the study of linear and quadratic functions from first-year algebra and the study of the size, shape, location and direction relationships from geometry, functional relationships are extended to include radical, rational, exponential and logarithmic functions. These functions are examined in a variety of problem situations and form the basis for the study of equations and the development of algebraic skills. Students use a variety of representations (concrete, numerical, algorithmic, graphical) and tools as well as having regular access to technology that allows function plotting, coordinate graphing, algebraic analysis and computation. This course is an excellent preparation for college entrance examinations (SAT, ACT, etc.) and further study in mathematics and is designed for students who plan to take an advanced placement (AP) mathematics course or College Algebra/Statistics in high school.

***Algebra II is required for automatic admission for top 10% in the state of Texas. It is also required to graduate on the Distinguished Plan of graduation.**

***Honors courses address learning objectives at greater depth and faster pace along with higher expectations for student performance.**

***PRE-CALCULUS (PRE CALC)**

Credits: 1.0 Grade Level:11th-12th

Tier III on GPA Chart

Pre-Calculus is an advanced class that is important for preparation for college bound students. It reviews and extends algebra skills and emphasizes the study of trigonometry. Many of the topics covered in this course are seen on college entrance exams. Skills for the graphing calculator will be taught in this class.

INDEPENDENT STUDY IN MATHEMATICS (INSTUMTH)

Credits: 0.5-1.0 Grade Level: 12th

In Independent Study in Mathematics, students will extend their mathematical understanding beyond the Algebra II level in a specific area or areas of mathematics such as theory of equations, number theory, non-Euclidean geometry, linear algebra, advanced survey of mathematics, or history of mathematics.

COLLEGE PREPARATORY COURSE MATHEMATICS (CPMAT)

Credits 1.0 Grade Level: 12th

This course addresses a variety of mathematical topics needed to prepare students for success in college-level mathematics. In this course students will connect and use multiple strands of mathematics in situations and problems, as well as in the study of other disciplines. In addition, the course supports students in developing skills and strategies needed to succeed in college. Mathematics topics include: numeracy with an emphasis on estimation and fluency with large numbers; manipulating and evaluating expressions and formulas, to include perimeter, area and volume; rates, ratios and proportions; percentages; solving equations; linear equations and inequalities; linear systems; exponential models; data interpretations including graphs and tables; verbal, algebraic and graphical interpretations of functions. Mathematical process standards are also included in this framework; these process standards describe ways in which students are expected to engage in the content. Successful completion of this course, as defined by the memorandum of understanding (MOU) with Temple College, grants the student an exemption to TSI requirements for mathematics at Temple College.

****AP CALCULUS AB (APCALCAB)**

Credits: 1.0 Grade Level: 12th

Tier IV on GPA Chart

Calculus develops the students' understanding of the concepts of calculus and providing experience with its methods and applications. The course emphasizes a multi representational approach to calculus, with concepts, results, and problems being expressed graphically, numerically, analytically and verbally. At the end of the course, students will take the Advanced Placement exam for college credit.

DUAL CREDIT INDEPENDENT STUDY IN MATH/COLLEGE ALGEBRA (MATH 1314)

Credits: 0.5 Grade Level: 12th

In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included.

Measurable Learning Outcomes:

Upon successful completion of this course, students will: Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations. Apply graphing techniques. Evaluate all roots of higher degree polynomial and rational functions. Recognize, solve and apply systems of linear equations using matrices.

DUAL CREDIT INDEPENDENT STUDY IN MATHEMATICS/ ELEMENTARY STATISTICAL METHODS (MATH 1442)

Credits: 0.5 Grade Level: 12th

Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended.

Measurable Learning Outcomes:

Upon successful completion of this course, students will: Explain the use of data collection and statistics as tools to reach reasonable conclusions. Recognize, examine and interpret the basic principles of describing and presenting data. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics. Explain the role of probability in statistics. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables. Describe and compute confidence intervals. Solve linear regression and correlation problems. Perform hypothesis testing using statistical methods.

SCIENCE

Courses that satisfy the advanced science requirement for the Foundation High School Program are:

Chemistry
Physics
Anatomy and Physiology
Advanced Animal Science
Advanced Plant and Soil
Forensic Science

INTEGRATED PHYSICS AND CHEMISTRY (IPC) Grade Level: 9th-10th
Credits: 1.0
Tier II on GPA Chart

This course integrated the disciplines of physics and chemistry in the following topics: motion, waves, energy transformations, properties of matter, changes in matter, and solution chemistry. This course will not serve as one of the 4 science courses needed for a Distinguished Graduation Plan.

BIOLOGY I (BIO)
Credits: 1.0 Grade Level: 9th-10th
Tier II on GPA Chart

Students will conduct field and laboratory investigations, use scientific methods during investigations and make informed decisions using critical thinking and scientific problem-solving. Students will study a variety of topics that include: structures and functions of cells and viruses; growth and development of organisms; cells, tissues and organs; nucleic acids and genetics; biological evolution; taxonomy; metabolism and energy transfers in living organisms; living systems; homeostasis; ecosystems; and plants and the environment.

***HONORS BIOLOGY (BIO)**
Credits: 1.0 Grade Level: 9th-10th
Tier III on GPA Chart

Students will conduct field and laboratory investigations, use scientific methods during investigations and make informed decisions using critical thinking and scientific problem-solving. Students will study a variety of topics that include: structures and functions of cells and viruses; growth and development of organisms; cells, tissues and organs; nucleic acids and genetics; biological evolution; taxonomy; metabolism and energy transfers in living organisms; living systems; homeostasis; ecosystems; and plants and the environment.

***Honors courses address learning objectives at greater depth and faster pace along with higher expectations for student performance.**

CHEMISTRY (CHEM)

Credits: 1.0 Grade Level: 10th-11th
Tier II on GPA Chart

Students conduct field and laboratory investigations, use scientific methods during investigations and make informed decisions using critical thinking and scientific problem solving. Students study a variety of topics that include characteristics of matter; energy transformations during physical and chemical changes; atomic structure; periodic table of elements; behavior of gases; bonding; nuclear fusion and nuclear fission; oxidation-reduction reactions; chemical equations; solutes; properties of solutions; acids and bases; and chemical reactions. Students will investigate how chemistry is an integral part of our daily lives.

***HONORS CHEMISTRY (CHEM)**

Credits: 1.0 Grade Level: 10th
Tier III on GPA Chart

Students conduct field and laboratory investigations, use scientific methods during investigations and make informed decisions using critical thinking and scientific problem solving. Students study a variety of topics that include characteristics of matter; energy transformations during physical and chemical changes; atomic structure; periodic table of elements; behavior of gases; bonding; nuclear fusion and nuclear fission; oxidation-reduction reactions; chemical equations; solutes; properties of solutions; acids and bases; and chemical reactions. Students will investigate how chemistry is an integral part of our daily lives.

***Honors courses address learning objectives at greater depth and faster pace along with higher expectations for student performance.**

PHYSICS (PHYSICS)

Credits: 1.0 Grade Level: 11th-12th
Tier II on GPA Chart

Students conduct field and laboratory investigations, use scientific methods during investigations and make informed decisions using critical thinking and scientific problem solving. Students study a variety of topics that include: laws of motion; changes within physical systems and conservation of energy and momentum; force; thermodynamics; characteristics and behavior of waves; and quantum physics. This course provides students with a conceptual framework, factual knowledge and analytical and scientific skills.

***HONORS PHYSICS (PHYSICS)**

Credits: 1.0 Grade Level: 11th

Tier III on GPA Chart

Students conduct field and laboratory investigations, use scientific methods during investigations and make informed decisions using critical thinking and scientific problem solving. Students study a variety of topics that include: laws of motion; changes within physical systems and conservation of energy and momentum; force; thermodynamics; characteristics and behavior of waves; and quantum physics. This course provides students with a conceptual framework, factual knowledge and analytical and scientific skills.

***Honors courses address learning objectives at greater depth and faster pace along with higher expectations for student performance.**

***ANATOMY & PHYSIOLOGY (ANATPHYS)**

Credits: 1.0 Grade Level: 12th

Tier III on GPA Chart

In this course, students conduct laboratory investigations and fieldwork, use scientific methods during investigations and make informed decisions using critical thinking and problem solving, Topics will be presented through an integration of biology, chemistry and physics. Students will study the structures and functions of the human body and body systems and will investigate the body's responses to forces, maintenance of homeostasis, electrical interactions, transport systems and energy systems. *This course must include at least 40% laboratory investigation and fieldwork using appropriate scientific inquiry.*

ADVANCED ANIMAL SCIENCE (ADVANSCI)

Credits: 1.0 Grade Level: 11th- 12th

Prerequisites: Biology, IPC or Chemistry, Algebra I, Geometry, Small Animal or Equine or Livestock Production

This course will allow students to attain both academic and animal science knowledge and skills. Advanced animal science, nature of science, scientific inquiry, science and social ethics and science, systems and modules will be addressed in this class.

