

ACADEMIC PLANNING GUIDE

2025-2026



FRIENDSWOOD HIGH SCHOOL

ACADEMIC PLANNING GUIDE

2025 - 2026

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Planning your High School Curriculum

Planning a four-year school program is a serious undertaking. The FHS Academic Planning Guide is designed to assist you in making informed decisions regarding your education. Although many of your courses will be determined by the graduation plan selected, you will still have many other choices to make during your years of high school. The courses you select will be guided largely by your plans for the future. Will you continue your education in college or in a trade or technical school? Do you want to learn a career skill in order to enter the full-time work force immediately after school? Are you interested in a technical field? Are you thinking of entering a profession which requires years of specialized education? The answers to these questions are extremely important for making decisions about your course selections.



The answers to these questions are extremely important for making decisions about your course selections. Your interests and abilities should also guide these answers. Students will be required to graduate under the Texas High School requirements, which are shared on the following pages of this guide. Students who intend to enroll in our most rigorous courses may want to complete the distinguished requirements and/or performance acknowledgments, which require additional coursework. A more detailed explanation can be found on the following pages.

The first section of this guide provides important foundation information on which to begin building your course selections. The remaining pages offer guidance in each specific subject area, which includes course descriptions, prerequisites, course credits, and sequence charts. It is common for young people to change their minds about which career to choose. For this reason, it is important for you to plan as challenging a program as you can. If your career plans should change, then it will not be as difficult to move into another program. While it may sometimes seem tempting to schedule a less demanding combination of courses, choosing courses that meet your needs or interests is the best way to prepare for your future. By planning wisely, you can create the future most appropriate for you.



COLLEGE TIMELINE

*All of this information and more details are located on the FHS Counseling Center website:
<https://fhs.myfisd.com/explore-fhs/about-fhs/httpsmyfisdcomhssupport-teamscounseling-center>

Grade 8

- ___ Complete SchoolLinks Assessments to explore possible career clusters and pathways
- ___ Consult 8th grade counselor and teachers and review interest inventory results for appropriate course selections
- ___ Choose the most appropriate graduation plan with endorsement for your proposed post-high school endeavors
- ___ Attend Student/Parent programs for high school/college planning

Grade 9 - Freshman Year

- ___ Take your freshman year seriously and remember that your GPA starts now
- ___ Begin researching potential colleges, possible career choices, and the educational requirements of each in SchoolLinks
- ___ Participate in a variety of extracurricular activities
- ___ Meet with college & military representatives as they visit the school during lunch visits. See the lunch visit calendar in SchoolLinks under the School Events Tab.
- ___ Begin building your resume in SchoolLinks

Grade 10 - Sophomore Year

- ___ Check credits to make sure you are on schedule for graduation requirements
- ___ Check to make sure your courses meet college entrance requirements
- ___ Take the PSAT/NMSQT. On the form, check the box which will put you on the mailing list for college information
- ___ Sign up to take the ASVAB if you need help determining your post-secondary interests
- ___ Plan to attend the College and Career Fair during the fall semester
- ___ Explore dual-enrollment college credit and dual credit workforce opportunities
- ___ Meet with college representatives as they visit the school during lunch visits. See the lunch visit calendar in SchoolLinks under the School Events Tab.
- ___ Seek ways to develop your leadership skills
- ___ Continue building your resume in SchoolLinks

SPRING OF JUNIOR YEAR

- ___ Review and update or retake your SchoolLinks interest inventories and assessments, if desired
- ___ Research colleges based on your career goals using the SchoolLinks college search tools
- ___ Schedule your two allowed college visits for junior year. Permission forms can be found on the FISD Counseling Center website.
- ___ Meet with college & military representatives as they visit the school during lunch visits. See the lunch visit calendar in SchoolLinks under the School Events Tab.
- ___ Register with NCAA Clearinghouse or NAIA if you are planning to play college sports
- ___ Take the SAT and ACT exams
- ___ Sign up to take the ASVAB if you need help determining your post-secondary interests
- ___ Work on your resume in SchoolLinks
- ___ Work on your Brag Sheet, found in SchoolLinks
- ___ Look for volunteer opportunities to include on your resume, and, if possible, try to align volunteer experiences to career goals
- ___ Begin to consider 1-2 people/teachers who know you well and could possibly write you a recommendation letter if needed
- ___ Refer back to handouts and presentations received during counselor junior class visits
- ___ See your counselor or the College and Career Specialist if you have any questions

SUMMER AFTER JUNIOR YEAR

- ___ Begin ApplyTexas application, if applicable
- ___ Begin Common Application, if applicable, and link to SchoolLinks
- ___ Get started on your college application essays, if applicable
- ___ Finish your Brag Sheet, found in SchoolLinks
- ___ Finish your Resume in SchoolLinks
- ___ Narrow down your college choices to a few schools

FALL OF SENIOR YEAR

- ___ Plan to attend the College and Career Fair
- ___ Meet with college representatives as they visit the school during lunch visits. See the lunch visit calendar in SchoolLinks under the School Events Tab.
- ___ Schedule your two allowed college visits for senior year. Permission forms can be found on the FISD Counseling Center website.
- ___ Retake the SAT and ACT, as needed. You will need to send scores to the college(s), if you choose, through your College Board or ACT account
- ___ Finish and submit all college applications and add colleges to SchoolLinks.
- ___ Sign up to take the ASVAB if you need help determining your post-secondary interests
- ___ Request letters of recommendation in person, if needed for schools or scholarships. Also, enter the requests in SchoolLinks.
- ___ Order transcripts through SchoolLinks, and visit the registrar's office to ask for them to be sent
- ___ Complete the FAFSA application beginning October 1
- ___ Begin researching and applying for scholarships. This will be an ongoing process.
- ___ Refer to handouts and presentations from counselor senior class visits
- ___ See your counselor or the College and Career Specialist if you have any questions

SPRING OF SENIOR YEAR

- ___ Continue to research and apply for scholarships
- ___ See the registrar to have mid-year transcripts sent through SchoolLinks, if your college requires them.
- ___ Make the final decision of the college you will be attending and follow that school's process for enrollment
- ___ Request that your AP test scores be sent to the college that you will be attending, if you have not done so already
- ___ Report the college you will be attending and all scholarships awarded on the Senior End of Year Survey in SchoolLinks
- ___ Visit the Registrar's office and pay \$2 to have your final transcript sent to the college you will be attending.
- ___ See your counselor or the College and Career Specialist if you have any questions.

Texas Education Agency Graduation Toolkit

Information - Workforce Resources

Career

If you are considering going straight into the workforce or into a technical training program following graduation, you still need to complete your high school education and earn a high school diploma.

While in high school, you will want to:

Look at the five endorsements offered under the Foundation High School Program.

Determine your area of interest.

Complete your selected endorsement along with the required Foundation Program to earn your high school diploma.

Learn about available jobs and any required post-high school or technical training.

Explore new career opportunities.

Research wage and occupation information, required levels of education and training requirements.

Discover your interests and abilities; use labor market resources at www.texasrealitycheck.com/ and www.texasworkforce.org/customers/jsemp/career-exploration-trends.html.

Research which jobs are among the fastest and most in-demand in Texas at www.texascaresonline.com/hotshotslists.asp.

Community College & Career Schools

Find training and certification for specific occupations or skills through community colleges or career schools and colleges at www.texasworkforce.org/svcs/propschools/career-schools-colleges.html

Did you know...

Training - many of the high-demand jobs will require some postsecondary education?

Credentials - Texas public school students can earn a Performance Acknowledgement with their diploma by earning a nationally or internationally recognized credential for a specific professional occupation, such as a Pharmacy Technician or Microsoft Office (MOS)?

Tuition - students attending community colleges or trade schools may be eligible for state or federal financial aid?

Earnings - over their lifetime, high school graduates with a workforce certificate from a community or technical college earn 20 percent more than those with only a high school diploma?



What is SchoolLinks?

SchoolLinks is a modern College and Career Readiness Platform that is easy and engaging for students to use. From educating learners about potential careers, helping them explore and apply to colleges, or finding that entry level position to jumpstart a career, SchoolLinks can help support each student in his or her post-secondary planning.

How does SchoolLinks support students?

- Gamified assessments to help students find their path
- College application tracking portal and transcript request tool
- On-Demand mentorship opportunities allow students to connect with real world professionals and understand careers
- Industry Partner Portal offers a single place for industry partners to engage with our district
- Allows students to explore local and national jobs to get ahead
- Students can easily set up their own to-do lists, favorite the colleges of their choice, etc.
- Keeps parents informed and everyone on the same page in students' post-secondary planning

Do parents have access to SchoolLinks?

The SchoolLinks' Family Engagement portal allows parents to explore their students' pathways, keep track of their progress and communicate with counselors. FISD parents do have access to this portal. In addition, parents are encouraged to explore SchoolLinks with their students by logging in together. Parents can login using the guardian email address given for the guardian in Skyward.

How do students log into SchoolLinks?

SchoolLinks works best on the Google Chrome browser. Your student will need to be logged into his or her FISD gmail account. Then, they may access the SchoolLinks login (choose Login with Google) one of the following ways:

- from the FHS Counseling Center website
- from any teacher's Canvas page
- by visiting www.schoollinks.com

COLLEGE, CAREER, & MILITARY READINESS

Philosophy

FISD is committed to preparing all students to graduate from high school ready for college, a career, or the military.

Friendswood ISD focuses on cutting edge, rigorous and relevant education that prepares our students for post-secondary learning as well as a wide range of high-wage, high-demand careers. We offer sixty one programs of study, thirty of which are Career and Technical Education, or CTE, programs. We also offer college readiness opportunities through advanced placement, dual credit, and dual enrollment coursework. Throughout the progression of each program, students learn relevant skills that may lead to a future career choice and/or path towards a college degree.

College, Career, and Military Readiness Standards

Students can meet College, Career, and Military Readiness in any of the ways defined below.

College Credit

- Score a 3+ on any AP exam in any subject
- 3 Dual Credit hours in ELA or math
- 9 hours Dual Credit in any subjects
- Complete OnRamps dual enrollment course + earn UT college credit
- Earn an associate's degree while in high school

TSIA 2 Criteria: Reading and Math

- Meet the college-ready criteria on either the TSIA 2/SAT/ACT for reading & math (highest score) or;
- Successfully complete and earn credit for a college prep course as defined in TEC 28.014 for reading & math; or
- Any combination of the above for reading and math (i.e. SAT for Reading but College Prep for math)

U.S. Armed Forces

- Enlist in the U.S. Armed Forces

Industry-Based Certifications

- Earn an industry-based certification and
- Complete aligned pathway of courses

Graduation Program Requirements

All students in the State of Texas begin their high school career on the Foundation Plus Endorsement (Distinguished Level of Achievement) Plan. After the completion of a student's sophomore year and based on his/her individual instructional plan, the student may be eligible to graduate on the Foundation Only Plan. There are eligibility requirements and considerations for post-secondary enrollment, which

<u>Subject Area</u>	<u>Foundation Plus Endorsement Plan</u> 26 credits <u>*see pages 8-9 for more information</u>	<u>Foundation Only Plan</u> (22 credits) <u>*eligible students only</u>
English	4 credits <ul style="list-style-type: none"> English I English II English III English IV 	4 credits <ul style="list-style-type: none"> English I English II English III English IV
Math	4 credits <ul style="list-style-type: none"> Algebra I Geometry Algebra II Additional credit of math 	3 credits <ul style="list-style-type: none"> Algebra I Geometry Additional credit of math
Science	4 credits <ul style="list-style-type: none"> Biology IPC or Chemistry 2 Additional credits of science *some endorsement areas have specific science requirements	3 credits <ul style="list-style-type: none"> Biology IPC or Chemistry Additional credit of science
Social Studies	3 credits <ul style="list-style-type: none"> World Geography or World History US History Government and Economics *some endorsement areas have specific science requirements	3 credits <ul style="list-style-type: none"> World Geography or World History US History Government and Economics
Fine Arts	1 credit of Fine Arts	1 credit of Fine Arts
Language other than English	2 credits from the same language	2 credits from the same language
PE	1 credit of PE or PE alternative	1 credit of PE or PE alternative
Health/Speech	<ul style="list-style-type: none"> .5 credit of health .5 credit of speech 	<ul style="list-style-type: none"> .5 credit of health .5 credit of speech
Additional Credits	6 credits to fulfill electives and requirements of selected endorsement path	4 credits of electives
Total	26 credits	22 credits

For information on how students may earn a Performance Acknowledgement, see pages 11-13. Students may qualify for a Distinguished Achievement Cord at graduation by earning 3 of the 5 different Performance Acknowledgements.

TEXAS HIGH SCHOOL GRADUATION ENDORSEMENT REQUIREMENTS

ENDORSEMENTS	CURRICULUM REQUIREMENTS (Plan Options)
<p>Science, Technology, Engineering & Mathematics (STEM)</p> <p>Biomedical Science Engineering Info Technology Mathematics Science</p> <p><i>Required Courses: Foundation courses, Additional Math (minimum Algebra II), Chemistry, Physics, and one option from the list on the right</i></p>	<p>Students must complete Algebra II, Chemistry, Physics, and ONE of the following options for the STEM Endorsement:</p> <ol style="list-style-type: none"> Courses required to be designated a CTE completer* in one of the following TEA approved programs of study related to STEM: <ol style="list-style-type: none"> biomedical sciences; cybersecurity; engineering foundations; programming and software development Three credits in Mathematics by successfully completing Algebra II and two additional Mathematics courses for which Algebra II is a prerequisite; or Four credits in Science by successfully completing Chemistry, Physics and two additional Science courses. In addition to chemistry, physics, and Algebra II, one additional mathematics course for which Algebra II is a prerequisite and one additional science course (not including IPC). <p>Students must complete ONE of the following options for the Business & Industry Endorsement:</p> <ol style="list-style-type: none"> Courses required to be designated a CTE completer* in one of the following TEA approved programs of study in the Career Clusters below related to Business and Industry: <ol style="list-style-type: none"> Agriculture, Food, and Natural Resources Arts, Audio Video Technology, and Communications Business, Marketing, and Finance Energy Engineering Hospitality and Tourism Information Technology Manufacturing Transportation, Distribution, and Logistics <p>*CTE completer - A student who completes, passes, and receives credit for three or more high school CTE courses for four or more credits, including at least one level 3 or level 4 course, from within the same program of study.</p> <ol style="list-style-type: none"> Four English elective credits to include three levels in one of the following areas: <ol style="list-style-type: none"> Advanced Broadcast Journalism; or Advanced Journalism Newspaper; or Debate; or Advanced Journalism Yearbook
<p>Business & Industry</p> <p>Agriculture Science Arts, Audio/Video Tech Business, Mark & Finance Energy, Engineering, Hospitality and Tourism Information Technology Manufacturing Transportation English</p> <p><i>Required courses: Foundation courses, Additional Math (minimum Algebra II), an additional Science, and one Endorsement option from the list on the right</i></p>	

<p>Public Services</p> <p>Education & Training Health Science Human Services Law and Public Safety</p> <p><i>Required courses: Foundation courses, Additional Math (minimum Algebra II), an additional Science, and one Endorsement option from the list on the right</i></p>	<p>Students must complete <u>ONE</u> of the following options for the Public Service Endorsement:</p> <p>Courses required to be designated a CTE completer* in one of the following TEA approved programs of study in the Career Clusters below related to Public Service:</p> <ul style="list-style-type: none"> a. Education & Training; or b. Health Science; or c. Human Services d. Law and Public Service <p>*CTE completer - A student who completes, passes, and receives credit for three or more high school CTE courses for four or more credits, including at least one level 3 or level 4 course, from within the same program of study</p>
<p>Arts & Humanities</p> <p>Social Studies Languages Other Than English Fine Arts</p> <p><i>Required courses: Foundation courses, Additional Math (minimum Algebra II), an additional Science, and one Endorsement option from the list on the right</i></p>	<p>Students must complete <u>ONE</u> of the following options for the Arts & Humanities Endorsement:</p> <ul style="list-style-type: none"> 1. Five Social Studies credits; or 2. Four levels of the same language in a language other than English; or 3. Two levels of the same language other than English and two levels of a different language in a language other than English; or 4. A coherent sequence of four credits by selecting courses from one or two categories in fine arts (Art, Dance, Choir, Band, Theatre, Technical Theatre).
<p>Multidisciplinary Studies</p> <p>Advanced courses from one or among Endorsement areas, four credits in each of the four core subject areas, four credits in advanced placement or dual credit</p> <p><i>Required courses: Foundation courses, Additional Math (minimum Algebra II), an additional Science, and one Endorsement option from the list on the right</i></p>	<p>Students must complete <u>ONE</u> of the following options for the Multidisciplinary Studies Endorsement:</p> <ul style="list-style-type: none"> 1. Four advanced courses that prepare a student to enter the workforce successfully or postsecondary education without remediation from within one endorsement area or among endorsement areas that are not in a coherent sequence; or 2. Four credits in each of the four foundation subject areas to include English IV and Chemistry and/or Physics; or 3. Four credits in advanced placement or dual credit selected from English, Mathematics, Science, Social Studies, Economics, languages other than English, or Fine Arts.