ADVANCED PLANT AND SOIL SCIENCE (ADVPSSCI)

Credits: 1.0 Grade Level: 11th-12th

Advanced Plant and Soil Science provides a way of learning about the natural world. Students should know how plant and soil science has influenced a vast body of knowledge, that there are still applications to be discovered and that plant and soil science is the basis for many other fields of science. To prepare for careers in plant and soil science, students must attain academic skills and knowledge, acquire technical knowledge and skills related to plant and soil science and the workplace.

FORENSIC SCIENCE (FORENSCI)

Credits: 1.0 Grade Level: 9th-12th
Prerequisites: Biology & Chemistry

Forensic Science is a course that introduces students to the application of science to connect a violation of law to a specific criminal, criminal act, or behavior and victim. Students will learn terminology and procedures related to the search and examination of physical evidence in criminal cases as they are performed in a typical crime laboratory. Using scientific methods, students will collect and analyze evidence such as fingerprints, bodily fluids, hairs, fibers, paint, glass and cartridge cases. Students will also learn the history and the legal aspects as they relate to each discipline of forensic science.

SOCIAL STUDIES

WORLD GEOGRAPHY (W GEO)

Credits: 1.0 Grade Level: 9th, 10th
Tier II on GPA Chart

Students will engage in learning the five themes of Geography that consist of Location, Place, Interaction, Movement and Regions. The course will cover a broad array of these themes.

***HONORS WORLD GEOGRAPHY (W GEO)**

Credits: 1.0 Grade Level: 9th
Tier III on GPA Chart

Includes all of the basic class with more in depth look at the topics, more research and reports. The work is done at an accelerated pace and with more emphasis on understanding the connection between history and present day society. ***Honors courses address learning objectives at greater depth and faster pace along with higher expectations for student performance.**

WORLD HISTORY (W HIST)

Credits: 1.0 Grade Level: 10th
Tier II on GPA Chart

All of man's history is examined from the age of Australopithecine (pre-human forms) to the modern day. Areas included in this time frame are politics, individuals, economics, religion, culture, ideas, inventions, social science, technology and the changing environment around humans.

***HONORS WORLD HISTORY (W HIST)**

Credits: 1.0 Grade Level: 10th
Tier III on GPA Chart

The advanced sections of this class will include all areas of the basic class and have added material. This added material would include more research and reports, more in depth looks at several portions of the basic material. The work is done at an accelerated pace and with more emphasis on understanding the connection between history and present day society.
***Honors courses address learning objectives at greater depth and faster pace along with higher expectations for student performance.**

U. S. HISTORY (USHIST)

Credits: 1.0 Grade Level: 11th
Tier II on GPA Chart

This survey course covers the period of American History between 1865 and the present. Emphasis is placed on the following themes: forging a national identity from a diverse population, strengthening our national democracy and institutions, and improving our economic and technological capacity.

****DUAL CREDIT U.S. HISTORY I (Hist 1301) and II (Hist 1302)/High School U.S. History**

Credits: 0.5 each semester Grade Level: 11th
Tier IV on GPA Chart

U. S. History I is a general survey of the United States from the period of discovery through Reconstruction. The second course is a continuation of the history of the United States since Reconstruction to the present time.

ECONOMICS (ECO)

Credits: 0.5 Grade Level: 12th
Tier II on GPA Chart

Economics is the study of human efforts to satisfy what appears to be unlimited and competing wants through the careful use of relatively scarce resources. Economics deals with the relationship between producers and consumers and how their relationship will determine the things that are bought and sold in this Country.

****DUAL CREDIT ECONOMICS (Eco 2301) Principles of Macroeconomics/High School Economics**

Credit: 0.5 Grade Level: 12th
Tier IV on GPA Chart

This course surveys the American economic system emphasizing the impact of choices made by consumers and firms on the total level of economic activity. Introduces the fundamental economic-principles underlying the economic problem; special emphasis on aggregate economic analysis; determinants of policy; inflation and unemployment; economic growth, macroeconomic equilibrium, fiscal policy, monetary policy, government budget deficits and public debt, international trade, money and banking.

U. S. GOVERNMENT (USGOVT)

Credits: 0 .5 Grade Level: 12th

Tier II on GPA Chart

Government is the study of how our political system works on all levels, as well as how people are responsible for its operation. Government is also the study of the rights and responsibilities of citizens. Government also shows the relationship of people interacting with other people.

****DUAL CREDIT GOVERNMENT I (Gov 2305) American Government I/High School Government**

Credit: 0.5 Grade Level: 12th

Tier IV on GPA Chart

This course surveys the origin and the development of the U. S. and Texas Constitutions, federalism, interstate relations, political parties, interest groups, political campaigns and elections

Languages other than English

SPANISH I (SPANI)

Credits: 1.0 Grade Level: 9th – 11th

Prerequisite: None

This course introduces students to a large vocabulary and the use of present and past tense in sentences. They will also read and write in the language.

SPANISH II (SPANII)

Credits: 1.0 Grade Level: 10th - 12th

Prerequisite: Spanish I

This course increases the students' vocabulary by nearly double and introduces them to a minimum of three more verb usages. They do more reading, writing and translating.

FINE ARTS

DUAL CREDIT ART APPRECIATION (ARTIAPP)

Credits: 1.0 Grade Level: 9th – 12th

A general introduction to the visual arts designed to create an appreciation of the vocabulary, media, techniques, and purposes of the creative process. Students will critically interpret and evaluate works of art within formal, cultural, and historical contexts.

Measurable Learning Outcomes:
1. Apply art terminology as it specifically relates to a work of art.
2. Demonstrate knowledge of art elements and principles of design.
3. Differentiate between the processes and materials used in the production of various works of art.
4. Critically interpret and evaluate works of art.
5. Demonstrate an understanding of the impact of arts on culture.

ART I (ARTI)

Credits: 1.0 Grade Level: 9th – 12th

In this survey course, students will learn beginning techniques in a variety of Mediums. Studio projects will consist of a mix of 2 dimensional and 3 dimensional assignments. Students will learn the elements and principles of art and apply them to their studio practices. Along with each major project the study of art history and contemporary artists within each medium will aid the development of an appreciation for art.

ART II Drawing/Painting (ART2DRAW/ART2PATG)

Credits: 1.0 Grade Level: 10th – 12th
Prerequisite: Art I

This second-year art course provides students who have successfully completed an Art I course an opportunity to further develop their drawing and painting skills through the use of advanced concepts and processes. Development of a portfolio is required.

ART II Sculpture/Ceramics (ART2SCLP/ART2CRMC)

Credits: 1.0 Grade Level: 10th – 12th
Prerequisite: Art I

This second-year art course provides students who have successfully completed an Art I course an opportunity to further develop their three-dimensional skills through the use of advanced concepts and processing in clay and a variety of other media. Development of a portfolio is required.

THEATRE ARTS

TECHNICAL THEATRE I (TH1TECH)

Credits: 1.0 Grade Level: 9th-12th

Through a variety of experiences with diverse forms of storytelling and production, Technical Theatre I will afford students the opportunity to develop and exercise creativity, intellectual curiosity, critical thinking, problem solving, and collaborative skills. Participation and evaluation in a variety of theatrical experiences will afford students opportunities to develop an understanding of self and their role in the world.

TECHNICAL THEATRE II (TH2TECH)

Credits: 1.0 Grade Level: 12th

The purpose of this course is to continue the application of skills related to technical theatre. Topics will include: scenery, lighting, sound, costuming, hair / makeup, marketing / publicity, and their relationship to the overall theatrical process. Students may have the opportunity to participate in campus events and productions

BAND

BAND (MUS1BAND, MUS2BAND, MUS3BAND, MUS4BAND)

Credits: 1.0 Grade Level: 9th – 12th

Band is an instrumental music performance course designed for students in 9th through 12th grade who have had one or more years of band. Students with no band experience are enrolled by director approval. Marching band, jazz ensemble, color guard, twirling, solo and ensemble and concert band are opportunities for students to excel musically and physically. Students sign up with the band director. Marching Band requires a physical prior to participation.

INSTRUMENTAL ENSEMBLE 1, 2, 3, AND 4 (MUS1 (2, 3, & 4) INEN

Credits: 1.0 Grade Level: 9th – 12th

The student will take private lessons during the course while learning more about the instrument enabling them to perform beyond the intermediate level. The student will also be exposed to chamber ensemble experiences preparing them for performance at an artist level.

PHYSICAL EDUCATION

PHYSICAL EDUCATION, BOYS AND GIRLS (PE) Grade Level: 9th – 12th
Credits: 1.0

This course offers students an opportunity to evaluate their fitness and also give them an opportunity to improve their fitness level. Students will be introduced to numerous lifetime sports such as tennis, bowling, golf, etc. to give students a background to be able to continue being physically active and physically fit after graduation. T-shirts, shorts (and/or sweats) and tennis shoes are necessary for participation.

GIRLS ATHLETICS (PETS) Grade Level: 9th – 12th
Credits: 1.0

This course is for young ladies interested in trying out and participating in organized team sports. All sports have practices and competitions after school hours, so transportation needs to be available. See the Girls Coordinator for a list of sports.

BOYS ATHLETICS (PETS) Grade Level: 9th – 12th
Credits: 1.0

This is a course designed for all boy athletes who participate in organized team sports. All sports have practices and competitions after school hours, so transportation needs to be available. See the Athletic Director for a list of sports.

ELECTIVES & SPECIALIZED COURSES

INDEPENDENT STUDIES/RESEARCH METHODS (Social Studies or Science)

Credits: 1.0 Grade Level: 9^{h} – 12^{th}

In Social Studies/Science Research Methods, an elective course, students conduct advanced research on a selected topic in social studies using qualitative and quantitative methods of inquiry. The course is designed to be conducted in either classroom or independent settings.

- Project based learning course
- Must create a Science Fair (Sc & Ag) or History Fair Project
- Record keeping is mandatory for credit to be awarded

This is a rigorous course recommended for GT students. 9th and 10th graders are only eligible to take this course if they are identified Gifted and Talented.

CAREER AND TECHNICAL EDUCATION (CTE)

BUSINESS ENGLISH (BUSENGL)

Credits: 1.0 Grade Level: 12th
Prerequisite: English 3

In Business English, students enhance communication and research skills by applying them to the business environment, in addition to exchanging information and producing properly formatted business documents using emerging technology.
Note: This course satisfies an English credit requirement for students on the Foundation High School Program

FINANCIAL MATHEMATICS (FINMATH)

Credits: 1.0 Grade Level: 10th-12th
Prerequisite: Algebra I

Financial Mathematics is a course about personal money management. Students will apply critical-thinking skills to analyze personal financial decisions based on current and projected economic factors.

COMMERCIAL PHOTOGRAPHY I (CPHOTO1)

Credits: 1.0 Grade Level: 10th-12th

Commercial Photography I course scope and sequence within the Arts, A/V Technology, and Communications Career Cluster® summarizes the content to be taught, and one possible order for teaching the units of instruction. A brief description of each unit and the corresponding TEKS are included. This scope and sequence may be adapted or adopted by the local education agency.

COMMERCIAL PHOTOGRAPHY II (CPHOTO2)

Credits: 1.0 Grade Level: 10th-12th
Prerequisite: Commercial Photography I

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 technical understanding of the commercial photography industry with a focus on producing, promoting, and presenting professional quality photographs.

CAREER PREPARATION I (CAREERP1)

Credit: 2.0 Grade Level: 11th–12th

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

CAREER PREPARATION I/EXTENDED CAREER PREPARATION(EXCAREE1)

Credit: 3.0 Grade Level: 12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Corequisites: Career Preparation I.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace.Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

CAREER PREPARATION II (CAREERP2)

Credit: 2.0 Grade Level: 12th

Prerequisite: Career Preparation I.

Career Preparation II develops essential knowledge and skills through advanced classroom instruction with business and industry employment experiences. Career Preparation II maintains relevance and rigor, supports student attainment of academic standards, and effectively prepares students for college and career success.

CAREER PREPARATION II/EXTENDED CAREER PREPARATION II (EXCAREE2)

Credit: 3.0 Grade Level: 12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Corequisites: Career Preparation II.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

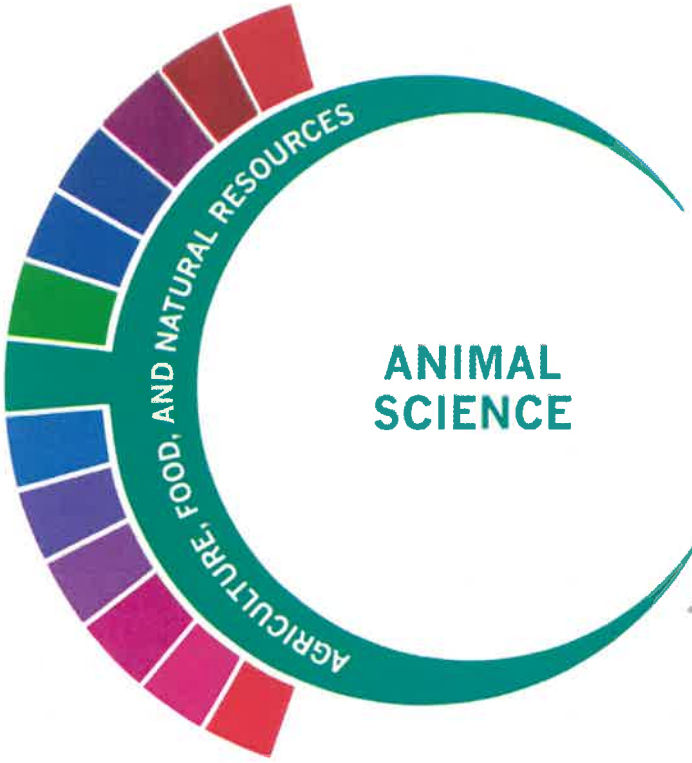
PRACTICUM IN AGRICULTURE, FOOD, AND NATURAL RESOURCES

Credit: 2.0 Grade Level: 12

Extended Practicum in Agriculture, Food, and Natural Resources is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internships, assistantships, mentorships, or laboratories. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Agriculture, Food, and Natural Resources Career Cluster® that fall in the Applied Ag Engineering, Animal Science, and Plant Science Pathways of Study.

- Fill out and submit an Application to the Agriculture Science teacher to be considered for enrollment in a Practicum Course.
- The following criteria will be evaluated for consideration into the Practicum of AFNR course.
    - Attendance
    - Discipline Record
    - Academic Performance

BUSINESS AND INDUSTRY



ANIMAL SCIENCE

Level 1 Principles of Agriculture, Food, and Natural Resources

Level 2 Small Animal Management
Equine Science

Level 3

Level 4 Advanced Animal Science
Veterinary Medical Applications

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Licensed Veterinary Technician	Pet Groomer	Food Science and Technology	Animal Sciences	Genetics
Feedyard Technician in Cattle Care and Handling	Veterinary Technician	Veterinary Studies	Agriculture	Veterinary Medicine
Certified Veterinary Assistant	Licensed Breeder	Biotechnology Laboratory Technician	Biology	Biological and Physical Sciences
		Biology Technician	Zoology/ Animal Biology	Biological and Biomedical Sciences

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

Occupations	Median Wage	Annual Openings	% Growth
Animal Breeders	$39,135	28	9%
Animal Scientists	$57,533	22	12%
Medical Scientists	$63,898	435	27%
Veterinarians	$93,496	294	24%
Zoologists and Wildlife Biologists	$67,309	45	32%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Texas FFA	Agri-Science Fair 4H Volunteer at a local farm or veterinary office FFA Supervised Agriculture Experience (SAE)

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

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

Successful completion of the Animal Science program of study will fulfill requirements of a Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised - July 2020

TEA Texas Education Agency

ANIMAL SCIENCE

PRINCIPLES OF AGRICULTURE, FOOD & NATURAL RESOURCES (PRINAFNR)

Credit: 1.0 Grade Level: 9th-12th

Principles of Agriculture, Food, and Natural Resources will allow students to develop knowledge and skills regarding career and educational opportunities, personal development, globalization, industry standards, details, practices, and expectations

SMALL ANIMAL MANAGEMENT (SMANIMGT)

Credits: 0.5 Grade Level: 10th–12th

In Small Animal Management, students will acquire knowledge and skills related to small animals and the small animal management industry. Small Animal Management may address topics related to small mammals such as dogs and cats, amphibians, reptiles, and birds.

EQUINE SCIENCE (EQUINSCI)

Credits: 0 .5 Grade Level: 10th-12th

In Equine Science, students will acquire knowledge and skills related to equine animal systems and the equine industry. Equine Science may address topics related to horses, donkeys, and mules

VETERINARY MEDICAL APPLICATIONS (VETMEDAP)

Credits: 1.0 Grade Level: 11th - 12th

Prerequisites: Small Animal Management, Equine, or Livestock Production

Veterinary Medical Applications covers topics relating to veterinary practices, including practices for large and small animal species.