Performance Acknowledgments

****Students at Friendswood High School may qualify for a Distinguished Achievement cord at graduation by earning 3 of the 5 different Performance Acknowledgements****

(a) A student may earn a performance acknowledgment on the student's transcript for outstanding performance in a dual credit course by successfully completing:

- (1) at least 12 hours of college academic courses, including those taken for dual credit as part of the Texas core curriculum, and advanced technical credit courses, including locally articulated courses, with a grade of the equivalent of 3.0 or higher on a scale of 4.0; or
- (2) an associate degree while in high school.

(b) A student may earn a performance acknowledgment on the student's transcript for outstanding in bilingualism and biliteracy as follows.

(1) A student may earn a performance acknowledgment by demonstrating proficiency in accordance with local school district grading policy in two or more languages by:

- (A) completing all English language arts requirements and maintaining a minimum grade point average (GPA) of the equivalent of 80 on a scale of 100; and
- (B) satisfying one of the following:

- (i) completion of a minimum of three credits in the same language in a language other than English with a minimum GPA of the equivalent of 80 on a scale of 100; or
- (ii) demonstrated proficiency in the Texas Essential Knowledge and Skills for Level IV or higher in a language other than English with a minimum GPA of the equivalent on a scale of 100; or
- (iii) completion of at least three credits in foundation subject area courses in a language other than English with a minimum GPA of 80 on a scale of 100; or
- (iv) demonstrated proficiency in one or more languages other than English through one of the following methods:

- (I) a score of 3 or higher on a College Board Advanced Placement examination for a language other than English; or
- (II) a score of 4 or higher on an International Baccalaureate examination for a higher-level language other than English course; or
- (III) performance on a national assessment of language proficiency in a language other than English of at least Intermediate High or its equivalent.

- (2) In addition to meeting the requirements of paragraph (1) of this subsection, to earn a performance acknowledgment in bilingualism and biliteracy, an English language learner must also have:
- (A) participated in and met the exit criteria for a bilingual or English as a second language (ESL) program; and
 - (B) scored at the Advanced High level on the Texas English Language Proficiency Assessment System (TELPAS).
- (c) A student may earn a performance acknowledgment on the student's transcript for outstanding performance on a College Board Advanced Placement test or International Baccalaureate examination by earning:
- (1) a score of 3 or above on a College Board Advanced Placement examination; or
 - (2) a score of 4 or above on an International Baccalaureate examination.
- (d) A student may earn a performance acknowledgment on the student's transcript for outstanding performance on an established, valid, reliable, and nationally norm-referenced preliminary college preparation assessment instrument used to measure a student's progress toward readiness for college and the workplace or on an established valid, reliable, and nationally norm-referenced assessment instrument used by colleges and universities as part of their undergraduate admissions process by:
- (1) earning a score on the Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT®) that qualifies the student for recognition as a commended scholar or higher by the College Board and National Merit Scholarship Corporation, as part of the National Hispanic Recognition Program (NHRP) of the College Board or as part of the National Achievement Scholarship Program of the National Merit Scholarship Corporation;
 - (2) achieving the college readiness benchmark score on at least two of the four subject tests on the ACT Aspire™ examination;
 - (3) earning a composite score of at least 1310 on the SAT®; or
 - (4) earning a composite score on the ACT® examination of 28 (excluding the writing subscore).
- (e) A student may earn a performance acknowledgment on the student's transcript for earning a state-recognized or nationally or internationally recognized business or industry certification or license as follows.
- (1) A student may earn a performance acknowledgment with:
 - (A) performance on an examination or series of examinations sufficient to obtain a nationally or internationally recognized business or industry certification; or
 - (B) performance on an examination sufficient to obtain a government-required credential to practice a profession.

(2) Nationally or internationally recognized business or industry certification shall be defined as an industry-validated credential that complies with knowledge and skills standards promulgated by a representing a particular profession or occupation that is issued by or endorsed by:

- (A) a national or international business, industry, or professional organization;
- (B) a state agency or other government entity; or
- (C) a state-based industry association.

(3) Certifications or licensures for performance acknowledgements shall:

- (A) be age appropriate for high school students;
- (B) represent a student's substantial course of study and/or end-of-program knowledge and skills;
- (C) include an industry-recognized examination or series of examinations, an industry-validated skill test, or demonstrated proficiency through documented, supervised field experience; and
- (D) represent substantial knowledge and multiple skills needed for successful entry into a high-skill occupation.

Statutory Authority: The provisions of this §74.14 issued under the Texas Education Code, §§7.102, 28.002, and 28.025.

Source: The provisions of this §74.14 adopted to be effective July 8, 2014, 39 TexReg 5149; amended to be effective August 22, 2016, 41 TexReg 5040; amended to be effective August 27, 2018, 43 TexReg 4190.

State of Texas Assessments of Academic Readiness (STAAR)

Requirements for Graduation: End-of-Course (EOC)

High School students are required to pass five STAAR EOC exams to meet the graduation requirements. The five assessments include Algebra I, English I (combined reading/writing), English II (combined reading/writing), Biology, and U.S. History. Students must meet a scale score for each exam that indicates satisfactory performance in all five of these assessments to be eligible to graduate from a Texas public high school.

Each EOC exam will have a designated satisfactory performance score and an advanced academic performance score. If the student does not meet the satisfactory score requirement, the student will be required to retake the test. Each student will receive a state generated confidential student report (CSR) which shows detailed information about their performance.

EOC exams will be offered three times per school year in the Spring, Summer and Fall. Students will participate in the exam during the time at which they are receiving credit for an EOC course or at the next available testing opportunity for students participating in retakes.

Regardless of the graduation plan or endorsement a student chooses, the STAAR EOC requirements remain the same.

House Bill (HB) 4545/ HB 1416

During the 87th and 88th Legislative Sessions, House Bill (HB) 4545 and HB 1416 were passed which require school districts to provide accelerated instruction during the school year for students who “Did Not Meet Grade Level” or did not take the STAAR and STAAR end-of-course assessments the previous year.

This accelerated instruction is required for any student that meets this criteria for any grade level and any content. Accelerated instruction is targeted, supplemental instruction aligned to the TEKS which must help the student in demonstrating proficiency of each content area. The 15-30 hours of required accelerated instruction may occur before or after school or be embedded during the school day. The exact number of hours will be determined by the students’ specific scores in each content area and the growth they achieved over the past two years.

Credit Requirements

Local vs State Credit

State credit means the State of Texas recognizes the course for credit.

Local credit is awarded to students taking courses that are locally approved and are not recognized by TEA for graduation.

Students involved in extracurricular activities must be enrolled in five classes that are state or local credits.

Exception: Teacher Aide, Senior Mentor and Lab Management do not count toward the five.

High School Courses Taught at Friendswood Junior High

High school credit courses taken at junior high are not included in GPA or class ranking, but are reflected on the high school transcript.

Classification

Grade level classifications for students in grades 10-12 shall be earned by course credits. All students entering high school for their first year will be classified as a freshman. High school credits earned prior to entering high school will count in students educational record.

Changes in grade level classification shall be made at the beginning of the fall semester, for students in grades 10-12. Students keep their classification for the entire year except those students who move to the senior level for graduation purposes.

<u>Classification</u>	<u>Credits</u>
Freshman	Less than 6
Sophomore	6 - 12
Junior	12.5 - 18.5
Senior	19+

Academic Achievement

For the class of 2026 and beyond, all academic achievement calculations for Rank GPA and Cumulative GPA will be calculated based on the following guidelines.

The following weighted 5pt GPA scale will be used to calculate both Rank GPA and Cumulative GPA.

NUMERICAL GRADE	AP COURSES & COURSES THAT REQUIRE AP PRE-REQUISITE	MAP/DUAL CREDIT/OTHER DESIGNATED COURSES	ON LEVEL
97 & ABOVE	6.0	5.5	5.0
93-96	5.8	5.3	4.8
90-92	5.6	5.1	4.6
87-89	5.4	4.9	4.4
83-86	5.2	4.7	4.2
80-82	5.0	4.5	4.0
77-79	4.8	4.3	3.8
73-76	4.6	4.1	3.6
71-72	4.4	3.9	3.4
70	4.0	3.5	3.0
Below 70	0.0	0.0	0.0

Dual Credit courses will earn GPA points on the following scale:

A = 5.5 B = 4.9 C = 4.3 D = 3.5

Rank GPA

The Rank GPA is internally calculated solely for the purpose of determining the top 10% of a graduating class.

Class rank will be reported ONLY for the top 10% to an institute of higher learning as an exact rank and as a percentile.

Rank in class for the top 10% and valedictorian/salutatorian determination shall be based on the weighted 5pt scale.

Rank GPA calculation shall be based on semester grades for courses taken for High School credit received after completion of 8th grade in the following content areas only:

1. English;
2. Mathematics;
3. Science;
4. Social Studies, including Economics;
5. Languages other than English.

To confirm if a particular course is used in the calculation of Rank GPA see the designated symbol “(R)” alongside the course title.

Students in grade 9 will have their Rank GPA based on the 5pt weighted scale printed on their final report card. Students in 10-12th grades will have their Rank GPA based on the 5pt weighted scale printed on their semester report cards. In addition, the lowest weighted rank in the top 10% will also be communicated on the report card. This report card can be found in Skyward Family Access.

Cumulative GPA

All students receive a Cumulative GPA that will be determined using the weighted 5pt scale.

The Cumulative GPA calculation shall be based on semester grades for courses taken for High School credit received after completion of 8th grade in all credit earning courses.

Students in grades 9-12 will have their Cumulative GPA based on a 5pt weighted scale printed on the their report cards. These report cards can be found in Skyward Family Access.

Honors: Valedictorian, Salutatorian, Honor Graduates

Honors: Valedictorian and Salutatorian

The students with the highest and second highest grade averages shall be designated as valedictorian and salutatorian respectively, provided they meet the residency requirements.

To be eligible for the honor of valedictorian and salutatorian, a student must be enrolled continuously in the District beginning no later than the first Friday following Labor Day of the sophomore year.

Students who graduate in fewer than or more than four years shall not be eligible for the State of Texas Honor Graduate Certificate for the highest-ranking graduate, valedictorian or salutatorian.

In the event that two or more students in contention for valedictorian or salutatorian have the same grade point average, the student who has taken the most advanced placement courses will be named.

For graduation honors (Valedictorian and Salutatorian), a student's scholastic rank will be determined by dividing the total number of semester grade points by the number of grades accumulated for all eligible courses, during grades 9-12.

See Board Policy EIC Local"

Top 10% Honor Graduates

Honor graduates will be the top 10% of the senior class by rank in grade point average. A student's top ten percent scholastic rank in his/her graduating class shall be determined by the numerical average based on the total eligible coursework during the grades 9,10, and 11 and shall include the first three grading periods of the grade 12 year.

Students who have earned graduation honors (Valedictorian and Salutatorian) must have completed all course work required by Friendswood High School for graduation and the grade received by the school by the last teacher the day before graduation.

Other Scholastic Awards

Other scholastic awards, including Academic and Athletic Letter Jackets is set up by the principal and staff approved by the Executive Director of Secondary Teaching and Learning.

Gifted and Talented (GT)

FHS offers programs for gifted/talented students in grades 9-12. Teachers and counselors aid these students in assessing their strengths and in determining their goals as they select their courses each year. All GT students are served within our MAP/Advanced Placement Programs, and Independent Study Mentorship programs.

Furlough Procedures for GT Students

Furlough is defined as a leave of absence from the gifted and talented program that may last for up to one year. A furlough may be initiated by a student/parent/teacher or for continuous low performance. A student may be placed on furlough (leave of absence) for the GT program for up to one year for any of the following reasons:

- Continual academic struggles
- The student elects not to participate in the levels of service offered to GT students at their grade level. (ISM, MAP, AP courses)

Top 10 Percent Rule for College Admissions

Students who are in the top 10 percent of their graduating class are eligible for automatic admission to any public university in Texas*.

To be eligible for automatic admission, a student must:

- Graduate in the top 10 percent of his or her class at a public or private high school in Texas, or
- Graduate in the top 10 percent of his or her class from a high school operated by the U.S. Department of Defense and be a Texas resident or eligible to pay resident tuition;
- Enroll in college no more than two years after graduating from high school; and
- Submit an application to a Texas public university for admission before the institution's application deadline (check with the university regarding specific deadlines).
- Students admitted through this route may still be required to provide SAT or ACT scores, although these scores are not used for admissions purposes. Students must also take the TSI assessment, unless exempted from the test requirement. Check with the admissions office regarding the TSI assessment, SAT, and ACT requirements);
- Students graduating under Foundation High School Program must earn an Endorsement and the Distinguished Level of Achievement in order to be eligible for the top 10% designation.

After a student is admitted, the university may review the student's high school records to determine if the student is prepared for college-level work. A student who needs additional preparation may be required to take a developmental, enrichment, or orientation course during the semester prior to the first semester of college.

Admission to a university does not guarantee acceptance into a particular college of study, major, or department. Regardless of class ranking, all students are encouraged to apply to the college of their choice.

* SB 175, passed by the 81st Legislature, modifies the top 10 percent admissions program for The University of Texas at Austin. Automatic admit criteria will vary year-by-year, with remaining spaces to be filled through holistic review.

Course Selection and Schedule Changes

Every year students register for and verify classes that they will need the following year. It is important for students to plan their choices carefully because class size and staffing decisions will be determined from their choices. Choose your courses with this in mind because after course verification, there will be no schedule changes other than errors in scheduling. Every effort will be made to schedule requested courses.

Schedule Changes

***Verification course listings are provided for students the Monday after Spring Break, so each student can confirm that the correct course choices have been input in Skyward.

All elective and level changes must be requested by April 4, 2025. After this time, schedule changes will only be considered for the following reasons and must take place within the first 10 days of school. Space availability in the receiving course will be a consideration for approval.

- Student is a senior and not scheduled in a course needed for graduation.
- Student has already earned credit for a course in which he/she is currently scheduled.
- Student does not have the prerequisite(s) for a class listed on schedule.
- There is a data entry error (class entered twice, free period, etc.)

Please note-Due to scheduling and staffing, FHS is unable to accommodate lunch changes, class period changes, and teacher requests.

Level Changes – MAP, AP & Dual Credit

Level changes will be considered after the posting of the first 6 week progress report, the first nine week report card, and the first semester report card.

When there is no appropriate level to move down to, students in MAP/AP classes must stay until the end of the semester.

To be considered for a level change the student must have made a sincere effort to succeed by attending tutorials, completing all work, and by conferencing with the teacher. The parent must conference with the teacher before a level change will be considered. If these conditions are met and the student is earning a 79 or lower, the student will be considered for a change. Space availability in the receiving course will be a consideration for a level change. The grade earned in the MAP/AP course will be transferred to the regular course. Changes must be made within a 5 day window after the grading period.

If a student drops Dual Credit or Dual Enrollment OnRamps at any time, they go into a regular class with a transfer grade of 70.