ADVANCED ANIMAL SCIENCE (ADVANSCI)

Credits: 1.0 Grade Level: 11th- 12th

Prerequisite: Biology, Chemistry or Integrated Physics and Chemistry; Algebra I, Geometry, and either Small Animal Management, Equine Science, or Livestock Production

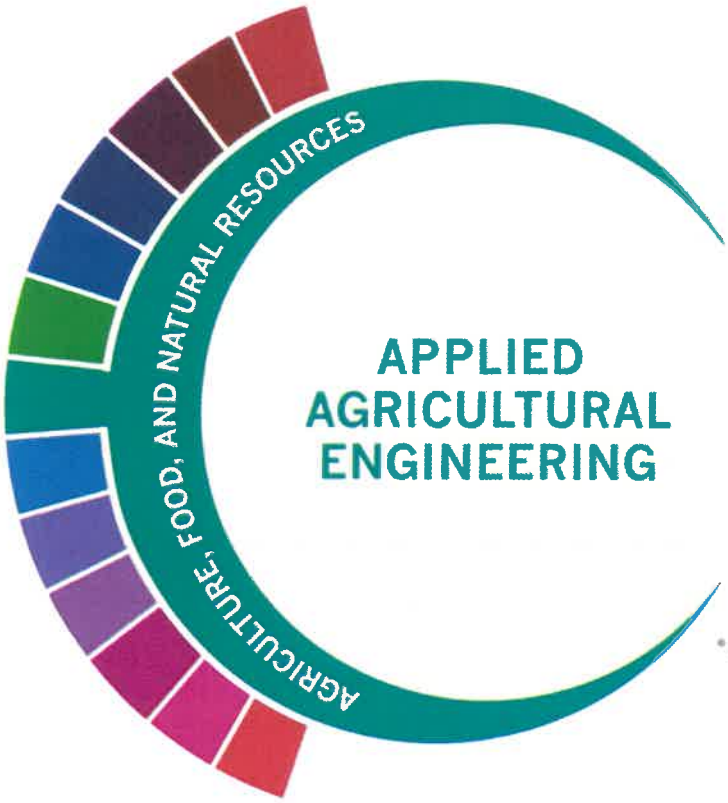
Advanced Animal Science examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences. Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

PRACTICUM IN AGRICULTURE, FOOD, AND NATURAL RESOURCES

Credit: 2.0 Grade Level: 12

Extended Practicum in Agriculture, Food, and Natural Resources is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internships, assistantships, mentorships, or laboratories. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Agriculture, Food, and Natural Resources Career Cluster® that fall in the Applied Ag Engineering, Animal Science, and Plant Science Pathways of Study.

- Fill out and submit an Application to the Agriculture Science teacher to be considered for enrollment in a Practicum Course.
- The following criteria will be evaluated for consideration into the Practicum of AFNR course.
    - Attendance
    - Discipline Record
    - Academic Performance



APPLIED AGRICULTURAL ENGINEERING

Level 1 Principles of Agriculture, Food, and Natural Resource

Level 2 Agricultural Mechanics and Metal Technologies

Level 3 Agricultural Structures Design and Fabrications

Level 4 Agricultural Equipment Design and Fabrication/Lab

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
OSHA 30 Hour General Industry	Certified Professional Agronomist	Heavy Equipment Maintenance Technology/ Technician	Agricultural Engineering	Agricultural Engineering
Feedyard Technician in Machinery, Operation, Repair and Maintenance	Certified Reliability Engineer	Agricultural Mechanization, General	Agricultural Mechanization, General	Agricultural Mechanization, General
AWS SENSE Welding Level 1	Certified Irrigation Designer	Small Engine Mechanics and Repair Technology/ Technician		
AWS D1.1 or D9.1 Certification	Fluid Power Mobile Hydraulic Mechanic	Welding Technology/ Welder		

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

Occupations	Median Wage	Annual Openings	% Growth
Outdoor Power Equipment and Other Small Engine Mechanics	$32,406	366	16%
Welders	$41,350	6,171	9%
Farm Equipment Mechanics and Service Technicians	$39,915	304	17%
Mobile Heavy Equipment Mechanics	$47,299	1,627	16%
Agricultural Engineers	$64,792	9	13%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Tour a farm products or machinery plant Texas FFA	Earn a welding certification Intern at a farm products or machinery plant FFA Supervised Agriculture Experience (SAE)

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

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

Successful completion of the Applied Agricultural Engineering program of study will fulfill requirements of a Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised - July 2020

TEA
Texas Education Agency

APPLIED AGRICULTURE ENGINEERING

PRINCIPLES OF AGRICULTURE, FOOD & NATURAL RESOURCES (PRINAFNR)

Credit: 1.0 Grade Level: 9th-12th

Principles of Agriculture, Food, and Natural Resources will allow students to develop knowledge and skills regarding career and educational opportunities, personal development, globalization, industry standards, details, practices, and expectations

AGRICULTURAL MECHANICS AND METAL TECHNOLOGIES (AGMECHMT)

Credit: 1.0 Grade Level: 10th – 12th

Prerequisites: Small Animal Management, Equine, or Livestock Production

Agricultural Mechanics and Metal Technologies is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metal-working techniques. To prepare for careers in agricultural power, structural, and technical systems, students must attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the industry; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations.

AGRICULTURAL STRUCTURES DESIGN & FABRICATION (AGSDF)

Credit: 1.0 Grade Level: 11th-12th

In Agricultural Structures Design and Fabrication, students will explore career opportunities, entry requirements, and industry expectations. To prepare for careers in mechanized agriculture and technical systems, students must attain knowledge and skills related to agricultural structures design and fabrication.

AGRICULTURE EQUIPMENT DESIGN AND FABRICATION(AGEQDF)

Credit: 1.0 Grade Level: 11th-12th

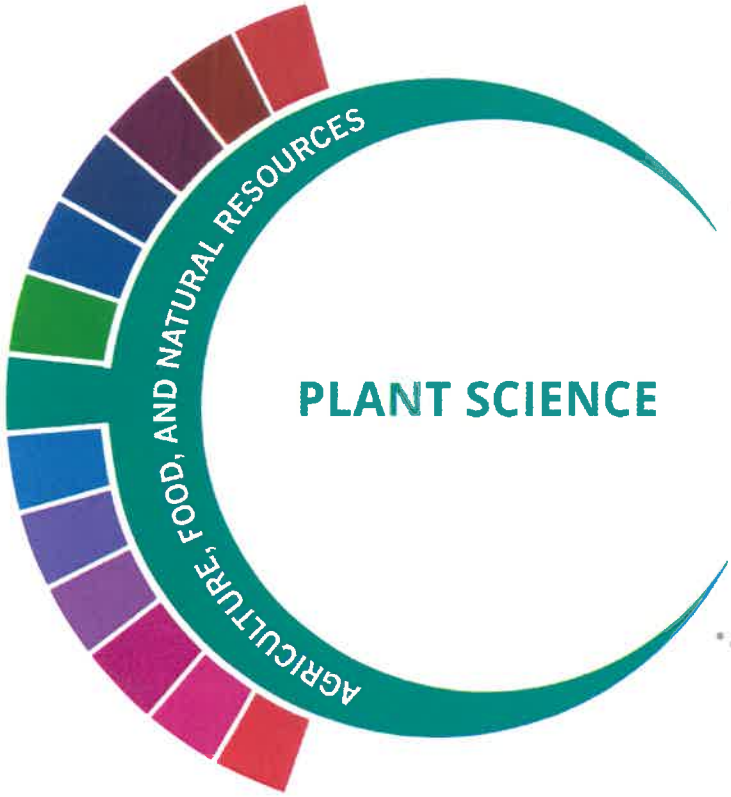
In Agricultural Equipment Design and Fabrication, students will acquire knowledge and skills related to the design and fabrication of agricultural equipment.

PRACTICUM IN AGRICULTURE, FOOD, AND NATURAL RESOURCES

Credit: 2.0 Grade Level: 12

Extended Practicum in Agriculture, Food, and Natural Resources is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internships, assistantships, mentorships, or laboratories. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Agriculture, Food, and Natural Resources Career Cluster® that fall in the Applied Ag Engineering, Animal Science, and Plant Science Pathways of Study.

- Fill out and submit an Application to the Agriculture Science teacher to be considered for enrollment in a Practicum Course.
- The following criteria will be evaluated for consideration into the Practicum of AFNR course.
    - Attendance
    - Discipline Record
    - Academic Performance



PLANT SCIENCE

Level 1 — Principles of Agriculture, Food, and Natural Resources

Level 2 — Greenhouse Operation and Production

Level 3 — Floral Design

Level 4 — Advanced Plant and Soil Science

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Landscape Irrigation Technician License	Pesticide Applicator	Applied Horticulture/ Horticulture Operations, General	Applied Horticulture/ Horticulture Operations, General	Applied Horticulture/ Horticulture Operations, General
Commercial/ Noncommercial Pesticide Applicator	Certified Floral Designer	Ornamental Horticulture	Agronomy and Crop Science	Agronomy and Crop Science
Texas State Floral Association Level One Floral Certification	Accredited Member of AIFD	Agricultural Business and Management, General	Agricultural Business and Management, General	Agricultural Business and Management, General
Texas State Floral Association Level Two Floral Certification	Landscape Industry Certified Technician	Turf and Turfgrass Management	Turf and Turfgrass Management	Farm/Farm and Ranch Management

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

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

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Texas FFA	Work part-time at a florist; start or work for a local landscaping business FFA Supervised Agriculture Experience (SAE)

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

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

Successful completion of the Plant Science program of study will fulfill requirements of a Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised - July 2020

TEA Texas Education Agency

PLANT SCIENCE

PRINCIPLES OF AGRICULTURE, FOOD & NATURAL RESOURCES (PRINAFNR)

Credit: 1.0 Grade Level: 9th-12th

Principles of Agriculture, Food, and Natural Resources will allow students to develop knowledge and skills regarding career and educational opportunities, personal development, globalization, industry standards, details, practices, and expectations

GREENHOUSE OPERATION AND PRODUCTION (GREOP)

Credits: 1.0 Grade Level: 10th – 12th

Greenhouse Operation and Production is designed to develop an understanding of greenhouse production techniques and practices. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations.

FLORAL DESIGN (FLORAL)

Credits: 1.0 Grade Level: 9th - 12th

Floral Design is designed to develop students' ability to identify and demonstrate the principles and techniques related to floral design as well as develop an understanding of the management of floral enterprises. Through the analysis of artistic floral styles and historical periods, students will develop respect for the traditions and contributions of diverse cultures. Students will respond to and analyze floral designs, thus contributing to the development of lifelong skills of making informed judgments and evaluations. Note: This course satisfies a fine arts credit requirement for students on the Foundation High School Program

ADVANCED PLANT AND SOIL SCIENCE (ADVPSSCI)

Credits: 1.0 Grade Level: 11th-12th

Advanced Plant and Soil Science provides a way of learning about the natural world. Students should know how plant and soil science has influenced a vast body of knowledge, that there are still applications to be discovered, and that plant and soil science is the basis for many other fields of science. To prepare for careers in plant and soil science, students must attain academic skills and knowledge, acquire technical knowledge and skills related to plant and soil science and the workplace.
Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

PRACTICUM IN AGRICULTURE, FOOD, AND NATURAL RESOURCES

Credit: 2.0 Grade Level: 12

Extended Practicum in Agriculture, Food, and Natural Resources is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internships, assistantships, mentorships, or laboratories. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Agriculture, Food, and Natural Resources Career Cluster® that fall in the Applied Ag Engineering, Animal Science, and Plant Science Pathways of Study.

- Fill out and submit an Application to the Agriculture Science teacher to be considered for enrollment in a Practicum Course.
- The following criteria will be evaluated for consideration into the Practicum of AFNR course.
    - Attendance
    - Discipline Record
    - Academic Performance

ACCOUNTING & FINANCIAL SERVICES

Level 1 Business Information Management I

Level 2 Accounting I
Financial Mathematics

Level 3 Accounting II

Level 4 Career Preparation I

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

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

Occupations	Median Wage	Annual Openings	% Growth
Accountants and Auditors	$71,469	14,436	22%
Loan Officers	$68,598	2,419	19%
Personal Financial Advisors	$86,965	1,861	52%
Administrative Service Managers	$96,138	2,277	21%
Insurance Underwriters	$66,206	594	14%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Business Professionals of America (BPA) Future Business Leaders of America (FBLA) DECA	Internship with local accounting firm Microsoft Office Specialist (MOS) certifications

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

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

Successful completion of the Accounting & Financial Services program of study will fulfill requirements of the Business and Industry Endorsement. Revised - July 2020

Texas Education Agency

ACCOUNTING & FINANCIAL SERVICE

BUSINESS INFORMATION MANAGEMENT I (BUSIM1)

Credits: 1.0 Grade Level: 9th -12th

In Business Information Management I, students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, create word processing documents, develop a spreadsheet, formulate a database and make an electronic presentation using appropriate software.

FINANCIAL MATHEMATICS (FINMATH)

Credits: 1.0 Grade Level: 10th-12th
Prerequisite: Algebra 1

Financial Mathematics is a course about personal money management. Students will apply critical-thinking skills to analyze personal financial decisions based on current and projected economic factors.

ACCOUNTING I (ACCOUNT1)

Credits: 1.0 Grade Level: 10th- 12th

In Accounting I, students will investigate the field of accounting, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal, and ethical factors. Students will reflect on this knowledge as they engage in the process of recording, classifying, summarizing, analyzing, and communicating accounting information. Students will formulate and interpret financial information for use in management decision making. Accounting includes such activities as bookkeeping, systems design, analysis, and interpretation of accounting information.

CAREER PREPARATION I (CAREERP1)

Credit: 2.0 Grade Level: 11th–12th
Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE1)

Credit: 3.0 Grade Level: 11th-12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Corequisites: Career Preparation I.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace.Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

CAREER PREPARATION II (CAREERP2)

Credit: 2.0 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Career Preparation II develops essential knowledge and skills through advanced classroom instruction with business and industry employment experiences. Career Preparation II maintains relevance and rigor, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE2)

Credit: 3.0 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Corequisites: Career Preparation II.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success. Must be taken concurrently with Career Preparation II.

Level 1 — Business Information Management I

Level 2 — Business Information Management II

Level 3 — Business Management

Level 4 — Career Preparation I

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE / LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Microsoft Office Specialist or Expert- Excel	Certified Records Manager	Business Administration	Business Administration	Business Administration
Microsoft Office Specialist or Expert - Word	Certified Facility Manager	Business/ Commerce	Business/ Commerce	Business Management
Google Cloud Certified Professional – G-Suite	Certified Commercial Contracts Manager	Public Administration	Public Administration	Public Administration
Certified Associate in Project Management	Teradata 14 Basics/ Certified Technical Specialist	Business Management	Management Science	Management Science

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

Occupations	Median Wage	Annual Openings	% Growth
Administrative Service Managers	$96,138	2,277	21%
Management Analysts	$87,651	4,706	32%
General and Operations Managers	$107,640	18,679	20%
Operations Research Analysts	$78,083	1,128	38%
Supervisors of Administrative Support Workers	$57,616	14,982	20%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Business Professional of America (BPA), Future Business Leaders of America (FBLA), and DECA	Internship with local business or chamber of commerce

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

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

Successful completion of the Business Management program of study will fulfill requirements of the Business and Industry Endorsement. Revised - July 2020

Texas Education Agency

BUSINESS MANAGEMENT

BUSINESS INFORMATION MANAGEMENT I (BUSIM1)

Credits: 1.0 Grade Level: 9th -12th

In Business Information Management I, students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, create word processing documents, develop a spreadsheet, formulate a database and make an electronic presentation using appropriate software.

BUSINESS INFORMATION MANAGEMENT II (BUSIM2)

Credits: 1.0 Grade Level: 10th -12th

Prerequisite: Business Information Management I

In Business Information Management II, students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce or postsecondary education. Students apply technical skills to address business applications of emerging technologies, create complex word-processing documents, develop sophisticated spreadsheets using charts and graphs and make an electronic presentation using appropriate multimedia software.

BUSINESS MANAGEMENT (BUSMGT)

Credits: 1.0 Grade Level:10th -12th

Business Management is designed to familiarize students with the concepts related to business management as well as the functions of management, including planning, organizing, staffing, leading and controlling. Students will also demonstrate interpersonal and project-management skills.

CAREER PREPARATION I (CAREERP1)

Credit: 2.0 Grade Level: 11th–12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE1)

Credit: 3.0 Grade Level: 11th-12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Corequisites: Career Preparation I.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace.Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

CAREER PREPARATION II (CAREERP2)

Credit: 2.0 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Career Preparation II develops essential knowledge and skills through advanced classroom instruction with business and industry employment experiences. Career Preparation II maintains relevance and rigor, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE2)

Credit: 3.0 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Corequisites: Career Preparation II.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success. Must be taken concurrently with Career Preparation II.