TEKS Based Instruction

Friendswood High School courses are guided by the Texas Essential Knowledge and Skills (TEKS). Class changes that result in gaps in the TEKS will not be approved. Semester credit cannot be gained unless the opportunity to meet all TEKS for a specific course is present.

Alternate Credit Opportunities

Through alternative credit opportunities, no more than 4 High School credits (excluding Dual Credit) may be applied towards graduation requirement, except through the process of an application with your counselor and principal approval.

Correspondence Courses

Correspondence courses taken through a state approved extension program **must have counselor** and parent approval prior to registration.

Students taking coursework that is a prerequisite for the upcoming school year must complete the course, full or half credit, before school starts. In addition, the final exam must be taken and the final grade received before the start of school. This will override the deadline given by Texas Tech University ISD or another correspondence program. If the course is only partially completed by the start of school, the correspondence course will be negated, and the student will be seated in the course for the school year.

Upon completion of the entire course and receipt of the grade by FISD, the grade will automatically be posted to the students/ FHS transcript. High school courses can only be taken one time for credit.

FOR SENIORS ONLY: Any courses that are required for graduation taken via correspondence **MUST** be completed by the first Monday in December in order to be posted to your FHS transcript and count towards graduation. If you are not finished by the first Monday in December, FHS will NOT accept the credit. Therefore, your options will be to: 1) take the class in the spring semester at FHS, even if you have already signed up and/or paid for the correspondence course, or 2) sign up and pay for FHS summer school immediately in order to not have the class placed in your spring semester schedule. Should you take this route, if you complete the correspondence course, before graduation, your summer school payment will be returned to you. *If the course is not offered in FHS summer school, then you will have to follow option #1, and the course will remain in your spring schedule. **If the course is not completed by graduation, you will not receive your diploma or have a final transcript to send to colleges, which could impact your college acceptance.

Summer School

Summer school credit will be awarded according to the same guidelines which apply to courses taken during the regular school year.

Credit-by-Exam/Examination for Acceleration

Students may be given credit for an academic subject in which he or she has had no prior instruction if the student scores 80 percent on a criterion-referenced test for the applicable course. Students who earn an 80 or higher and choose not to use this credit need to notify the counselor within one week of the test date. If the student does not communicate with the counselor, the grade will be transcribed on the FHS transcript, and the student will not be scheduled in the course.

Additional information is available in the counselor's office. **Must have counselor and parent approval to order Credit-By-Exam.**

Note: Fees may be required with some alternative credit opportunities.

College Credit Opportunities

Friendswood ISD is committed to providing opportunities for students to earn college credit while in high school. There are multiple ways to earn college credit which are outlined below.

College credit opportunities are intended for students who possess proven ability, interest, and motivation to handle the extra workload and study requirements of a college level course. A strong degree of organization and time management skills are critical to a students' success.

Advanced Placement Courses

Students can participate in Advanced Placement (AP) Programs offered at Friendswood HS, sponsored by the College Board. AP courses prepare students for the Advanced Placement exams given by the College Board in May. An advanced score, determined by individual universities, on an AP exam can result in a college or university awarding credit.

When signing up for a MAP/AP level course, it is imperative to understand a schedule change will not be made until the end of the first six weeks, if all criteria have been met, (see pg. 19) or when there is no appropriate level to move down, a change will not be made until the end of the first semester. Schedule changes will only be made with the approval of the principal, counselor, teacher and parent. The grade earned will transfer to the new class.

AP Courses offered at FHS

AP English III	AP Biology	AP Music Theory
AP English IV	AP Chemistry	AP 2D Art and Design
AP French IV	AP Environmental Science	AP 3D Art and Design
AP German IV	AP Physics I	AP Drawing
AP Latin IV	AP Physics II	AP Economics (Macro)
AP Spanish IV	AP Computer Science A	AP European History
AP Spanish Literature	AP Computer Science Principles	AP Human Geography
AP Calculus AB	AP Career Kickstart Cybersecurity 1	AP United States Government
AP Calculus BC	AP Pilot Career Kickstart Cybersecurity 2	AP United States History
AP Statistics		AP World History

Dual Credit

FHS partners with College of The Mainland (COM) to provide dual credit opportunities. Upon completion of a course, students will receive a letter grade that will be recorded on both their high school and college transcript.

Enrollment Eligibility

1. Meet the course prerequisites per course, have a minimum of a B overall average and pass all of the End of Course state assessments taken to date.
2. Meet established admissions requirements at the Junior College.
3. Take the TSIA 2 placement test prior to enrolling.
4. Attend mandatory advisement session with COM College Advisor.
5. Complete the dual credit enrollment form, acquiring the appropriate school and parental signatures.
6. Pay the reduced costs associated with taking a dual credit college course.

Dual credit courses offered on campus during school hours

English III Composition	College Statistical Methods
English IV Composition	College Algebra
English IV British Literature	Ready Set Teach II
Math for Bus. Social Sciences	
Calculus for Bus. Social Sciences	
Practicum in Health Science(EMT)	

Dual credit courses offered on campus before school hours

Psychology
TX Government 2306 (Federal)
US Government 2305 (Federal)
US History

University of Texas UT On Ramps Dual Enrollment

FHS partners with the University of Texas to provide dual enrollment credit. These courses are facilitated by FHS teachers during school hours in collaboration with a UT professor. All assessments and grades will be provided by the UT professor. This grade will be recorded on the student's college transcript. A student is given the opportunity to accept or decline the college transcript grade. The high school grade cannot be declined and will be recorded on the high school transcript.

Enrollment Eligibility

1. For Dual credit classes taught at FHS, you must meet the course prerequisites per course, have a minimum of a B overall average and pass all of the End of Course state assessments taken to date.
2. No TSIA placement test necessary for enrollment.
3. Complete the dual enrollment form, acquiring the appropriate school and parental signatures.
4. Pay the reduced costs associated with taking a dual enrollment college course.

Dual Enrollment courses offered on campus during school hours: US History and Physics I + Lab

Collegiate High School (CHS) Concurrent Enrollment

FHS partners with COM Collegiate High School to afford students the opportunity to work towards high school graduation and associate degree requirements simultaneously. These courses are taught at College of the Mainland main campus by College of the Mainland professors. All grades earned at Collegiate HS are recorded on the High school transcript and the college transcript. Students must complete the collegiate HS application on the COM website.

Enrollment Eligibility:

1. Be on grade level
2. Have passing state assessment scores
3. Seeking a foundation graduation plan with an endorsement
4. Meet college entrance requirements
5. Completed application required
6. Pay associated fees for all coursework at COM

Students can still participate in FHS extracurricular activities while enrolled in Collegiate HS

Students enrolled in Collegiate HS are not eligible for FHS valedictorian or salutatorian honors.

There are fees associated with Collegiate HS. Please see a counselor if interested.

Workforce Dual Credit

The Texas Workforce Commission (TWC) partners with public junior colleges, public state colleges or public technical colleges under an agreement with school districts across the state to expand dual credit and career technical education programs. High school students can enroll in postsecondary classes, while simultaneously completing high school coursework. This gives students the ability to get a jump start on their education or career goals as they earn credits toward a degree or professional certificate while still in school. These courses are taught at either College of the Mainland or San Jacinto College by college professors. All grades earned are recorded on the high school transcript and the college transcript.

Enrollment Eligibility

1. Must verify that you have met or are on track to meet ALL graduation requirements, that you have met the prerequisites per course, and that you have passed all of the End of Course State Assessments taken to date.
2. Meet established admission requirements at the Junior College
3. Comply with the state mandated TSIA requirements.
4. Complete the dual credit enrollment form acquiring the appropriate school and parental signatures.
5. Pay the costs associated with taking a dual credit college course
6. Provide own transportation to and from the Junior College.
7. Workforce Dual credit courses are for Junior and Senior students only.

College of Mainland

Barbering

Cosmetology

Welding

San Jacinto College

Maritime Transportation

Process Technology (Refining and Chemical Processing)

Eligibility For Extracurricular Activities

1. A student in grades 9 - 12 may participate in extracurricular activities on or off campus at the beginning of the school year only if the student has earned the cumulative number of credits in state-approved courses indicated in this subsection:
 - A. Beginning at the ninth-grade year must have been regularly promoted from grade 8.
 - B. Beginning of their second year of high school - at least 5 credits toward graduation.
 - C. Beginning of the third year - at least 10 credits toward state high school graduation credit or earned a total of five credits which count toward high school graduation requirements during the 12 months preceding the first day of the current school year.
 - D. Beginning of the fourth year - at least 15 credits toward state high school graduation credit or earn a total of five credits which count toward high school graduation requirements during the 12 months preceding the first day of the current school year.
2. In order to be eligible to participate in an extracurricular activity for a grading period following the initial grading period of a school year, a student must not have a recorded cumulative grade average lower than 70 on a scale of 0 to 100 in any course, including Texas Virtual School Network but excluding those identified as Mustang Advanced Program, Advanced Placement, and ISM through the end of the preceding grading period. Students enrolled in Mustang Advanced Program, Advanced Placement, and ISM classes must not have a recorded cumulative grade average lower than a 65 on a scale of 0 to 100. These classes include:

ADVANCED PLACEMENT	MUSTANG ADVANCED PROGRAM	INDEPENDENT STUDY MENTORSHIP
AP English III & IV	MAP English I & II	ISM I
AP French IV	MAP French II, III & IV	ISM II
AP German IV	MAP German II, III	ISM III
AP Latin IV	MAP Latin II & III	ISM Computer Science I
AP Spanish IV	MAP Spanish II & III	ISM Computer Science II
AP Spanish Literature	MAP Geometry	
AP Calculus AB & BC	MAP Algebra II	
AP Statistics	MAP Pre-Calculus	OTHER
AP Economics (Macro)	MAP Biology	AD ISM I (Academic Decathlon)
AP European History	MAP World Geography	AD ISM II (Academic Decathlon)
AP US Government	MAP Chemistry	AD ISM III (Academic Decathlon)
AP Human Geography	Computer Science II (Weighted)	Debate I
AP US History	Computer Science III (Weighted)	Debate II
AP World History	PLTW - WEIGHTED COURSES	Debate III
AP Biology	Introduction to Engineering Design (Weighted)	
AP Chemistry	Engineering Science (Weighted)	
AP Environmental Science	Civil Engineering & Architecture (Weighted)	
AP Physics 1	Aerospace Engineering (Weighted)	
AP Physics 2	Engineering Design & Development (Weighted)	
AP 2D Art and Design	Digital Electronics (Weighted)	
AP 3D Art and Design	Principles of Biomedical Science (Weighted)	
AP Drawing	Human Body Systems (Weighted)	
AP Music Theory	Medical Interventions (Weighted)	
AP Computer Science A	Biomedical Innovation (Weighted)	
AP Computer Science Principles	Computer Integrated Manufacturing	
AP Career Kickstart Cybersecurity I		
AP Career Kickstart Cybersecurity II		

Eligibility For Extracurricular Activities Continued

3. All Dual credit classes will follow the UIL guidelines for advanced courses identified for exemption for the purposes of eligibility. All dual credit courses will receive MAP weight.

4. A student whose recorded cumulative grade average in any course is lower than 70 at the end of a grading period shall be suspended from participation in any extracurricular activity. The suspension period begins 7 calendar days after the close of the grading period and continues for a minimum of three weeks. At the end of the three-week grading period, if a student is passing all courses, the suspension is removed 7 calendar days later. If a student is not passing all courses at the three-week evaluation, the suspension continues until the next three-week period, at which time the preceding rules apply. An INC (incomplete) is considered a failing grade until it is assigned a passing grade. An INC 7 calendar days after the close of a grading period is considered a failing grade.

5. A student suspended under this section may practice or rehearse with other students for an extracurricular activity but may not participate in a competition or other public performance.

6. At the end of any grading period in which a student has attained a cumulative course grade average of 70 or more in all courses taken, any suspension under this section shall be removed.

Friendswood High School Policy:

Students who are otherwise eligible may not miss a class in which he/she is currently failing in order to participate in an extracurricular or co-curricular activity unless approved by the principal. Grades for the FHS local policy are checked weekly beginning with the 3-week grade check of each grading period. A student may miss class with an INC (incomplete) for their average if they were passing the grade check the week before.

Exceptions must be approved by principal.

NCAA

NCAA Information for the College-Bound Student Athlete:

If your child is planning on playing a college sport, they will need to refer to the NCAA Guide for the College-Bound Student Athlete that can be found on the FHS website under the Athletics tab. Students will need to follow these courses and guidelines starting as early as their freshman year to make sure they are prepared with the high school courses they need to be eligible.

Note: Edgenuity courses are not accepted by NCAA.

LANGUAGE ARTS

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
English I	1110	X				1	None
MAP English I	1120	X				1	Recommended: 85 or higher in previous English course
English II	1210		X			1	English I
MAP English II	1220		X			1	Recommended: 85 or higher in previous English course and MAP English I
English III	1310			X		1	English II
AP English III	1330			X		1	Recommended: 85 or higher in previous English course and MAP English II
Dual Credit College English III (1301 Composition I & 1302 Composition II)	1340A 1340B			X		1	Meet TSI requirements
English IV	1410				X	1	English III
College Prep - English IV	1600				X	1	English III; and not meeting any qualifying scores
AP English IV	1430				X	1	Recommended: 85 or higher in previous English course and AP English III
Dual Credit College English IV (1301 Composition I & 1302 Composition II)	1440A 1440B				X	1	Meet TSI requirements
Dual Credit British Literature	1455A 1455B				X	1	Meet TSI requirements “C” or higher in 1301 & 1302
English as a Second Language (ESL) Academic Support	0040	X	X	X	X		None
English for Speakers of Other Languages 1 (ESOL I)	1115	X				1	None

LANGUAGE ARTS

(R) indicates included in RANK

1110 ENGLISH I (R)

Grade: 9

Credit: 1

Prerequisite: None

Learners' studies include, literary and persuasive writing, with a primary focus on expository writing, along with appropriate grammar, literature and vocabulary development. Reading skills, paragraph writing, and language concepts are stressed. Learners study various types of literature including poetry, drama, short stories, novels, and prose. Composition skills include the paragraph (open-ended response) and multi-paragraph theme.

1120 MAP ENGLISH I (R)

Grade: 9

Credit: 1

Prerequisite: None

Recommended: 85 or higher in previous English course

On the freshman level, the MAP student covers the same basic material as the regular student: grammar, composition, short story, poetry, novel, drama, propaganda, and prose. The MAP student deals with these subjects in a more challenging way and in greater depth. Additional reading material with regard to novels, short stories, and prose is required, and the student is expected to go beyond recognition level to employ critical thinking skills to all work. A greater emphasis is placed on writing style and variety of sentence and paragraph construction in the five-paragraph and multi-paragraph theme. Summer reading title(s) are required.

1210 ENGLISH II (R)

Grade: 10

Credit: 1

Prerequisite: English I

Learners' studies include expository and persuasion as the key composition skill and focus of English II, along with appropriate usage, mechanics, vocabulary and test-taking practice. A solid introduction to research serves as a foundation in English II, as well. Learners also enjoy exposure to a variety of world literature, such as epics, dystopian works, satires, biographies, novels, and short stories and study the literary components and how they relate to the various genres.

1220 MAP ENGLISH II (R)

Grade: 10

Credit: 1

Prerequisite: None

Recommended: 85 or higher in previous English course, MAP English I

MAP English II is the advanced English course for the sophomore level. Designed for highly skilled and motivated readers and writers, this course will develop learners' literary and critical thinking skills. Research skills, challenging literature and the study of style are integrated throughout the course. Summer reading title(s) are required.

1310 ENGLISH III (R)

Grade: 11

Credit: 1

Prerequisite: English II

English III gives the student the opportunity to practice and apply grammar, composition, and literary skills, gaining increased independence in the ability to understand and evaluate fiction and nonfiction. Emphasis is placed upon American literature, vocabulary development, and writing: composing, critiquing, and revising.

1330 AP ENGLISH III (R)

Grade: 11

Credit: 1

Prerequisite: None

Recommended: 85 or higher in previous English course, MAP English II

AP English III is the advanced English class for the junior level. Designed for highly skilled and motivated readers and writers, this American literature course will develop learners' rhetorical analysis and critical reading skills. Research skills, challenging literature, the study of style and rhetoric, and preparation for the AP Language and Composition test will be integrated throughout this course. Summer reading title(s) are required.

1340A/1340B DUAL CREDIT COLLEGE ENGLISH III (R) (WEIGHTED COLLEGE CREDIT) (1301 COMPOSITION I, 1302 COMPOSITION 2)

Grade: 11

Credit: 1

Prerequisite: Meet TSI requirements

The fall semester lines up with college ENG 1301; the spring semester lines up with college ENG 1302.

Senior Year: 2322/2323 Dual Credit College British Literature

Composition I is the intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis is placed on rhetorical choices, including audience, purpose, arrangement, and style. This course focuses on writing the academic essay as a vehicle for learning, communicating, and critical analysis.

Composition II is the intensive study of practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis is placed on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions.

Learners will be responsible for registration with College of the Mainland and any additional book fees.

1410 ENGLISH IV (R)

Grade: 12

Credit: 1

Prerequisite: English III and meeting any of the qualifying scores on the standardized assessments listed under College Prep English IV

English IV is designed to prepare learners for English in college or career. The course concentrates on literature, literary analysis, writing comp and research opportunities.

1600 COLLEGE PREP ENGLISH IV - (R)

Grade: 12

Credit: 1

Prerequisite: English III and not meeting any qualifying scores on these standardized assessments:

SAT < 480 EBRW* portion

PSAT < 460 EBRW portion

TSIA2 < 945 the EBRW portion

ACT : a combined score of 40 on the English and Reading (E+R) tests shall be exempt for both reading and writing or ELAR sections of the TSI Assessment. There is no composite score.

*Evidence-Based Reading & Writing

This course is designed to prepare learners for English in college and career. The course concentrates on literature, literacy analysis, writing composition and research opportunities. FISD will partner with the Texas College Bridge to provide opportunities to be successful in college-level, credit-bearing courses and prepare you for success in the TSIA2,

With Texas College Bridge, high school seniors can take online college preparatory courses, strengthening their English skills prior to enrolling in college and setting them on a path to postsecondary success. Texas College Bridge courses are personalized, self-paced and teacher facilitated-allowing students to focus on skills they need and skip those they have already mastered, with teacher support along the way. Students receive additional support and resources to help them complete college transition milestones. Plus, at the time of high school graduation, they can earn a TSI exemption at more than 80 partnering colleges and universities across Texas.

1430 AP ENGLISH IV (R)

Grade: 12

Credit: 1

Prerequisite: Recommended: 85 or higher in previous English course, AP English III

AP English IV is the advanced English class for the senior level. Designed for highly skilled and motivated readers and writers, this British and world literature course will develop learners' literary criticism skills. Research skills, challenging literature, the study of style, and preparation for the AP Literature test will be integrated throughout this course. Summer reading title(s) are required.

1440A/1440B DUAL CREDIT COLLEGE ENGLISH IV (R) (WEIGHTED COLLEGE CREDIT) (1301 COMPOSITION I, 1302 COMPOSITION 2)

Grade: 12

Credit: 1

Prerequisite: Meet TSI requirements

Composition I is the intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis is placed on rhetorical choices, including audience, purpose, arrangement, and style. This course focuses on writing the academic essay as a vehicle for learning, communicating, and critical analysis.

Composition II is the intensive study of practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis is placed on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions.

Learners will be responsible for registration with College of the Mainland and any additional book fees.

1455A/1455B DUAL CREDIT COLLEGE BRITISH LITERATURE (R) (WEIGHTED COLLEGE CREDIT) (2322 BRITISH LITERATURE I, 2323 BRITISH LITERATURE II)

Grade: 12

Credit: 1

Prerequisite: Meet TSI requirements, "C" or higher in 1301 & 1302

British Literature I is 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.

British Literature II is a survey of the development of British Literature from the Romantic period to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

Learners will be responsible for registration with College of the Mainland and any additional book fees.

0040 English as a Second Language (ESL) Academic Support

Grade: 9-12

Credit: 1

Prerequisite: None

This course is for students whose native language is other than English. Students review, practice, and synthesize the grammar in reading, writing, listening/speaking skills of standard English in an academic context.

1115 English for Speakers of Other Languages (ESOL) (R)

Grade: 9-12

Credit: 1

Prerequisite: LPAC approval, only recent immigrant students with limited English proficiency may enroll; students will be required to take the English STAAR EOC exams.

In this course, students will receive emergent instruction in listening, speaking, reading, writing, and comprehending English language as required for academic success. Within this course, students focus on commonly used phrases, idioms, sentence stems, and vocabulary to express themselves, make friends, and describe the world around them, increasing their ability to converse with their Native peers. Students develop competence in English, preparing them to be successful in all academic subjects.

LANGUAGE ARTS ELECTIVES

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
Journalism I	7618	X	X	X	X	1	None
Journalism II-IV	7628 7638 7648		X	X	X	1	Journalism I or Advisor Approval
Annual/Commercial Photography I, II Annual III (Yearbook)	7616 7617 7615		X	X	X	1	Journalism I then Commercial Photo I or II
Academic Literacy I	1100	X	X	X	X	1	Teacher Referral
AD ISM I (Academic Decathlon) (Counts as AP course for grade points earned) (This course may count as a Speech or Fine Arts credit)	0055		X			1	Sponsor Signature
AD ISM II (Academic Decathlon) (Counts as AP course for grade points earned)	0056			X		1	Sponsor Signature
AD ISM III (Academic Decathlon) (Counts as AP course for grade points earned)	0057				X	1	Sponsor Signature
Independent Study: Speech/Debate (This course may count as a Speech credit)	7219A/ 7219B	X				1	Coach Approval, letter of recommendation
Debate I (Counts as AP course for grade points earned)	7210		X	X	X	1	Application
Debate II (Counts as AP course for grade points earned)	7215			X	X	1	Debate I & Performance Based Assessment
Debate III (Counts as AP course for grade points earned)	7218				X	1	Debate I-II & Performance Based Assessment

LANGUAGE ARTS ELECTIVES CONT.

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
Public Speaking I	1521		X	X	X	1	Teacher Recommendation
Public Speaking II	1522		X	X	X	1	Teacher Recommendation
Public Speaking III	1523		X	X	X	1	Teacher Recommendation

LANGUAGE ARTS ELECTIVES

7618 JOURNALISM I

Grade: 9 – 12

Credit: 1

Prerequisite: None

Journalism I is a basic newspaper lab course. Major emphasis is placed on the fundamentals of news writing, feature writing, editorial writing, headline writing, photography. Learners also learn the mechanics of the print media, including copy reading, website layout, and advertising, as they relate to the school newspaper, The Lariat.

* Many projects are graded on a deadline basis.

7628 JOURNALISM II

7638 JOURNALISM III

7648 JOURNALISM IV

Grade: 10 - 12

Credit: 1

Prerequisite: Journalism I or Advisor Approval

In Journalism II the learners continue to produce The Lariat, the school newspaper. The newspaper advisor and editor will assign article topics to students. Journalism II is a lab and is scheduled during a regular class period, but will require students to attend events before and/or after school.

7616 ANNUAL/COMMERCIAL PHOTOGRAPHY I

Prerequisite: Journalism I

7617 ANNUAL/COMMERCIAL PHOTOGRAPHY II

Prerequisite: Commercial Photography I

7615 ANNUAL III

Prerequisite: Commercial Photography II

Grade: 10 - 12

Credit: 1

Learners electing this course work prepare the yearbook for publication. Positions include editor, news editor, feature editor, sports editor, business manager, staff artist, photographers, and reporters. Design, photography, and all aspects of publishing the yearbook are involved in this course. Coverage of activities, sports, and campus life will require students to work before and/or after school. Staff members make decisions concerning theme, type of arrangement, and pictures that appear in the yearbook. Class is limited to 25 learners.

1100 ACADEMIC LITERACY

Grade: 9 - 12

Credit: .5 or 1

Prerequisite: Teacher referral

This course is designed to support the students who struggle with on level curriculum, on level reading, completion of class work, and time management. Students who struggle with specific content classes may be referred for extra support during this class time. Access to this course is by teacher referral or self-selection with counselor approval. Duration of this course may be one semester or one full year as needed. Class size is limited.

ACADEMIC DECATHLON

0055 AD INDEPENDENT STUDENT MENTORSHIP I (ACADEMIC DECATHLON)

Grade: 10

Credit: 1 (Counts as AP course for grade points earned) (This course may count as a Speech or Fine Arts credit)

Prerequisite: Sponsor Signature

Academic Decathlon involves research of ten academic areas including economics, history, language and literature, science, fine arts, and others. A team of 3 A, 3 B and 3 C average learners will be selected to compete in the Academic Decathlon competition during the spring semester. Region and state contests are held for schools categorized as large, medium and small. Based on a point system, the highest scoring team represents Texas at the national USAD competition. All members of the winning team receive scholarships. Texas provides \$150,000 in scholarship money each year. Overall individual winners also win scholarships. Registration fees and the Texas Education Agency contribute to this scholarship fund.

0056 AD INDEPENDENT STUDENT MENTORSHIP II (ACADEMIC DECATHLON)

Grade: 11

Credit: 1 (Counts as AP course for grade points earned)

Prerequisite: Sponsor Signature

Academic Decathlon involves research of ten academic areas including economics, history, language and literature, science, fine arts, and others. A team of 3 A, 3 B and 3 C average learners will be selected to compete in the Academic Decathlon competition during the spring semester. Region and state contests are held for schools categorized as large, medium and small. Based on a point system, the highest scoring team represents Texas at the national USAD competition. All members of the winning team receive scholarships. Texas provides \$150,000 in scholarship money each year. Overall individual winners also win scholarships. Registration fees and the Texas Education Agency contribute to this scholarship fund.

0057 AD INDEPENDENT STUDENT MENTORSHIP III (ACADEMIC DECATHLON)

Grade: 12

Credit: 1 (Counts as AP course for grade points earned)

Prerequisite: Sponsor Signature

Academic Decathlon involves research of ten academic areas including economics, history, language and literature, science, fine arts, and others. A team of 3 A, 3 B and 3 C average learners will be selected to compete in the Academic Decathlon competition during the spring semester. Region and state contests are held for schools categorized as large, medium and small. Based on a point system, the highest scoring team represents Texas at the national USAD competition. All members of the winning team receive scholarships. Texas provides \$150,000 in scholarship money each year. Overall individual winners also win scholarships. Registration fees and the Texas Education Agency contribute to this scholarship fund.

DEBATE COURSES

These classes are only offered to students who are members of the FHS Forensics Team. Students enrolled in Debate are REQUIRED to attend speech tournaments throughout the year. Only students committed to competition for FHS should take these courses. Enrollment in these courses constitutes agreement to fulfill all curricular, co-curricular, and extra-Curricular requirements.

7219A/7219B INDEPENDENT STUDY: SPEECH/DEBATE

Grade: 9

Credit: 1

Prerequisite: Coach Approval, Letter of Recommendation

This course may count as a speech credit

Communication skills are important in all aspects of life. Students who have mastered concepts and developed skills in this introductory course will be provided with opportunities to extend their knowledge and expand their skills in competitive debate. Independent Study in Speech provides opportunities for students to learn the skills necessary to exceed in competitive debate.

7210 DEBATE I (Competition)

Grade: 10 - 12

Credit: 1 (Counts as AP course for grade points earned)

Prerequisite: Application

Controversial issues arise in aspects of personal, social public, and professional life in modern society. Debate and argumentation are widely used to make decisions and reduce conflict. Students who develop skills in argumentation and debate become interested in current issues, develop sound critical thinking, and sharpen communication skills. They acquire life-long skills for intelligently approaching controversial issues. In this course, students develop their abilities in argumentation and debate. They approach current issues, develop critical thinking and sharpen communication skills. Extensive independent research is required for all debate courses.

7215 DEBATE II (Competition)

Grade: 11 - 12

Credit: 1 (Counts as AP course for grade points earned)

Prerequisite: Debate I & Performance Assessment

In this course, students master the techniques of argumentation, research and persuasive speaking.

7218 DEBATE III (Competition)

Grade: 12

Credit: 1 (Counts as AP course for grade points earned)

Prerequisite: Debate I-II & Performance Assessment

In this course, students gain in-depth knowledge of argumentation techniques, research for a specific purpose, and demonstrate speaking as a persuasive skill.

1521 PUBLIC SPEAKING I

Grade: 10 - 12

Credit: 1

Prerequisite: Teacher Recommendation

This course is designed for students who want to enhance their public speaking skills and take part in competitive speaking events. This course runs concurrently with Debate.

1522 PUBLIC SPEAKING II

Grade: 10 - 12

Credit: 1

Prerequisite: Teacher Recommendation

This course is designed for students who want to enhance their public speaking skills and take part in competitive speaking events. This course runs concurrently with Debate.

1523 PUBLIC SPEAKING III

Grade: 10 - 12

Credit: 1

Prerequisite: Teacher Recommendation

This course is designed for students who want to enhance their public speaking skills and take part in competitive speaking events. This course runs concurrently with Debate.

SOCIAL STUDIES

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
World Geography	2210	X	X			1	None
MAP World Geography	2220	X				1	Recommended: MAP 8th Grade English, MAP 8th Grade American History
AP Human Geography	2600	X				1	Recommended: MAP 8th grade English, MAP American History and Concurrent enrollment in MAP English I
World History	2310	X	X			1	None
AP World History	2325		X			1	Recommended: MAP World Geography or AP Human Geography & MAP English I
Economics w/Personal Financial Literacy	2426			X	X	.5	None
United States History	2110		X	X		1	None
AP United States History	2130			X		1	Recommended: MAP English II & AP W. History
Dual Credit College United States History	2200A 2200B			X		1	Meet TSI requirements
UT OnRamps United States History	2300A 2300B			X		1	English I and English II
AP European History	2250			X	X	1	Recommended: AP W. History/ AP US History or Dual Credit US History
Dual Credit College Government 2305	2442AW				X	.5	Meet TSI requirements
United States Government	2415			X	X	.5	US History 11th Needs Counselor Approval
Advanced Topics In US Government	2431				X	.5	Recommended: AP English III, and AP US History
Economics	2425			X	X	.5	US History 11th Needs Counselor Approval
Advanced Topics In Economics(Macro)	2436				X	.5	Recommended: AP US History & AP English

SOCIAL STUDIES

(R) indicates included in RANK

2210 WORLD GEOGRAPHY (R)

Grade: 9 - 10

Credit: 1

Prerequisite: None

This course provides learners the opportunity to study the interaction of people and their physical environments in the major areas of the world. Content introduces the student to the world of geographers, their unique vocabulary, tools, and methodologies. Learners acquire an understanding of the physical setting of the earth, locate and study different land forms and regions of the world, learn how people and geography impact each other, and are introduced to urban analysis. Content offers learners an opportunity to put into practice the geographical concepts and skills they have accumulated throughout the social studies program beginning in elementary grades and the Texas and United States history courses.

2220 MAP WORLD GEOGRAPHY (R)

Grade: 9

Credit: 1

Prerequisite: None

Recommended: MAP English (8th grade) and MAP American History (8th grade)

MAP World Geography is designed for mastery of state essential elements and sub-elements as well as extension beyond this mastery. In this course, critical thinking and analytical skills will be accomplished through the use of various strategies including interpretation of primary and secondary source materials. Learners will use their knowledge of spatial relationships, systematic physical and human processes and the interaction between people and their environment to make intelligent decisions as citizens. The purpose of this MAP course is to prepare highly motivated learners for rigorous and fast paced Advanced Placement classes. AP classes prepare learners for the National College Board Advanced Placement exams that allow learners to earn college credit.

2600 AP HUMAN GEOGRAPHY (R)

Grade: 9

Credit: 1

Prerequisite: None

Recommended: MAP English (8th grade) and MAP American History (8th grade)

APHG is an advanced course, designed for students to have the opportunity to study the human elements of the earth. This includes the study of how humans influence the earth as well as human populations, migrations, cultural characteristics, agricultural land use patterns, urban developments, political organization and economic factors. It is a college level course and students should be prepared to think critically, research independently, exercise writing skills and analyze college level topics. Successful completion of this course fulfills the requirement for the World Geography course and the course prepares students for the College Board Advanced Placement Human Geography exam.