Level 1 Introduction to Culinary Arts

Level 2 Culinary Arts

Level 3 Advanced Culinary Arts

Level 4 Food Science

Career Preparation I

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Fundamentals Cook	Certified Chef	Hotel and Restaurant Management	Hotel and Restaurant Management	Hotel and Restaurant Management
Certified Fundamentals Pastry Cook	Foodservice Management Professional	Restaurant Culinary and Catering Management	Food Service Systems Administration/ Management	Food Service Systems Administration/ Management
ServSafe Manager	Comprehensive Food Safety	Hospitality Administration/ Management, General	Hospitality Administration/ Management, General	Hospitality Administration/ Management, General
ManageFirst Professional	Certified Food and Beverage Executive	Culinary Arts/ Chef Training	Culinary Science and Food Service Management	Business Administration Management, General

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

Occupations	Median Wage	Annual Openings	% Growth
Food and Beverage Managers	$55,619	1,561	28%
Chef and Head Cooks	$43,285	1,366	25%
Food Science Technicians	$34,382	236	11%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Family, Career, and Community Leaders of America (FCCLA), SkillsUSA, American Culinary Federation, Texas Restaurant Association	Plan a catering event or work for a catering company; participate in a cooking course; work in a restaurant; cook at home

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

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

Successful completion of the Culinary Arts program of study will fulfill requirements of the Business and Industry Endorsement. Revised - July 2020

Texas Education Agency

CULINARY ARTS

INTRODUCTION TO CULINARY ARTS (INCULART)

Credit: 1.0 Grade Level: 9th–10th

Introduction to Culinary Arts will emphasize the principles of planning, organizing, staffing, directing, and controlling the management of a variety of food service operations. The course will provide insight into the operation of a well-run restaurant. Introduction to Culinary Arts will provide insight into food production skills, various levels of industry management, and hospitality skills. This is an entry level course for students interested in pursuing a career in the food service industry. This course is offered as a classroom and laboratory-based course.

CULINARY ARTS (CULARTS)

Credit: 2.0 Grade Level: 10th–12th

Culinary Arts begins with the fundamentals and principles of the art of cooking and the science of baking and includes management and production skills and techniques. Students can pursue a national sanitation certification or other appropriate industry certifications. This course is offered as a laboratory-based course.

ADVANCED CULINARY ARTS (ADCULART)

Credit: 2.0 Grade Level: 10th–12th
Prerequisite: Culinary Arts

Advanced Culinary Arts will extend content and enhance skills introduced in Culinary Arts by in-depth instruction of industry-driven standards to prepare students for success in higher education, certifications, and/or immediate employment.

CAREER PREPARATION I (CAREERP1)

Credit: 2.0 Grade Level: 11th–12th
Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE1)

Credit: 3.0 Grade Level: 11th-12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Corequisites: Career Preparation I.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace.Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

CAREER PREPARATION II (CAREERP2)

Credit: 2.0 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Career Preparation II develops essential knowledge and skills through advanced classroom instruction with business and industry employment experiences. Career Preparation II maintains relevance and rigor, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE2)

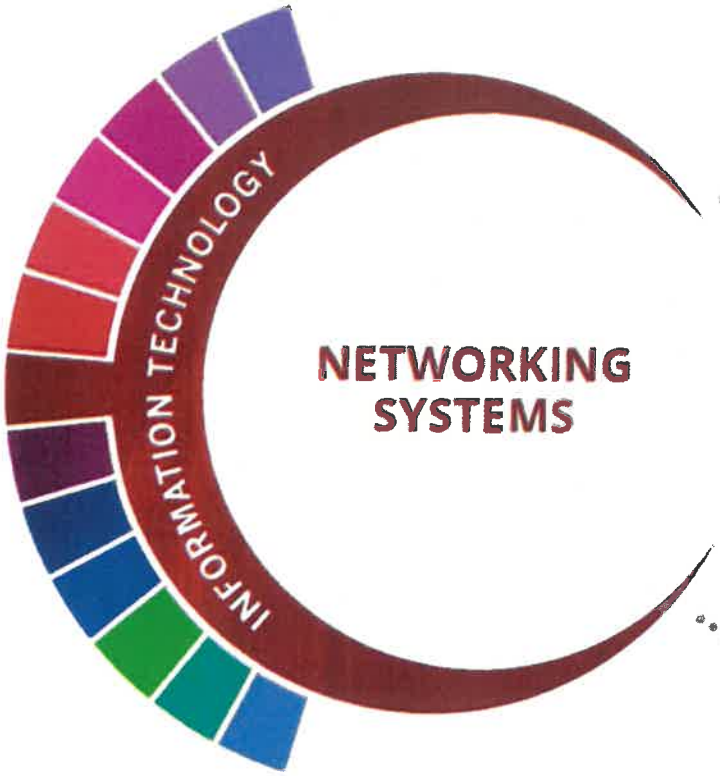
Credit: 3.0 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Corequisites: Career Preparation II.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success. Must be taken concurrently with Career Preparation II.

INFORMATION TECHNOLOGY (IT)



NETWORKING SYSTEMS

Level 1 — Computer Science I; Principles of Information Technology

Level 2 — Computer Maintenance/Lab

Level 3 — Networking/Lab

Level 4 — Career Preparation I

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Oracle Certified Associate Java SE 8	AEM 6 Business Practitioner	Computer and Information Sciences, General	Computer and Information Sciences, General	Computer and Information Sciences, General
Oracle Certified Database Associate	Intelligence Planner Certification Program	Computer Systems Networking And Tele-communications	Computer Systems Networking And Tele-communications	Information Technology
Cisco Certified Entry Networking Technician (CCENT)	Cisco Certified Entry Networking Technician	Information Technology	Computer and Information Systems Security/ Information Assurance	Computer and Information Systems Security/ Information Assurance
Associate of (ISC)2	Microsoft Networking Fundamentals	Network and System Administration/ Administrator	Computer Engineering, General	Computer Engineering, General

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

Occupations	Median Wage	Annual Openings	% Growth
Computer Network Architects	$111,633	1,082	23%
Computer Systems Analysts	$87,568	5,937	29%
Computer Network Support Specialists	$68,037	1,824	19%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Join TSA Job shadow a computer network architect or support specialist	Earn an industry-based certification.

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

The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

Successful completion of the Networking Systems program of study will fulfill requirements of the Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised - July 2020

FOR ADDITIONAL INFORMATION ON THE INFORMATION TECHNOLOGY CAREER CLUSTER, PLEASE CONTACT:
CTE@tea.texas.gov

Texas Education Agency

11/2021

NETWORKING SYSTEMS

COMPUTER SCIENCE I (TACS1)

Credit: 1.0 Grade Level: 9th-12th

Prerequisite: Algebra I.

Computer Science I will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations, systems, and concepts. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

PRINCIPLES OF INFORMATION TECHNOLOGY (PRINIT)

Credit: 1.0 Grade Level: 9th-12th

In Principles of Information Technology, students will develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students will enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment.

COMPUTER MAINTENANCE (COMPMTN)

Credit: 1.0 Grade Level: 10th–12th

In Computer Maintenance, students will acquire knowledge of computer maintenance and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer maintenance. Students will apply technical skills to address the IT industry and emerging technologies.

COMPUTER MAINTENANCE/COMPUTER MAINTENANCE LAB(COMMTLAB)

Credit: 2.0 Grade Level: 10th–12th

In Computer Maintenance Lab, students will acquire knowledge of computer maintenance and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer maintenance. Students will apply technical skills to address the IT industry and emerging technologies. Districts are encouraged to offer this course in a consecutive block with Computer Maintenance to allow students sufficient time to master the content of both courses.

CAREER PREPARATION I (CAREERP1)

Credit: 2.0 Grade Level: 11th–12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE1)

Credit: 3.0 Grade Level: 11th-12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.
Corequisites: Career Preparation I.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace.Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

CAREER PREPARATION II (CAREERP2)

Credit: 2.0 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Career Preparation II develops essential knowledge and skills through advanced classroom instruction with business and industry employment experiences. Career

Preparation II maintains relevance and rigor, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE2)

Credit: 3.0 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Corequisites: Career Preparation II.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success. Must be taken concurrently with Career Preparation II.