2310 WORLD HISTORY (R)

Grade: 9 - 10

Credit: 1

Prerequisite: None

This course includes further study of the history and development of world cultures that learners encountered throughout the elementary grades and earlier secondary social studies courses. Content includes the development of early civilizations, western civilization, and other world regions from their early days to the present. The course provides learners the opportunity to compare and analyze various ways of life and cultural patterns that reflect the diversity and commonality of human experiences and the understanding of how these patterns occur. Geographic influences on world history are a part of the study.

2325 AP WORLD HISTORY: Modern (R)

Grade: 10

Credit: 1

Prerequisite: None

Recommended: MAP World Geography or AP Human Geography, and/or MAP English I

This is a one-year world history course for learners who would like to prepare for college level work and to have the opportunity to take the AP exam for college credit. The purpose of the course is for the learners to develop an understanding of the changes in human societies that have taken place over time, especially in the past one thousand years. Emphasis will be placed on the processes within societies as well as the contacts and interaction between them. Learners will look at, compare, and evaluate civilizations from different perspectives (cultural, institutional, technological, etc.). The course is based upon relevant factual knowledge while giving learners a basis of the interpretive issues within the various types of historical evidence. Periodization and themes will provide the main organization for the course in giving learners a global perspective of the significant aspects of the past. Critical thinking, analysis, and interpretation are emphasized.

2340 PERSONAL FINANCIAL LITERACY

Grade: 10 - 12

Credit: .5

Prerequisite: None

This is an interactive and research-based course. The course will cover materials students can use to apply critical thinking and problem-solving skills to analyze decisions involving earning and spending, saving and investing, credit and borrowing, insuring and protecting, and college and postsecondary education and training. Students will also evaluate the necessity of a purchase, the quality or value of the purchase or investment compared to the other alternatives, and the total cost of acquisition, particularly in the context of financing options.

2110 UNITED STATES HISTORY (R)

Grade: 10 - 11

Credit: 1

Prerequisite: None

Content for the second year of study of United States history includes significant individuals, issues, and events after the period of Reconstruction to the present. The course continues the focus from Grade 8 on the history, geography, and political and economic growth of the nation. It also continues the theme of cultural pluralism as a characteristic of American society, past and present.

Learners study the emergence of the United States as a world power. They learn how geography influences historical developments, analyze economic development and growth, understand the nation's social and cultural developments, and study the political development of the United States from Reconstruction to the present.

2130 AP UNITED STATES HISTORY (R)

Grade: 11

Credit: 1

Prerequisite: None

Recommended: MAP English II and AP World History

AP US History is a comprehensive course that covers the age of exploration and colonization through the present era. Advanced Placement US History offers an introduction of college level skills and curriculum at the secondary level, as well as an opportunity to receive 6 hours of college credit (upon successful completion of the College Board Examination) for the course work while still in high school. Learners taking this course may expect heavy reading assignments, extensive writing, and in-depth preparation for the AP Exam.

2200A/2200B DUAL CREDIT COLLEGE UNITED STATES HISTORY (R) (WEIGHTED COLLEGE CREDIT)

Grade: 11

Credit: 1

Prerequisite: Meet TSI requirements

This course traces the development of American characteristics and nationality from the early European exploration to the reconstruction of the Union in 1877, continuing to the present. This course will be taught 1st period ONLY.

College of the Mainland equivalent courses: United States History 1301 and 1302.

Learners will be responsible for registration with College of the Mainland and any additional book fees.

2300A/2300B UT OnRamps United States History (R) Weighted College Credit

Grade: 11

Credit: 1

Prerequisite: English I and English II

In these two sequential courses, students explore the scope and depth of the American experience, engaging with course material both independently and collaboratively to develop critical thinking skills, analyze evidence-based historical narratives, and conduct archival research. Each unit consists of primary and secondary sources that challenge students to uncover the complexities within historical study.

UT Equivalent courses: United States History 1301 and 1302

Learners will be responsible for all registration fees. This course is offered during the school day. Priority given to students who have 1st period conflicts for example drill, band, etc.

2250 AP EUROPEAN HISTORY (R)

Grade: 11 - 12

Credit: 1

Prerequisite: None

Recommended: AP World History and/or AP United States History/Dual Credit or teacher recommendation.

The study of European history since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which they live. In addition to providing a basic narrative of events and movements, the goals of AP European History are to develop an understanding of some of the principal themes in modern European history, an ability to analyze historical evidence and historical interpretation, and an ability to express historical understanding in writing.

2442AW DUAL CREDIT COLLEGE GOVERNMENT (R) (WEIGHTED COLLEGE CREDIT)

Grade: 12

Credit: .5

Prerequisite: Meet TSI requirements

Origin and development of the Texas constitution, structure and powers of state and local government, federalism and inter-governmental relations, political participation, the election process, public policy and the political culture of Texas. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

Learners will be responsible for registration with College of the Mainland and any additional book fees.

2305AW DUAL CREDIT COLLEGE FEDERAL GOVERNMENT (R) (WEIGHTED COLLEGE CREDIT)

Grade: 11

Credit: .5

Prerequisite: Meet TSI requirements

Origin and development of the U.S. Constitution, structure and powers of the national government including the legislative, executive, and judicial branches; federalism; political participation; the national election process; public policy; civil liberties and civil rights. Prerequisite: : TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

Learners will be responsible for registration with College of the Mainland and any additional book fees.

2415 UNITED STATES GOVERNMENT (R)

Grade: 11- 12

Credit: .5

Prerequisite: US History, 11th Grade Needs Counselor Approval

This course provides an opportunity to study in depth the foundation of the United States political system; to analyze the political institutions, processes, and values of the system; to trace the development of the United States government system; and to analyze its structure.

2436 ADVANCED TOPICS IN UNITED STATES GOVERNMENT (R)

Grade: 12

Credit: .5 AP US Government (2435)

Prerequisite: AP Instructional Block Contract

Recommended: AP English III and AP US History

This is the course seniors choose on their course selection for AP U.S. Government. This course will be taught over the course of the year in an A/B block with Advanced Topics Economics. Students will receive credit for AP Government in May. The goal of this course is to provide learners with the knowledge and skills to analyze and interpret the relationship between current events and the foundations and principles of the United States government. Learners are presented with more than a basic understanding of the ideas of the founding fathers, democracy, federalism, the separation of powers, and the rights of citizens. Learners must understand the changes that these ideas and principles have undergone and how they impact the way the United States government functions today and the effect on citizens.

2425 ECONOMICS (R) (with emphasis on the free enterprise system)

Grade: 11- 12

Credit: .5

Prerequisite: US History, 11th Grade Needs Counselor Approval

The course provides opportunities for learners to study basic principles concerning production, consumption, and distribution of goods and services. Content builds an understanding of the essential components and benefits of the free enterprise system. Learners study such concepts as scarcity, economic interdependence, the market system, prices, economic stability, and growth. They examine the role of government in the American economics system and explore selected aspects of international economic systems. The course gives learners insights into the techniques and tools used by economists in analyzing data. Learners are also provided opportunities to acquire competencies and knowledge of practical economic functions.

2426 ECONOMICS with PERSONAL FINANCIAL LITERACY

Grade: 12 (Juniors with Counselor Approval)

Credit: .5

Prerequisite: None

The Personal Financial Literacy and Economics Course emphasizes the economic way of thinking, which serves as a framework for the personal financial decision-making opportunities introduced in the course. Students will demonstrate the ability to anticipate and address financial challenges as these challenges occur over their lifetime. In addition, students are introduced to common economic and personal financial planning terms and concepts. As a result of learning objective concepts and integrating subjective information, students gain the ability to lead productive and financially self-sufficient lives.

2431 ADVANCED TOPICS IN ECONOMICS (MACRO) (R)

Grade: 12

Credit: .5 AP Economics 2430

Prerequisite: AP Instructional Block Contract

Recommended: AP US History and AP English III

This is the course seniors choose on their course selection for AP Economics. This course will be taught over the course of the year in a A/B block with Adv. Topics Government. Students will receive credit for AP Economics in May. This course is encouraged for all college bound learners, especially those learners planning on studies in social sciences and business. This class will teach the basic concepts including scarcity, opportunity costs, aggregate supply, and aggregate demand. Learners will study market structures, economic systems, the Federal Reserve system, measuring the economy, money and banking, international trade and the Global Economy, as well as current economic challenges. Learners will examine the relationship between the government and the economy including the federal budget, fiscal policy and monetary policy. Learners are expected to understand basic Algebraic concepts of equations. Learners are encouraged to take the College Board exam at the completion of the course.

SOCIAL STUDIES ELECTIVE

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
Dual Credit College Psychology	0076AW			X	X	.5	Meet TSI requirements
Dual Credit College TX Government 2306	2444AW			X	X	.5	Meet TSI requirements
AP European History	2250			X	X	1	Recommended: AP World History, AP US History or Dual Credit US History
Personal Financial Literacy	2340		X	X	X	.5	None

SOCIAL STUDIES ELECTIVES

0076AW DUAL CREDIT COLLEGE PSYCHOLOGY (WEIGHTED COLLEGE CREDIT)

Grade: 11 - 12

Credit: .5

Prerequisite: Meet TSI requirements

An introduction to the field of psychology, dealing with such topics as the scientific method and theories, neuroscience and behavior, perception, consciousness learning, memory, intelligence, motivation, emotion and stress, personality, psychological disorder, therapy and developing person. Discussions and required readings will cover topics discussed in college level courses.

Learners will be responsible for registration with College of the Mainland and any additional book fees.

2444AW DUAL CREDIT COLLEGE GOVERNMENT 2306 (TEXAS) (WEIGHTED COLLEGE CREDIT)

Grade: 11 - 12

Credit: .5

Prerequisite: United States History and Meet TSI requirements

Origin and development of the Texas constitution, structure and powers of state and local government, federalism and inter-governmental relations, political participation, the election process, public policy, and the political culture of Texas.

Learners will be responsible for registration with College of the Mainland and any additional book fees.

2250 AP EUROPEAN HISTORY (R)

Grade: 11 - 12

Credit: 1

Prerequisite: None

Recommended: AP World History and/or AP United States History/Dual Credit or teacher recommendation.

The study of European history since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which they live. In addition to providing a basic narrative of events and movements, the goals of AP European History are to develop an understanding of some of the principal themes in modern European history, an ability to analyze historical evidence and historical interpretation, and an ability to express historical understanding in writing.

2340 PERSONAL FINANCIAL LITERACY

Grade: 10 - 12

Credit: .5

Prerequisite: None

This is an interactive and research-based course. The course will cover materials students can use to apply critical thinking and problem solving skills to analyze decisions involving earning and spending, saving and investing, credit and borrowing, insuring and protecting, and college and postsecondary education and training. Students will also evaluate the necessity of a purchase, the quality or value of the purchase or investment compared to the other alternatives, and the total cost of acquisition, particularly in the context of financing options.

Social Studies Requirements for Arts & Humanities or Multidisciplinary Endorsements

World Geography or World History
US History
Government & Economics

Options to above courses:

MAP World Geography
AP Human Geography
AP World History
AP US History
Dual Credit College US History
OnRamps US History
Dual Credit College Government 2305
AP Government
AP Economics

Other Choices to reach a total of 4 Social Studies Credits

Dual Credit College Psychology (.5 credit)
World Geography or World History
AP European History
Personal Financial Literacy (.5 credit)

Social Studies Requirements for Business and Industry, Public Services, or STEM Endorsements

Choose three credits.

World Geography or World History
US History
Government & Economics

Options to above courses:

MAP World Geography
AP Human Geography
AP World History
AP US History
Dual Credit College US History
OnRamps US History
Dual Credit College Government 2305 (Federal)
AP Government

SCIENCE

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
Biology	4110	X				1	None
MAP Biology	4120	X				1	Teacher Recommendation
Integrated Physics & Chemistry (IPC)	4210		X			1	None
Chemistry	4310		X	X		1	Biology; Algebra I
MAP Chemistry	4320		X	X		1	Biology; concurrently enrolled in either MAP Geometry or Algebra II and Teacher Recommendation
Conceptual Chemistry	4200			X		1	Biology, IPC; Algebra I and Teacher Recommendation
Physics	4540			X	X	1	Biology, Chemistry; completed or concurrently enrolled in Algebra II
UT OnRamps Physics I + Lab	4560 A/B			X	X	1	Biology, Chemistry; completed or concurrently enrolled in PreCal and Teacher Recommendation
AP Physics 1	4550			X	X	1	Biology, Chemistry; completed or concurrently enrolled in PreCal (MAP Recommended) and Teacher Recommendation
AP Enviromental Science	4130			X	X	1	3 units in science(including Biology & Chemistry) and 3 units of mathematics (one of each may be taken concurrently)
Technological Principles	4650			X	X	1	Biology, IPC (or Chemistry); Algebra I
AP Biology	4630			X	X	1	Biology, Chemistry, and Teacher Recommendation
AP Chemistry	4330			X	X	1	Chemistry, Algebra II and Teacher Recommendation Recommended: MAP Chemistry and MAP Algebra II

SCIENCE

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
Astronomy	4645			X	X	1	3 units of Science & 3 units of Math (one of each may be taken concurrently)
Food Science	5335			X	X	1	Biology, Chemistry, and 5340 Culinary Arts
Forensic Science	4140				X	1	Biology, Chemistry & either IPC, Physics, or Tech Principles Recommended: Algebra II and 1 course from Law & Public Service
Human Body Systems (Weighted)	5425W		X	X	X	1	Biology and completed or concurrently enrolled in Chemistry Recommended: 1 course from Health Science/Biomedical Program of Study
Medical Interventions (Weighted)	5415W			X	X	1	Biology, Chemistry; Principles of Biomedical Science or Human Body Systems
Advanced Animal Science	5155			X	X	1	Biology and IPC or Chemistry; Algebra I, Geometry; either Small Animal Management, Equine Science or Livestock Production Recommended: Vet Med Apps
Engineering Science (Weighted)	4900W		X	X	X	1	Introduction to Engineering Design, Algebra I, Biology; Recommended: Geometry; IPC, Chemistry, or Physics
Project Based Research (Zero-hour course that counts as MAP course for grade points earned)	0100	X				1	Concurrent enrollment in MAP Biology
Independent Study/ Mentorship (Zero-hour course that counts as AP course for grade points earned)	0030 ISM I 0035 ISM II		X	X		1	Biology, Concurrent enrollment in MAP Chemistry(sophomores) or other AP science course(juniors)
Independent Study/ Mentorship (Counts as AP course for grade points earned)	0030 ISM I 0035 ISM II 0038 ISM III				X	1	Biology, Chemistry

SCIENCE

(R) indicates included in RANK

Science teachers will provide guidance and counseling regarding student placement in all Science classes.

4110 BIOLOGY (R)

Grade: 9

Credit: 1

Prerequisite: None

In Biology, learners use scientific methods to conduct and make informed decisions using critical-thinking and scientific problem solving. Learners in Biology study a variety of topics that include: functions of biomolecules; structures and functions of cells and viruses; DNA structure and function; ; growth and development of organisms; genetics; biological evolution; plant and animal systems; and ecosystems.

If you plan to take AP Biology, MAP Biology is recommended over Biology.

4120 MAP BIOLOGY (R)

Grade: 9

Credit: 1

Prerequisite: Teacher Recommendation

The concepts are similar to the regular Biology course but are taught on a higher level, in more detail, and at a faster pace. Learners will be exposed to aspects of biochemistry, cell biology, photosynthesis and cellular respirations, DNA structure and function, genetics, biotechnology, evolution, plant systems, ecology, and human systems. Integral to this course is a laboratory program that stresses accurate observations, data collection, analysis, critical thinking and problem solving skills as well as comprehensive use of laboratory equipment. Learners will perform calculations from data collected and form valid conclusions of lab results. Good time management skills are necessary to be successful in this class. It is recommended that learners who take MAP Biology have previously completed Algebra I.

MAP Biology learners may participate in Science Fair with concurrent enrollment in Project-Based Research (PBR)*

*(See Project-Based Research)

4210 INTEGRATED PHYSICS AND CHEMISTRY (IPC) (R)

Grade: 10

Credit: 1

Prerequisite: None

In Integrated Physics and Chemistry, learners conduct laboratory investigations, use scientific methods during investigations, and make informed decisions using critical- thinking and scientific problem solving. This course integrates the disciplines of physics and chemistry in the following topics: force and motion, energy transfer and energy conservation, structures and properties of matter, and changes in matter. You may not take this course if you have already successfully completed Chemistry and/or Physics.

4310 CHEMISTRY (R)

Grade: 10 - 11

Credit: 1

Prerequisite: Biology; Algebra I

Chemistry is a course designed to explore concepts of chemistry along with practical applications. The mathematical relationships of chemical concepts are heavily emphasized. Learners will conduct laboratory investigations, use scientific methods during investigations, and make informed decisions using critical-thinking and scientific problem solving. Learners study a variety of topics that include; use of the Periodic Table; development of atomic theory and chemical bonding; chemistry reactions; chemical stoichiometry; gas laws, solution chemistry; thermochemistry; and nuclear chemistry.

Due to the difference in the curriculums, learners will not be permitted to transfer between Conceptual Chemistry and Chemistry during the year. You may not take this course if you have already passed Conceptual Chemistry.

If you plan to take AP Chemistry, MAP Chemistry is recommended over Chemistry.

4320 MAP CHEMISTRY (R)

Grade: 10-11

Credit: 1

Prerequisite: Biology (MAP Recommended); Concurrent enrollment in MAP Geometry or Algebra II (MAP Algebra II Recommended) and Teacher Recommendation

MAP Chemistry covers the same content as Chemistry plus additional concepts at a higher level and with more rigor. The MAP Chemistry curriculum teaches many student objectives including: proficiency in using scientific method and laboratory equipment, problem solving using dimensional analysis and the mole concepts, understanding the properties of matter and energy, and describing various chemical reactions quantitatively and qualitatively. This course will provide a more rigorous background and will cover additional concepts needed for learners planning on taking AP Chemistry.

MAP Chemistry learners may participate in Science Fair with concurrent enrollment in Independent Student/Mentorship (ISM)*.

Due to the difference in the curriculums, learners will not be permitted to transfer between Conceptual Chemistry and MAP Chemistry during the year. You may not take this course if you have already passed Conceptual Chemistry.

* (See Independent Study/Mentorship)

4200 CONCEPTUAL CHEMISTRY (R)

Grade: 11

Credit: 1

Prerequisite: Biology, IPC, Algebra I, and Teacher Approval

The Conceptual Chemistry curriculum does not prepare the student for college chemistry. Conceptual Chemistry is designed to teach the same content as Chemistry on a fundamental level. This lab-based course is designed to help learners realize the important role that chemistry will play in their personal and professional lives; to demonstrate the use of the principles of chemistry; to think more intelligently about issues they will encounter that involve science and technology; and to develop a lifelong awareness of the potential and limitations of science and technology.

Due to the difference in the curriculums, learners will not be permitted to transfer from Conceptual Chemistry to Chemistry during the year. You may not take this course if you have already passed Chemistry.

Previous EOC scores and grades in Science and Math are reviewed prior to placement.

4540 PHYSICS (R)

Grade: 11-12

Credit: 1

Prerequisite: Biology, Chemistry; Completed or concurrent enrollment in Algebra II

In Physics, learners conduct field and laboratory investigations, use scientific methods during investigations, and make informed decisions using critical-thinking and scientific problem solving. Learners study a variety of topics that include: laws of motion, changes with physical systems and conversion of energy and momentum; forces; characteristics and behavior of waves; light, electricity and magnetism; and atomic, nuclear and quantum physics. Learners who successfully complete Physics will acquire factual knowledge within a conceptual framework, practice experimental design and interpretation, work collaboratively with peers, and develop critical thinking skills.

If you are planning on taking AP Physics 2, AP Physics 1 is recommended over Physics. It is recommended that learners complete Algebra II prior to taking Physics.

4560 A/B UT On Ramps Physics I + Lab (R) Weighted College Credit

Grade: 11 - 12

Credit: 1

Pre-Requisites: Biology, Chemistry, completed or concurrent enrollment in PreCalculus (MAP Recommended), and Teacher Recommendation

Mechanics, Heat, and Sound introduces big ideas in physics, such as Newtonian mechanics (including motion, force, energy, and rotation), as well as solid and fluid mechanics, oscillations, waves, sound, and heat.

This is an algebra-based (non-calculus) course in mechanics that fulfills a general physics requirement. Strong proficiency in algebra and geometry is assumed (make bold). Students should expect to frequently explore concepts in peer instruction groups, develop and explain ideas about complex topics, and apply their understanding to high-level problems.

UT Equivalent Course: PHYS 1301 + PHYS 1101 (LAB)

Learners will be responsible for all registration fees. This course is offered during the school day.

4550 AP PHYSICS 1 (R)

Grade: 11-12

Credit: 1

Prerequisite: Chemistry (MAP Chemistry recommended); completed or concurrent enrollment in Pre-Calculus (MAP Pre-Calculus recommended)

AP Physics 1 is an Algebra-based, introductory college-level physics course. Students build their understanding of physical models as they explore and solve problems in these topics: kinematics; forces and translational dynamics; work, energy, and power; linear momentum; torque and rotational dynamics; energy and momentum of rotation systems; oscillations; and fluids. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. Learners will use a college textbook and the student completing this course will have a well-rounded preparation to take the Advanced Placement Physics 1 exam for college credit.

4650 TECHNOLOGICAL PRINCIPLES

Grade: 11-12

Credit: 1

Prerequisite: Biology, IPC or Chemistry; Algebra I

The Technological Principles curriculum does not prepare students for college physics. Learners conduct laboratory, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Various systems will be described in terms of space, time, energy, and matter. Learners will study a variety of topics that include laws of motion, conservation of energy, momentum, electricity, magnetism, and characteristics and behavior of waves.

4645 ASTRONOMY (R)

Grade: 11-12

Credit: 1

Prerequisite: Three units of science and three units of mathematics (one of which may be taken concurrently).

This course is recommended for learners in grade 12, but may be taken by self-motivated learners in grade 11. In Astronomy, students focus on patterns, processes, and relationships among astronomical objects in our universe. Students acquire basic astronomical knowledge and supporting evidence about sun-Earth-Moon relationships, the solar system, the Milky Way, the size and scale of the universe, and the benefits and limitations of exploration. Students conduct laboratory and field investigations to support their developing conceptual framework of our place in space and time.

****Important note: AP Biology, AP Chemistry, AP Physics 2, and AP Environmental Science do not have a corresponding on-level course. Students must remain in the course until the semester. Seniors should carefully consider their preparation, available time, and graduation credit needs before enrolling in these courses.**

4630 AP BIOLOGY (R)

Grade: 11-12

Credit: 1

Prerequisite: Biology (MAP Biology recommended), Chemistry, and Teacher Recommendation**(see important note above)

This course offers learners a college level curriculum equivalent to an introductory biology course in the freshman year of college and follows the syllabus set by the Development Committee of the College Board. Two major goals of AP Biology are to help learners develop a conceptual framework for modern biology and to help learners gain an appreciation of science as a process. Included within this course are advanced laboratory investigations, which are experimental, analytical, and qualitative in nature. Learners will develop an advanced background in biotechnology (such as DNA restriction analysis), molecular genetics, biochemistry, cells, heredity, evolution, and ecology. Learners will be using a college textbook, and the student completing this course in May will have a well-rounded preparation to take the Advanced Placement Biology exam for college credit.

4330 AP CHEMISTRY (R)

Grade: 11-12

Credit: 1

Prerequisite: Chemistry (MAP Chemistry recommended); Algebra II (MAP Algebra II recommended) and Teacher Recommendation

** (see important note above)

This course is designed to be the equivalent of the general chemistry course usually taken during the first year of college and requires an equivalent commitment of study, effort, and participation. Included in this course are advanced investigations and presentations of the structure of matter and atomic spectra, the wave particle theory, kinetic theory of gases, chemical bonding, chemical equilibrium, chemical kinetics, electrochemistry and the basic concepts of thermodynamics. Class work involves lecture and lab. Learners will use a college textbook and the student completing this course will have a well-rounded preparation to take the Advanced Placement Chemistry exam for college credit.

4730 AP PHYSICS 2 (R)

Grade: 12

Credit: 1

Prerequisite: Physics (AP Physics I recommended); Completed or concurrently enrolled in Pre-Calculus (MAP Pre-Calculus recommended)

** (see important note above)

AP Physics 2 is an Algebra-based, introductory college-level physics course. Students build their understanding of physical models as they explore and solve problems in these topics: thermodynamics; electric force, field, and potential; electric circuits; magnetism and electromagnetism; geometric optics; waves, sound, and physical optics; modern physics. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. Learners will use a college textbook and the student completing this course will have a well-rounded preparation to take the Advanced Placement Physics 2 exam for college credit.

4130 AP ENVIRONMENTAL SCIENCE (R)

Grade: 11-12

Credit: 1

Prerequisites: Three units of science (including Biology and Chemistry) and three units of mathematics (one of each may be taken concurrently). ** (see important note above)

This course is recommended for learners in grade 12, but may be taken by self-motivated learners in grade 11.

The goal of the AP Environmental Science course is to provide learners with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study. AP Environmental Science is intended to enable learners to undertake a more advanced study of topics in environmental science or, alternatively, to fulfill a basic requirement for a laboratory science and thus free time for taking other courses while in college. Learners will be using a college text, and the student completing this course will have a well-rounded preparation to take the Advanced Placement Environmental Science Exam for college credit.

5335 FOOD SCIENCE

Grade: 11-12

Credit: 1

Prerequisite: Biology and Chemistry

Recommended: 5340 Culinary Arts

Food Science is the study of the nature of foods, the causes of deterioration, the principles underlying food processing, and the improvement of foods for the consuming public. Topics of study include: principles of food safety and microbiology, chemical properties of food, functions of enzymes, how leavening agents are used in baking, purposes of additives in foods, physiology of digestion, metabolism and how food provides energy, and basic nutrients and their specific properties related to food science such as carbohydrates, fats, protein, vitamins and minerals, and water.

4140 FORENSIC SCIENCE

Grade: 12th ONLY

Credit: 1

Prerequisite: Biology, Chemistry and either IPC, Physics or Tech Principles

Recommended: Algebra II and 1 course from Law & Public Service

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

5425W HUMAN BODY SYSTEMS (WEIGHTED COURSE)

Grade: 10-12

Credit: 1

Prerequisite: Biology, completed or concurrent enrollment in Chemistry;

Recommended; 1 course of Health Science/Biomedical Program of Study

In the Human Body Systems (HBS) course, students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. In this project-based course, students design experiments, investigate the structures and the functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal manikin, work through interesting real-world cases, and often play the role of biomedical professionals to solve medical mysteries.

5415W MEDICAL INTERVENTIONS (WEIGHTED COURSE)

Grade: 11-12

Credit: 1

Prerequisite: Biology, Chemistry; Principles of Biomedical Science **or** Human Body Systems

Medical Interventions (MI) allows students to investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. A “How To” manual for maintaining overall health and homeostasis in the body, the course will explore how to prevent and fight infection, how to screen and evaluate the code in our DNA, how to prevent, diagnose, and treat cancer, and how to prevail when the organs of the body begin to fail. Through these scenarios’ students will be exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices and diagnostics.

5155 ADVANCED ANIMAL SCIENCE

Grades: 11-12

Credit: 1

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

Recommended: Veterinary Medical Applications

This course is designed to build on knowledge gained in prior animal agriculture classes covering such topics as animal reproduction, genetics, anatomy and physiology, nutrition, formulating feed rations, livestock handling, harvesting and marketing of livestock, and research in the field of animal agriculture.

4900W ENGINEERING SCIENCE (WEIGHTED COURSE)

Grade: 10-12

Credit: 1

Prerequisite: Introduction to Engineering Design, Algebra 1, and Biology

Recommended: Geometry; IPC, Chemistry, or Physics

This course explores the field of engineering and engineering technology. Learners will explore various technology systems and manufacturing processes in order to help them understand how engineers and technicians use math, science and technology to solve engineering problems. ES focuses heavily on group design and Project Based Learning. Learners will gain into various engineering disciplines. Learners will present a classroom project to a group of engineers for real world feedback at a STEM Fair held at FHS in the spring semester.

4400 LABORATORY MANAGEMENT

Grade: 12

Credit: .5 or 1 (Local)

Prerequisite: 3 science credits, Science Teacher Approval

Laboratory Management offers learners opportunities to observe the conditions, problems, and requirements for teaching science using the laboratory method. The student assists the teacher in the monitoring of student laboratory work and helps the teacher prepare and organize laboratory materials.

0100 PROJECT BASED RESEARCH (Freshman)

Grade: 9

Credit: 1 (Counts as MAP course for grade points earned)

Prerequisite: Concurrent enrollment in MAP Biology

Zero-hour course outside of regular school day.

This Project-Based Research course allows academically advanced freshman students an opportunity to conduct science fair research investigations through an independent study format. Students use scientific methods of investigation to conduct in-depth research, compile findings, and present their findings to an audience that includes experts in the field. Students in this course develop, research, and conduct a science fair project under the guidance of a teacher facilitator and a professional in the field of research. This course is designed to support students through the science fair process.

- Facilitator: Only available to MAP Biology learners during zero hour
- Learners meet with a facilitator in a pre-scheduled one on one meeting for 45 minutes once every 2 weeks. Other 45 minute mandatory meetings (general instructions, science fair process, research techniques, etc) are scheduled throughout the year.
- Learners are required to log 140 hours (outside of MAP Biology class time) as they develop and complete a senior level science fair project under the guidance of a mentor
- Grade carries MAP points for personal GPA
- A full listing of PBR requirements and time schedules will be given to MAP Biology learners early in the year and parent meeting will be scheduled to discuss the details

0030 INDEPENDENT STUDY/MENTORSHIP I (Sophomore)

0035 INDEPENDENT STUDY/MENTORSHIP II (Juniors)

Grade: 10 - 11

Credit: 1 (Counts as AP course for grade points earned)

Prerequisite: Biology; concurrent enrollment in MAP Chemistry (for Sophomores) and other AP science course (for Juniors)

Zero hour course outside of regular school day. This Independent Study Mentorship (ISM) is designed for self-motivated learners with a desire to develop their Independent Science Fair Research Project at a higher level. All Science Fair ISM learners will research, design, and present an Independent Science Fair Project in conjunction with their MAP Chemistry course. [The ISM class allows learners to work with experts in various fields, acquiring practical knowledge and hands-on experience. It also presents learners an opportunity to accept the type of responsibility that is usually only given to college learners and business professionals.]

General information:

- Facilitator: Only available to MAP Chemistry learners during zero hour
- Learners meet with a facilitator in a pre-scheduled one on one meeting for 45 minutes once every 2 weeks. Other 45 minute mandatory meetings (general instructions, science fair process, research techniques, etc) are scheduled throughout the year.
- Learners are required to log 140 hours (outside of MAP Chemistry class time) as they develop and complete a senior level science fair project under the guidance of a mentor
- Learners will analyze quantitative data using higher level statistics.
- Grade carries AP points for personal GPA
- A full listing of ISM requirements and time schedules will be given to MAP Chemistry learners the first week of school and a parent meeting will be scheduled to discuss the details
- This course may count as a science credit

0030 INDEPENDENT STUDY/MENTORSHIP I
0035 INDEPENDENT STUDY/MENTORSHIP II
0038 INDEPENDENT STUDY/MENTORSHIP III

Grade: 11-12

Credit: 1 (Counts as AP course for grade points earned)

Prerequisite: Biology and Chemistry

Seniors may not enroll in ISM as their 4th year science credit

This Scientific Research and Design course known as ISM allows academically advanced junior, and senior learners an opportunity to conduct science research investigations through an independent study mentorship. Students conduct empirical research under the guidance of a teacher facilitator and mentor. The ISM class allows learners to work with experts in various fields, acquiring practical knowledge and hands-on experience. It also presents learners an opportunity to accept the type of responsibility that is usually only given to college learners and business professionals. Learners must be self-motivated and have transportation to visit off-campus mentors.