PUBLIC SERVICE

EXERCISE SCIENCE AND WELLNESS

Level 1 Principles of Exercise Science and Wellness

Level 2 Kinesiology I

Level 3 Anatomy and Physiology

Level 4 Career Preparation I

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Personal Trainer	Physical Therapist Assistant	Kinesiology and Exercise Science	Kinesiology and Exercise Science	Exercise Physiology
	Physical Therapy Aides	Therapeutic Recreation/ Recreational Therapy	Therapeutic Recreation/ Recreational Therapy	Therapeutic Recreation/ Recreational Therapy
	Dietetic Technician	Athletic Training/ Trainer	Athletic Training/ Trainer	Athletic Training/ Trainer
			Dietitians and Nutritionists	Physical Therapist

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

Occupations	Median Wage	Annual Openings	% Growth
Athletic Trainers	$53,450	215	22%
Exercise Physiologists	$41,662	33	33%
Coaches and Scouts	$40,010	2,133	23%
Dietitians and Nutritionists	$57,762	428	24%
Recreational Therapists	$45,906	74	24%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Health Occupation Students of America (HOSA)	Volunteer at a hospital or rehabilitation center; manage a school sports team

The Exercise Science and Wellness program of study introduces CTE learners to the fields that assist patients with maintaining physical, mental, and emotional health. Students will research diet and exercise needed to maintain a healthy, balanced lifestyle and learn about and practice techniques to help patients recover from injury, illness, or disease.

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

Successful completion of the Exercise Science and Wellness program of study will fulfill requirements of a Public Service endorsement or STEM endorsement if the math and science requirements are met. Revised - July 2020

TEA Texas Education Agency

EXERCISE AND WELLNESS

PRINCIPLES OF EXERCISE SCIENCE AND WELLNESS (EXSCIWL)

Credit: 1.0 Grade Level: 9th–10th

The Principles of Exercise Science and Wellness course is designed to provide for the development of knowledge and skills in fields that assist patients with maintaining physical, mental, and emotional health. Students in this course will understand diet and exercise, as well as techniques to help patients recover from injury, illness, and disease. They will also learn about introductory health science topics such as employability skills, lifespan development, and ethical and legal standards.

Kinesiology I (KINES1)

Credit: 1.0 Grade Level: 9th–10th

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.

***ANATOMY & PHYSIOLOGY (ANATPHYS)**

Credits: 1.0 Grade Level: 11th-12th

Tier III Class

In this course, students conduct laboratory investigations and fieldwork, use scientific methods during investigations and make informed decisions using critical thinking and problem solving, Topics will be presented through an integration of biology, chemistry and physics. Students will study the structures and functions of the human body and body systems and will investigate the body's responses to forces, maintenance of homeostasis, electrical interactions, transport systems and energy systems. *This course must include at least 40% laboratory investigation and fieldwork using appropriate scientific inquiry.*

CAREER PREPARATION I (CAREERP1)

Credit: 2.0 Grade Level: 11th–12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE1)

Credit: 3.0 Grade Level: 11th-12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Corequisites: Career Preparation I.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace.Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

CAREER PREPARATION II (CAREERP2)

Credit: 2.0 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Career Preparation II develops essential knowledge and skills through advanced classroom instruction with business and industry employment experiences. Career Preparation II maintains relevance and rigor, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE2)

Credit: 3.00 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Corequisites: Career Preparation II.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success. Must be taken concurrently with Career Preparation II.

HEALTHCARE THERAPEUTIC

Level 1 Principles of Health Science

Level 2 Medical Terminology

Level 3 Anatomy and Physiology; Health Science Theory

Level 4 Pharmacology; Practicum in Health Science

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

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

Occupations	Median Wage	Annual Openings	% Growth
Medical Assistants	$29,598	8,862	30%
Surgical Technologists	$45,032	1,150	20%
Dental Hygienists	$73,507	1,353	38%
Physicians and Surgeons	$213,071	1,151	30%
Dental Assistants	$34,840	4,422	31%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
SkillsUSA Health Occupation Students of America (HOSA)	Volunteer at a community wellness center, hospital, assisted living, or nursing home.

The Healthcare Therapeutic program of study introduces students to occupations and educational opportunities related to diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study also includes an introduction to the opportunities associated with providing treatment and counsel to patients as well as rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

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

Successful completion of the Healthcare Therapeutic program of study will fulfill requirements of a Public Service endorsement or STEM endorsement if the math and science requirements are met. Revised - July 2020

TEA Texas Education Agency

HEALTHCARE THERAPEUTIC

PRINCIPLES OF HEALTH SCIENCE (PRINHLSC)

Credit: 1.0 Grade Level: 9th-10th

The Principles of Health Science course is designed to provide an overview of the therapeutic, diagnostic, health informatics, support services and biotechnology research and development systems of the healthcare industry.

MEDICAL TERMINOLOGY (MEDTERM)

Credit: 1.0 Grade Level: 9th-12th

The Medical Terminology course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology and pathophysiology.
***This course may be taken for high school or dual credit through TC.**

*ANATOMY & PHYSIOLOGY (ANATPHYS)

Credits: 1.0 Grade Level: 10th-12th
Tier III Class
Prerequisite: Biology and a Second Science Credit

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

HEALTH SCIENCE THEORY (HLTHSCI)

Credit: 1.0 Grade Level: 10th-12th
Prerequisite: Biology

The Health Science Theory course is designed to provide for the development of advanced knowledge and skills related to a wide variety of health careers. Students will employ hands-on experiences for continued knowledge and skill development.

PHARMACOLOGY (PHARMC)

Credits: 1.0 Grade Level: 11th-12th

Prerequisite: Biology and Chemistry

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 I (PRACHLS1) (Certified Nurses' Assistant)

Credits: 2.0 Grade Level: 12th

Prerequisite: Biology and Health Science Theory

The practicum is designed to give students practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. A student may earn industry-recognized certification in this course. Fees may be required for this course, but may be waived by the Admissions Review Committee.

LAW ENFORCEMENT

Level 1

Level 2 Criminal Investigation

Level 3 Correctional Services

Level 4 Forensic Science

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Non-Commissioned Security Officer Level II	Law Enforcement Officer	Criminal Justice/Safety Studies/Law Enforcement Administration	Criminal Justice/Safety Studies/Law Enforcement Administration	Criminal Justice/Safety Studies/Law Enforcement Administration
Emergency Telecommunicator	Private Investigator/ Security Guard	Criminal Justice/ Police Science	Criminal Justice/ Police Science	Natural Resources Law Enforcement and Protective Services
	Code Enforcement Officer	Corrections	Juvenile Corrections	
	Certified Law Enforcement Planner	Criminalistics and Criminal Science	Cyber/ Computer Forensics and Counterterrorism	

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

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

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Texas Public Service Association; criminal justice clubs	Attend court hearings and other legal procedures

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

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

Successful completion of the Law and Public Service program of study will fulfill requirements of the Public Service Endorsement. Revised - July 2020

TEA Texas Education Agency

LAW ENFORCEMENT

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

Credits: 1.0 Grade Level: 9th-12th

Principles of Law, Public Safety, Corrections and Security introduces 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.

CRIMINAL INVESTIGATION (CRINVEST)

Credits: 1.0 Grade Level: 10th-12th

Criminal Investigation is a course that introduces students to the profession of criminal investigations. Students will understand basic functions of criminal investigations and procedures and will learn how to investigate or follow up during investigations. Students will learn terminology and investigative procedures related to criminal investigation, crime scene processing, evidence collection, fingerprinting, and courtroom presentation. Through case studies and simulated crime scenes, students will collect and analyze evidence such as fingerprint analysis, bodily fluids, hairs, fibers, shoe and tire impressions, bite marks, drugs, tool marks, firearms and ammunition, blood spatter, digital evidence, and other types of evidence.

CORRECTIONAL SERVICES (CORRSRVS)

Credits: 1.0 Grade Level: 10th-12th

In Correctional Services, students prepare for certification required for employment as a municipal, county, state, or federal correctional officer. Students will learn the role and responsibilities of a county or municipal correctional officer; discuss relevant rules, regulations, and laws of municipal, county, state, or federal facilities; and discuss defensive tactics, restraint techniques, and first aid procedures as used in the municipal, county, state, or federal correctional setting. Students will analyze rehabilitation and alternatives to institutionalization for inmates.

FORENSIC SCIENCE (FORENSCI)

Credits: 1.0 Grade Level: 11th-12th

Prerequisites: Biology & Chemistry

Forensic Science is a course that introduces students to the application of science to connect a violation of law to a specific criminal, criminal act, or behavior and victim. Students will learn terminology and procedures related to the search and examination of physical evidence in criminal cases as they are performed in a typical crime laboratory. Using scientific methods, students will collect and analyze evidence such as fingerprints, bodily fluids, hairs, fibers, paint, glass, and cartridge cases. Students will also learn the history and the legal aspects as they relate to each discipline of forensic science and understand that scientific methods of investigation can be experimental, descriptive, or comparative. Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

TEACHING AND TRAINING

Level 1 Principles of Education and Training

Level 2 Suggestion-DC Psychology

Level 3 Instructional Practices

Level 4 Practicum in Education and Training

Career Preparation I

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Educational Aide I	Texas Educator Certification Program	Teacher Education	Bilingual and Multilingual Education	Instruction and Learning
	Educational Instructional Technology	Education, General (or specific subject area)	Education, General (or specific subject area)	Educational Leadership and Administration, General
	Counselor, Professional	Special Education	Special Education	Special Education
	Athletic Trainer	Health and Physical Education/ Fitness	Health and Physical Education/ Fitness	Social and Philosophical Foundations of Education

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

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

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Texas Association of Future Educators, or Family, Career and Community Leaders of America	Teach a community education class; intern as a teaching assistant or tutor; serve as a camp counselor.