Science Requirements for Business and Industry, Public Services, Arts and Humanities, or Multidisciplinary Endorsement

*Biology or MAP Biology

IPC or Chemistry

*Chemistry or MAP Chemistry

Subject to Prerequisite Requirements

* Physics, OnRamps Physics, AP Physics 1 or
Technological Principles

AP Biology

AP Chemistry

AP Environmental Science

AP Physics 2

Advanced Animal Science

Human Body Systems-Weighted Course

Astronomy

Food Science

Forensic Science

ISM

Medical Interventions – Weighted Course

Engineering Science-Weighted Course

*Denotes Recommended Sequence for College Preparation

Science Requirements for STEM Endorsement

*Biology or MAP Biology

*Chemistry or MAP Chemistry

*Physics, OnRamps Physics, or AP Physics 1

Choose One to reach a total of Four Science Credits.

OR

If you are meeting the STEM Endorsement requirements by Science Course selection,
you must obtain at least TWO additional Science credits.

Subject to Prerequisite Requirements

AP Biology

AP Chemistry

AP Environmental Science

AP Physics 2

Advanced Animal Science

Human Body Systems-Weighted Course

Astronomy

Food Science

Forensic Science

ISM

Medical Interventions – Weighted Course

Engineering Science-Weighted Course

*Denotes Recommended Sequence for College Preparation

MATHEMATICS

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
Algebra I	3100	X				1	8th grade Math or Pre Algebra
Geometry	3170	X	X			1	Algebra I
MAP Geometry	3120	X	X			1	Algebra I & teacher recommendation
Algebraic Reasoning	3515		X	X		1	Algebra I & Geometry
Algebra II	3210	X	X	X	X	1	Algebra I & Geometry
MAP Algebra II	3220	X	X	X	X	1	Algebra I, Geometry & teacher recommendation
Conceptual Algebra II	3212				X	1	Algebra I & Geometry
College Prep Advanced Algebra	3610				X	1	Algebra II, and a non-qualifying score
Pre Calculus	3410		X	X	X	1	Algebra II & teacher recommendation
MAP Pre Calculus	3420		X	X	X	1	MAP Algebra II or Algebra II with teacher recommendation
AP Calculus (AB)	3430			X	X	1	MAP Pre Calculus or Pre Calculus with teacher recommendation
AP Calculus (BC)	3460			X	X	1	MAP Pre Calculus (teacher conference required) or AP Calculus AB
Multivariable Calculus (Counts as AP course for grade points earned)	3510				X	1	AP Calculus BC
AP Statistics	3450		X	X	X	1	Algebra II & teacher recommendation

There will be no Algebra II to Algebraic Reasoning or PreCalculus to Advanced Algebra changes without a teacher recommendation and the approval of the Math Specialist, an administrator and counselor.

There is a board approved local requirement for all students to have a minimum of three years of math coursework at the high school, in addition to any credits

MATHEMATICS CONTINUED

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
AP Computer Science A This course will count as a math & world language credit	0510			X	X	1	Computer Science II The math credit will be transcribed as an earned grade with AP weight. The world language credit will be transcribed as a Pass/Fail credit
Dual Credit College Algebra	3400W				X	.5	Algebra II, teacher recommendation and qualifying TSI score
Dual Credit College Statistical Methods	3620				X	.5	Algebra II, teacher recommendation and qualifying TSI score
Dual Credit College Mathematics for Business & Social Science	3470W			X	X	.5	Pre Calculus, teacher recommendation and qualifying TSI score
Dual Credit College Calculus for Business & Social Sciences	3425W			X	X	.5	Pre Calculus, teacher recommendation and qualifying TSI score
Digital Electronics (Weighted)	3605W			X	X	1	Geometry, Intro to Engineering Design and Civil Engineering Architecture, or Engineering Science
Accounting II	5053			X	X	1	Accounting I
Texas College Bridge Mathematics (Independent Study)	0009				X		See Page 59

MATHEMATICS

(R) indicates included in RANK

Math teachers will provide guidance and counseling regarding student placement in Math classes.

3100 ALGEBRA I (R)

Grade: 9 - 12

Credit: 1

Prerequisite: 8th grade math or Pre-Algebra

In this course, topics covered include the number system, functionality, combining and factoring polynomials, solving and graphing linear equations and inequalities, solving and graphing quadratic equations, and a basic understanding of exponential functions and their associated graph. Graphing calculators are used to increase learners' understanding by comparing algebraic and graphical representations, collecting and exploring data, and analyzing statistical relationships.

3170 GEOMETRY (R)

Grade: 9 - 12

Credit: 1

Prerequisite: Algebra I

In this course, topics covered include angles, similarity and congruence, transformations, formal proof, and perimeter, area, surface area and volume. Learners use a variety of tools and technology to explore these relationships with emphasis placed on real-world application.

3120 MAP GEOMETRY (R)

Grade: 9 - 12

Credit: 1

Prerequisite: Algebra I and Teacher Recommendation

In MAP Geometry, learners continue to build on the foundations of concepts learned in grades K-8. Learners will use geometric thinking to understand mathematical concepts and the relationships among them. They will study properties and relationships having to do with size, shape, location, direction, and orientation of geometric figures. In addition, they will perceive the connection between geometry and the real and mathematical worlds and use the geometric ideas, relationships and properties to solve problems. Learners will use a variety of representations, tools, and technology to solve meaningful problems by representing and transforming figures and analyzing relationships. Finally, learners will use multiple representations, technology, applications and modeling, and numerical fluency in problem solving contexts.

3515 ALGEBRAIC REASONING (R)

Grade: 10 - 11

Credit: 1

Prerequisite: Algebra I and Geometry

This is a course in which learners will continue to build on experiences and mathematical knowledge from their foundation in Algebra I and Geometry. Students will continue their understanding of algebraic processes and deepen their foundation for studies in subsequent math courses. This course will engage learners in activities that broaden their knowledge of functions through analysis and application to the real world. Students will gain a deeper understanding of mathematical concepts and how to apply those concepts to the analysis of information that confronts them in Algebra II.

3210 ALGEBRA II (R)

Grade: 9 - 12

Credit: 1

Prerequisite: Algebra I and Geometry

The Algebra II curriculum serves as the primary foundation of future mathematics courses. Content is designed to extend the concepts presented in Algebra I and Geometry and to explore additional algebraic topics in the areas of linear and quadratic relations and functions, linear and quadratic inequalities, matrices, exponential and logarithmic functions, complex numbers, polynomials and polynomial functions and rational functions.

3220 MAP ALGEBRA II (R)

Grade: 9 - 12

Credit: 1

Prerequisite: Algebra I, Geometry and Teacher Recommendation

MAP Algebra II will cover all the regular topics presented in Algebra II. The curriculum is presented in greater depth and at a more vigorous pace. Refinement and extension of algebraic methods will lead to investigation of the connections and interplay among various mathematical topics and their applications. Problem solving, communication, reasoning, and mathematical disposition will be stressed.

3212 CONCEPTUAL ALGEBRA II (R)

Grade: 12

Credit: 1

Prerequisite: Algebra I and Geometry

The Conceptual Algebra II curriculum is designed to teach the same content as Algebra II on a fundamental level. Learners will continue to build on experiences and mathematical knowledge from their foundation in Algebraic Reasoning. Learners will explore additional algebraic topics in the areas of linear, quadratic, exponential, logarithmic, polynomial, and rational functions.

3610 ADVANCED ALGEBRA- CP (R)

Grade: 12

Credit: 1

Prerequisite: Algebra II, and not meeting any of the qualifying scores on these standardized assessments:

SAT < 530 Math portion

PSAT < 510 Math portion

TSIA2 < 950 Math portion

ACT (ACT administered on or after February 15, 2023) A score of 22 on the mathematics test shall be exempt for the mathematics section of the TSI Assessment. There is no composite score.

This course will provide a strong foundation of geometric concepts, probability and algebraic concepts, techniques, and applications with a focus on linear, quadratic, exponential, polynomial functions. FISD will partner with Texas College Bridge to provide opportunities to be successful in college-level, credit-bearing courses and prepare you for the success on the TSIA2 exam.

With Texas College Bridge, high school seniors can take online college preparatory courses, strengthening their math skills prior to enrolling in college and setting them on a path to postsecondary success. Texas College Bridge courses are personalized, self-paced and teacher facilitated—allowing students to focus on skills they need and skip those they have already mastered, with teacher support along the way. Students receive additional support and resources to help them complete college transition milestones. Plus, at the time of high school graduation, they can earn a TSI exemption at more than 80 partnering colleges and universities across Texas.

3410 PRE CALCULUS (R)

Grade: 10 - 12

Credit: 1

Prerequisite: Algebra II and Teacher Recommendation

This rigorous college-preparatory course stresses the functional and algebraic approaches to linear, quadratic, polynomial, rational, exponential and logarithmic functions. Also covered are conic sections, polar coordinates, recursion and sequences and series. There is an in-depth study of trigonometry from a geometric, graphical and functional approach. Real-world application is a unifying theme.

3420 MAP PRE CALCULUS (R)

Grade: 10 - 12

Credit: 1

Prerequisite: MAP Algebra II or Algebra II with Teacher Recommendation

This course provides a solid, well-balanced foundation for AP Calculus and college mathematics and covers the same topics as the regular Pre Calculus class (see above) in greater depth and at a faster pace. Also included is an introduction to calculus concepts such as limits and derivatives. Learners are assigned projects that stress real-world application of the material. This course is geared toward learners who intend to take AP Calculus and who desire an in-depth foundation for further college-level mathematics.

3430 AP CALCULUS (AB) (R)

Grade: 11 - 12

Credit: 1

Prerequisite: MAP Pre Calculus or Pre Calculus with Teacher Recommendation

Advanced Placement Calculus covers the topics of elementary functions, differential calculus and integral calculus. Learners who enroll in Advanced Placement Calculus should have a thorough knowledge of algebra, geometry, coordinate geometry, and trigonometry as well as advanced topics in algebra, trigonometry, analytic geometry, and elementary functions. The course is primarily concerned with an intuitive understanding of the concepts of calculus with emphasis on methods and applications. The term is spent on topics in differential and integral calculus, which will prepare the learners for the College Board Advanced Placement test in Calculus (AB). The use of current technology as problem-solving and discovery tools will be integrated throughout the course whenever possible.

3460 AP CALCULUS (BC) (R)

Grade: 11 - 12

Credit: 1

Prerequisite: MAP Pre Calculus (teacher conference required) or AP Calculus (AB)

Calculus BC is a continuation of Calculus AB. The contents of Calculus BC are designed to qualify the student for placement and credit in a course that is one course beyond that granted for Calculus AB. Topics include extension to topics covered in AP Calculus AB using parametric, polar, and vector functions and sequences and series.

3510 MULTIVARIABLE CALCULUS (R)

Grade: 12

Credit: 1 (Counts as AP course for grade points earned)

Prerequisite: AP Calculus (BC)

Multivariable Calculus takes the concepts learned in the single variable Calculus BC course and extends them to multiple dimensions. Topics include curvature, arc length, speed, velocity, and acceleration; continuity, limits, and derivatives of multivariable functions, tangent planes and normal lines of surfaces; applying double and triple integrals to multivariable functions to find area, volume, surface area, mass, center of mass, and moments of inertia; vector fields; finding curl and divergence of vector fields; line integrals, Green's Theorem, orientation of a surface, the Divergence Theorem and Stokes' Theorem.

3450 AP STATISTICS (R)

Grade: 10 - 12

Credit: 1

Prerequisite: Algebra II and Teacher Recommendation

This Advanced Placement course in statistics will introduce learners to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Learners are exposed to four broad conceptual themes:

Exploring data (Observing patterns and departure from patterns)

Planning a study (Deciding what and how to measure)

Anticipating patterns (Producing models using probability and simulation)

Statistical inference (Confirming models)

0510 AP COMPUTER SCIENCE A

Grade: 11-12

Credit: 1

Prerequisite: Computer Science II

This course will count as a math and world language credit. Not all colleges accept Computer Science as a world language credit.

The math credit will be transcribed as an earned grade with AP weight. The World Language credit will be transcribed as a Pass/Fail credit

AP Computer Science stresses object-oriented programming methodology (OOP) with an emphasis on problem solving and algorithmic development. This course is meant to be the equivalent of a first semester college course in computer science. It goes beyond merely learning to use applications like word processing, spreadsheets, and internet browsers. Learners with an interest related to engineering, business, the computer professions, bioinformatics, genetics, physics, chemistry, pre-med or math should take this course. This course uses the Java language and focuses on the basic principles needed to design and build applications. At the end of the course, learners will have the choice to take the AP Computer Science test. If a student passes the test, college credit for a semester of computer science may be awarded to the student. Learners will be expected to participate by solving problems, implementing those solutions on the computer, and then testing the problems using reasonable data to ensure accuracy. The problems solved will come from a variety of disciplines including mathematics, physics, chemistry, biology, economics, business and engineering. Students should consider their prior mathematical experiences when considering this course. There will be a strong emphasis on logical reasoning in addition to the use of mathematical concepts from Algebra, Geometry and Statistics. Students are encouraged to compete in local programming contests to improve their programming skills as well as UIL competitions.

DUAL CREDIT MATH PATHWAY OPTIONS (Based on College Pathway academic requirements)

Student Interest Post Secondary Pathway	Dual Credit Course Recommendation	Pre-Requisites
Arts & Humanities	Dual Credit College Algebra Dual Credit Statistical Methods	Algebra II, Qualifying TSI score; Teacher Recommendation
Health, Human & Consumer Services & Public Safety	Dual Credit College Algebra Dual Credit Statistical Methods	Algebra II, Qualifying TSI score; Teacher Recommendation
Business & Industry	Dual Credit Business and Social Sciences Dual Credit Calculus for Business and Social Sciences	Pre-Calculus, Qualifying TSI score; Teacher Recommendation

3400W DUAL CREDIT COLLEGE ALGEBRA - SM1 (R) (WEIGHTED COLLEGE CREDIT)

Grade: 12

Credit: .5

Prerequisite: Algebra II, Teacher Recommendation, Qualifying TSI score

This course covers linear, quadratic, polynomial, exponential and logarithmic functions; systems of equations and inequalities, matrices and determinants.

College of the Mainland equivalent courses: Math 1314.

Learners will be responsible for registration with College of the Mainland and any additional book fees.

3620 DUAL CREDIT STATISTICAL METHODS

Grade: 12

Credit: .5

Prerequisite: Algebra II, Qualifying TSI score

This course is a collection, analysis, presentation and interpretation of data and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing.

3470W DUAL CREDIT COLLEGE MATHEMATICS FOR BUSINESS AND SOCIAL SCIENCES- SM1 (R) (WEIGHTED COLLEGE CREDIT)

Grade: 11 - 12

Credit: .5

Prerequisite: Partnered with Calculus for B&SS: Pre Calculus, Teacher Recommendation, Qualifying TSI Score

Applications of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value.

College of the Mainland equivalent courses: Math 1324.

Learners will be responsible for registration with College of the Mainland and any additional book fees.

3425W DUAL CREDIT COLLEGE CALCULUS FOR BUSINESS AND SOCIAL SCIENCES - SM2 (R) (WEIGHTED COLLEGE CREDIT)

Grade: 11 - 12

Credit: .5

Prerequisite: Pre Calculus, Mathematics for Business and Social Sciences, Qualifying TSI score

This course is basic study of limits and continuity, differentiation, optimization and graphing, and integration of elementary functions, with emphasis on applications in business, economics, and social sciences.

College of the Mainland equivalent courses: Math 1325.

Learners will be responsible for registration with College of the Mainland and any additional book fees.