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

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

Successful completion of the Teaching and Training program of study will fulfill requirements of the Public Service Endorsement. Revised - July 2020

TEA Texas Education Agency

TEACHING AND TRAINING

PRINCIPLES OF EDUCATION AND TRAINING (PRINEDTR)

Credits: 1.0 Grade Level: 9th-10th

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 as well as educational and career information to analyze various careers within the Education and Training Career Cluster. Students will develop a graduation plan that leads to a specific career choice in the student's interest area.

INSTRUCTIONAL PRACTICES (INPRAC)

Credits: 2.0 Grade Level: 11th-12th

Instructional Practices is a field-based (practicum) internship that provides students with background knowledge of child and adolescent development as well as principles of effective teaching and training practices. Students work under the joint direction and supervision of both a teacher with knowledge of early childhood, middle childhood and adolescence education and exemplary educators or trainers in direct instructional roles with elementary, middle school and high school-aged students. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, develop materials for educational environments, assist with record keeping and complete other responsibilities of teachers, trainers, paraprofessionals, or other educational personnel.

CAREER PREPARATION I (CAREERP1)

Credit: 2.0 Grade Level: 11th–12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE1)

Credit: 3.0 Grade Level: 11th-12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Corequisites: Career Preparation I.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace.Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

CAREER PREPARATION II (CAREERP2)

Credit: 2.0 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Career Preparation II develops essential knowledge and skills through advanced classroom instruction with business and industry employment experiences. Career Preparation II maintains relevance and rigor, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE2)

Credit: 3.0 Grade Level: 12th

Prerequisite: Successful completion of Career Preparation I

Corequisites: Career Preparation II.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success. Must be taken concurrently with Career Preparation II.

STEM

SCIENCE, TECHNOLOGY, ENGINEERING, and MATHEMATICS

Level 1 — Foundations of Cybersecurity

Level 2 — Computer Science I
Computer Maintenance/Lab

Level 3 — Networking/Lab

Level 4

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Oracle Certified Associate Java SE 8	GIAC Reverse Engineering Malware	System Networking, and LAN/WAN Management	Computer Systems Networking and Telecommunications	Computer Systems Analysis/Analyst
Oracle Certified Database Associate	Certified Advanced Windows Forensic Examiner	Information Technology	Computer Systems Networking and Telecommunications	Information Technology
Cisco Certified Entry Networking Technician (CCENT)	SAP Certified Technology Professional System Security Architect	Computer and Information Sciences, General	Computer and Information Sciences, General	Computer and Information Sciences, General
CompTIA A+, Network+, Security+, and IT Fundamentals	Cisco Certified Network Professional Security Certification	Computer Science	Computer Science	Computer Science

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

Occupations	Median Wage	Annual Openings	% Growth
Information Security Analysts	$91,915	814	29%
Network and Computer System Administrators	$82,597	2,814	19%
Computer System Analysts	$87,568	5,937	29%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Join TSA Job Shadow a computer system analyst or information security analyst.	Obtain an industry based certification.

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

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

Successful completion of the Cybersecurity program of study will fulfill requirements of the Business and Industry or STEM endorsement if the math and science requirements are met. Revised - March 2022

TEA Texas Education Agency

CYBERSECURITY

FOUNDATIONS OF CYBERSECURITY (TAFCYB)

Credits: 1.0 Grade Level: 9th-10th

In this first course in the Cybersecurity program of study, students will explore fundamental concepts related to the ethics, laws, and operations of cybersecurity. Students will learn trends and operations of cyberattacks, threats, and vulnerabilities. Students will explore security policies designed to mitigate risks.

COMPUTER SCIENCE I (TACS1)

Credits: 1.0 Grade Level: 9th-11th

Computer Science I is designed to 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 with various electronic communities to solve the problems presented throughout the course. Data analysis will include the identification of task requirements, planning search strategies and the use of computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create a solution, and evaluate the results. Students will learn to become good digital citizens by practicing integrity and respect throughout the Computer Science I course. Students will gain an understanding of the principles of computer science through the study of technology operations, systems, and concepts.

COMPUTER MAINTENANCE (COMPMTN)

Credits: 1.0 Grade Level: 10th-12th

In Computer Maintenance, students will acquire knowledge of computer maintenance and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer maintenance. Students will apply technical skills to address the IT industry and emerging technologies.

COMPUTER MAINTENANCE LAB (COMMTLAB)

Credits: 2.0 Grade Level: 10th-12th

In Computer Maintenance Lab, students will acquire knowledge of computer maintenance and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer maintenance. Students will apply technical skills to address the IT industry and emerging technologies. Students are encouraged to take this course in a consecutive block with Computer Maintenance to allow students sufficient time to master the content of both courses.

NETWORKING (NETWRK)

Credits: 1.0 Grade Level: 10th-12th

In Networking, students will develop knowledge of the concepts and skills related to data networking technologies and practices to apply them to personal or career development. To prepare for success, students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

NETWORKING LAB (NETWRLAB)

Credits: 2.0 Grade Level: 10th-12th

In Networking Lab, students will develop knowledge of the concepts and skills related to telecommunications and data networking technologies and practices to apply them to personal or career development. To prepare for success, students must have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. This course must be taken concurrently with Networking and may not be taken as a stand-alone course. Students are encouraged to take this course in a consecutive block with Networking to allow students sufficient time to master the content of both courses.

Programming and Software Development

Level 1 — Fundamentals of Computer Science

Level 2 — Computer Science I

Level 3 — Computer Science II

Level 4 — Career Preparation I

HIGH... INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	PROFESSIONAL DEGREE
Oracle Certified Association JAVA SE 8 Programmer	Certified Computing Professional	Computer Programming/ Programmer Genera	Management Information Systems, General	Computer Software Engineer
Oracle Certified Database Associate	Cloud Technology Associate Certification	Computer Software Engineer	Computer Software Engineer	Computer Science
Microsoft Technology Associate, Introduction to Programming Using Python, HTML or CSS	AEM 6 Developer	Computer Science	Computer Science	Information Science/ Studies
Microsoft Technology Associate, Introduction to Programming Using Java or Java Script	Certified Software Analyst	Certified Software Analyst	Information Science/ Studies	

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

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Join TSA Participate in coding club at school	Obtain an industry-based certification.

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

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

Successful completion of the Programming and Software Development program of study will fulfill requirements of the Business and Industry and STEM endorsement if the math and science requirements are met. Revised - July 2020

TEA Texas Education Agency

COURSE INFORMATION

PROGRAMMING AND SOFTWARE DEVELOPMENT

FOUNDATIONS OF CYBERSECURITY (TAFCYB)

Credits: 1.0 Grade Level: 9th-10th

In this first course in the Cybersecurity program of study, students will explore fundamental concepts related to the ethics, laws, and operations of cybersecurity. Students will learn trends and operations of cyberattacks, threats, and vulnerabilities. Students will explore security policies designed to mitigate risks.

COMPUTER SCIENCE I (TACS1)

Credits: 1.0 Grade Level: 9th-11th

Computer Science I is designed to 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 with various electronic communities to solve the problems presented throughout the course. Data analysis will include the identification of task requirements, planning search strategies and the use of computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create a solution, and evaluate the results. Students will learn to become good digital citizens by practicing integrity and respect throughout the Computer Science I course. Students will gain an understanding of the principles of computer science through the study of technology operations, systems, and concepts.

COMPUTER SCIENCE II (TACS2)

Credits: 1.0 Grade Level: 9th-11th

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

CAREER PREPARATION I (CAREERP1)

Credit: 2.0 Grade Level: 11th–12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

EXTENDED CAREER PREPARATION (EXCAREE1)

Credit: 3.0 Grade Level: 11th-12th

Prerequisite: Successful completion of one or more advanced career and technical education courses that are part of a coherent sequence of courses in a Career Cluster related to the field in which the student will be employed.
Corequisites: Career Preparation I.

Extended Career Preparation provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace.Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.