3605W DIGITAL ELECTRONICS, WEIGHTED COURSE (DE)

Grade: 11-12

Credit: 1

Prerequisite: Introduction to Engineering Design; and Engineering Science or Civil Engineering and Architecture; and Geometry

This course may count as Math credit.

This course is designed to teach you about applied logic, which introduces you to the basics of electronics and digital systems – the building blocks to many products you use. The course is designed to expose learners to engineering design and troubleshooting techniques that are used in the electronics field. Computer simulation software is used to design and test digital circuitry in addition to actually constructing them. The projects are traditional in which you will learn how machines “think.” You will also learn a systematic approach that engineers use to design the electronics that are used every day. Learners taking this class will be required to present one of the classroom projects to a group of engineers at a stem fair held at FHS during the spring semester for real world feedback and insight in the field.

5053 ACCOUNTING II

Grades: 11 - 12

Credit: 1

Prerequisite: Accounting I

Accounting II emphasizes the computer applications of accounting principles through on-line curriculum. Students will review the full accounting cycle on the computer. Additional concepts will be introduced in this course to advance the student's knowledge of the accounting field. The course will cover such topics as careers in accounting, review of the accounting cycle, partnerships, corporations, departmentalized accounting, delinquent accounts, plant assets, accruals, financial statement analysis, cash accounting, budgeting, computerized payroll problems and management decision making.

0009 TEXAS COLLEGE BRIDGE MATHEMATICS(INDEPENDENT STUDY)

Grade: 12

Credit: 1 (no GPA) Certificate awarded upon successful completion of the course.

Prerequisite(s): Algebra II, and students who have not yet demonstrated college readiness in math on the Texas Success Initiative Assessment 2.0 (TSIA2) or other valid predictors of college readiness (e.g., SAT, ACT) will be placed into this course.

Texas College Bridge online college preparatory courses strengthen students' math skills prior to enrolling in 2 year, trade, or 4 year college, setting them up for postsecondary success. This is a teacher-facilitated course that is personalized and self-paced. Texas College Bridge permits students to focus on the skills they need. Students can earn a TSI exemption at more than 100 partnering colleges and universities across Texas.

Math Requirements for
Business and Industry, Public Service, Arts & Humanities,
Multi Disciplinary Studies Endorsement

® ALGEBRA

® GEOMETRY

Choose TWO credits to reach a total of four math credits, subject
to appropriate prerequisites.

Algebraic Reasoning

® *Algebra II - L

College Prep Advanced Algebra

® *Pre Calculus

Calculus AB

AP Calculus AB

AP Calculus BC

Multivariable Calculus

AP Statistics

AP Computer Science

Dual Credit College Algebra and Dual Credit Statistical Methods

Dual Credit Math for B&SS and Dual Credit for B&SS

Digital Electronics, Weighted Course

Accounting II

*These courses are also offered at the MAP Level

® Denotes recommended sequence for College Preparation

L - Algebra II will be a Local Requirement for all Endorsements

Math Requirements for STEM Endorsement

® ALGEBRA

® GEOMETRY

® ALGEBRA II

Choose one to reach a total of Four Math Credits

OR

If you are meeting the STEM Endorsement requirements
by Math Course selection–
you must obtain at least TWO credits that have Algebra II as a prerequisite.

College Prep Advanced Algebra

® *Pre Calculus

® AP Calculus AB

® AP Calculus BC

Multivariable Calculus

AP Statistics

AP Computer Science

Dual Credit College Algebra and Dual Credit Statistical Methods

Dual Credit Math for B&SS and Dual Credit for B&SS

*These courses are also offered at the MAP Level

®Denotes recommended sequence for STEM College Preparation

WORLD LANGUAGE

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
French II	6102	X	X	X	X	1	French I
MAP French II	6107	X	X	X	X	1	Recommended: Grade of 85 or better in French I or 8th grade French I
French III	6103		X	X	X	1	French II
MAP French III	6108		X	X	X	1	Recommended: Grade of 85 or better in MAP French II; grade of 90 or better in French II
AP French IV	6110			X	X	1	Recommended: Grade of 85 or better in MAP French III; grade of 90 or better in French III
Latin I	6301	X	X	X	X	1	None
Latin II	6302	X	X	X	X	1	Latin I
MAP Latin II	6307	X	X	X	X	1	Recommended: Grade of 90 or better in Latin I
MAP Latin III	6303		X	X	X	1	Recommended: Grade of 85 or better in MAP Latin II; grade of 90 or better in Latin II; teacher recommendation
AP Latin IV	6304			X	X	1	Recommended: Grade of 85 or better in MAP Latin III
Latin Seminar	6308				X	1	Recommended: Grade of 85 or better in AP Latin IV <small>The French Seminar credit will be transcribed as a Pass/Fail credit.</small>
Spanish I	6201	X	X	X	X	1	None
Spanish II	6202	X	X	X	X	1	Spanish I
MAP Spanish II	6207	X	X	X	X	1	Strongly recommended: Grade of 90 or better in Level I or 8th grade Spanish I
Spanish III	6203		X	X	X	1	Recommended: Grade of 90 or better in Spanish II
MAP Spanish III	6208		X	X	X	1	Strongly recommended: Grade of 90 or better in MAP Spanish II
AP Spanish IV	6209			X	X	1	Recommended: Grade of 90 or better in Spanish III

WORLD LANGUAGE CONTINUED

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
AP Spanish Literature	6212				X	1	Strongly recommended: Grade of 90 or better in AP Spanish IV Required: 90 MAP Spanish III
Computer Science I This course will count as a world language credit	0500	X	X	X	X	1	Algebra I
Computer Science II This course will count as a world language credit	0530	X	X	X	X	1	Computer Science I or AP Computer Science Principles
Computer Science III This course will count as a world language credit	0535			X	X	1	AP Computer Science A
AP Computer Science Principles This course will count as a world language credit	0505	X	X	X	X	1	Geometry
AP Computer Science Principles This course will count as a world language credit	0510		X	X	X	1	Algebra II, Computer Science II and teacher recommendation. The math credit will be transcribed as an earned grade with AP weight. The world language credit will be transcribed as a Pass/Fail credit

WORLD LANGUAGES

(R) indicates included in RANK

6102 FRENCH II (R)

Grade: 9 - 12

Credit: 1

Prerequisite: French I

This course reinforces the skills previously learned in French I. The course expands ability in aural comprehension, oral competency, reading, and writing. It develops insights into French customs, history, art, music, and literature. Learners will continue learning more complex grammatical structures through listening, speaking, writing, and reading. 80% mastery recommended to ensure success at the next level.

6107 MAP FRENCH II (R)

Grade: 9 - 12

Credit: 1

Prerequisite: None

Recommended: Grade of 85 or better in Level I or 8th grade French I

This course is a course for the intellectually motivated student wishing for a college preparatory course. This course reinforces the skills previously learned in French I: listening, reading, writing, speaking, and cultural competence. Learners are expected to demonstrate proficiency in all these areas. The instructional pace is accelerated and more intensive than that of the regular classroom. Class activities are designed to develop opportunities to practice and to acquire an extensive authentic vocabulary in a wide variety of real life situations.

6103 FRENCH III (R)

Grade: 10 - 12

Credit: 1

Prerequisite: French II

On this level, conversation and comprehensive grammar are highly emphasized. Learners are expected to converse more freely and easily with the teacher. Grammar skills are pulled into a comprehensive whole in the context of written work. Thematic units are used as the context for linguistic learning.

6108 MAP FRENCH III (R)

Grade: 10 - 12

Credit: 1

Prerequisite: None

Recommended: Grade of 85 or better in MAP French II, grade of 90 or better in French II

MAP French III is an advanced-intermediate course for learners preparing for the AP exam and wishing for a college preparatory atmosphere. Learners are expected to have attained the Intermediate High Level of mastery before entering the course. Development in all skills continues with the goal of exposing learners to a maximum amount of language and a wide variety of texts, both oral and written. Communication in the class will be in French as much as possible. Thematic units are used as the context for linguistic learning.

6110 AP FRENCH IV (R)

Grade: 11 - 12

Credit: 1

Prerequisite: None

Recommended: Grade of 85 or better in MAP French III, grade of 90 or better in French III

This course is a course for the intellectually motivated student wishing for a college preparatory course. This course reinforces the skills previously learned in French III: listening, reading, writing, speaking, and cultural competence. Learners are expected to demonstrate proficiency in all these areas. The instructional pace is accelerated and more intensive than that of the regular classroom. Class activities are designed to develop opportunities to practice and to acquire an extensive authentic vocabulary in a wide variety of real life situations.

6301 LATIN I (R)

Grade: 9 - 12

Credit: 1

Prerequisite: None

Learners will gain a basic understanding of Latin syntax and conversational idioms. They will learn to comprehend and present information in both written and oral media. They will gain knowledge and understanding of Roman culture through the study of various cities and their customs during the height of the Roman Empire. Throughout the course, learners will begin to understand the pervasive influence of Latin in all avenues of our lives, linguistically and culturally. 80% mastery is recommended to ensure success at the next level.

6302 LATIN II (R)

Grade: 9 - 12

Credit: 1

Prerequisite: Latin I

In Latin II, learners will further develop comprehension of the Latin Language. By the end of the course, learners should demonstrate a firm understanding of basic Latin communication. They will continue learning to comprehend and present information in written and oral media, with increasingly more sophisticated grammar and syntax. Student discovery of Roman culture will continue as well as their exploration of the influence of Latin. 80% mastery is recommended to ensure success at the next level.

6307 MAP LATIN II (R)

Grade: 9 - 12

Credit: 1

Prerequisite: Recommended: Grade of 90 or better in Latin I

The objectives are the same as Latin II; the intellectually motivated student looking for a challenge will find more rigorous content, pace, and assessment. MAP curriculum is designed to prepare the student for Advanced Placement, which adheres to university level guidelines and standards. Learners will learn, in depth, advanced grammatical concepts, many of which do not exist in the English Language. In addition, MAP learners will be introduced to the life and writings of Julius Caesar, in preparation for AP curriculum. MAP Latin II is strongly recommended for the student seeking more than the minimum foreign language requirement.

6303 MAP LATIN III (R)

Grade: 10 - 12

Credit: 1

Prerequisite: Recommended: Grade of 85 or better in MAP Latin II, grade of 90 or better in Latin II

Having achieved a basic understanding of written and oral Latin communication and fundamental Latin grammar, learners will now learn to apply these fundamental skills to classical Latin. Learners will look more closely at idiomatic intricacies of classical Latin and learn to analyze and synthesize the fundamental skills they learned at previous levels. Learners will also spend the Spring semester learning to read and interpret portions of Julius Caesar's *In Bello Gallico*

6304 AP LATIN IV (R)

Grade: 11 - 12

Credit: 1

Prerequisite: Recommended: Grade of 85 or better in MAP Latin III

Learners will translate excerpts from Books 1, 2, 4, & 6 of Vergil's *Aeneid* as well as Books 2, 4, 5 & 6 of Julius Caesar's *In Bello Gallico*. Learners will also familiarize themselves with the works as a whole in both translation and the original Latin. They will learn to scan dactylic hexameter and to recognize the literary, poetic & rhetorical devices typical of these masterpieces. In addition, we will begin working on the skills necessary to translate unseen passages from various Roman poets and authors.

6308 LATIN SEMINAR (R)

Grade: 12

Credit: 1

Prerequisite: Recommended: Grade of 85 or better in AP Latin IV

The Latin Seminar credit will be transcribed as a Pass/Fail credit.

This Latin class for seniors will be combined with AP Latin IV. The purpose of this class is to further build reading fluency and analysis of the poetic language of Vergil and Caesar's rhetoric. Students will be given the opportunity to take the AP exam by the end of this class.

6201 SPANISH I (R)

Grade: 9 - 12

Credit: 1

Prerequisite: None

Spanish I is a course of listening, speaking, reading, and writing drills. Learners listen at first, then begin to repeat, respond and generate thoughts of their own. A chapter by chapter vocabulary, based on everyday life activities, serves as the basis for reading, writing, listening and speaking drills. Oral proficiency is assessed on individual guided conversations or paired groupings. Grammar focuses on the present tense conjugation of regular and a few irregular verbs; the preterit conjugation of regular verbs; agreement and placement of adjectives and possessive and demonstrative adjectives. Cultural material is an overview of the Spanish-speaking people and their homelands. 80% mastery is recommended to ensure success at the next level.

6202 SPANISH II (R)

Grade: 9 - 12

Credit: 1

Prerequisite: Spanish I

Spanish II is a course of listening, speaking, reading, and writing skills that are developed with extra emphasis on reading and speaking. Oral proficiency is developed with daily tasks involving listening and speaking. Learners frequently work in groups or other pairings in guided conversations as well as creative composition writing. The study of grammar includes the two past tenses, (preterit and imperfect) as well as the future, conditional, command forms. The concept of the subjunctive is introduced as well. Also included is chapter by chapter vocabulary to serve as a base for conversations about everyday topics and narratives. Cultural material is oriented toward Hispanic life and the study of traditions and leisure. 80% mastery is recommended to ensure success at the next level.

6207 MAP SPANISH II (R)

Grade: 9 - 12

Credit: 1

Prerequisite: Spanish I

Strongly Recommend: Grade of 90 or better in Level I or 8th grade Spanish I

This course is for the intellectually motivated student desiring more rigorous content and assessments. The learners in MAP Spanish II are expected to demonstrate mastery of reading, writing, speaking and listening skills introduced in Spanish I. They must also demonstrate cultural awareness. Classroom activities are designed to practice and acquire an extensive authentic vocabulary in a wide variety of authentic presentational and conversational real-life situations..

6203 SPANISH III (R)

Grade: 10 - 12

Credit: 1

Prerequisite: Spanish II

Recommended: Grade of 85 or better in Spanish II

Spanish III is a course of listening, speaking, reading, and writing skills that are developed in a step-by-step process. Class is conducted as much as possible in Spanish. Each chapter focuses on cultural and historical topics related to the Spanish-speaking world. Learners are encouraged to use the language to discuss life events. Learners develop reading comprehension skills by reading popular literature and folk legends as well as items from other sources. The advanced tenses of verbs are studied and vocabulary continues to expand. Compositions reinforce the grammar and vocabulary presented in class. Oral proficiency is developed with conversations and discussions about the above topics. An exit grade in Spanish II of 85 or better is strongly recommended to ensure success in a Level III environment.

6208 MAP SPANISH III (R)

Grade: 10 - 12

Credit: 1

Prerequisite: MAP Spanish II

Strongly Recommend: Grade of 90 or better in MAP Spanish II

This course is an advanced-intermediate course for learners preparing for the AP Spanish Language Exam. In this course, students will perfect the grammar and vocabulary learned in MAP Spanish II. Development of all skills (reading, writing, listening and speaking) continues with the goal of exposing learners to a maximum amount of language and a wide variety of texts, both written and oral. Fluency and accuracy in both written and speaking will be expected. Communication in the target language is expected in this course.

6209 AP SPANISH IV (R)

Grade: 11 - 12

Credit: 1

Prerequisite: MAP Spanish III

Strongly Recommend: Grade of 90 or better in MAP Spanish III

AP Spanish IV teaches the learners to express themselves coherently and resourcefully. Learners are prepared with the necessary skill sets required for the AP Spanish Language and Culture Exam. The ultimate goal of the learner is to communicate with reasonable fluency and accuracy in both written and spoken Spanish. Communication in class will be in the target language. As determined by AP guidelines, this course seeks to further develop reading, writing, listening and speaking skills that can be used to explore and understand the six AP themes. Vocabulary and grammar structures are reviewed and enhanced through the reading of authentic resources. The course participants work towards accurate and fluent oral and written expression (formal and informal). Extensive training in the organization and writing of compositions is emphasized. Listening skills are strengthened by exposure to a variety of accents and themes.

6212 AP SPANISH LITERATURE

Grade: 12

Credit: 1

Prerequisite: Grade of 90 or better in MAP Spanish III

Strongly Recommend: 90 or better in AP Spanish IV

AP Spanish Literature is equivalent to a college level introductory survey course of literature written in Spanish. Students continue to develop their interpretive, interpersonal, and presentational skills in Spanish language as well as critical reading and analytical writing as they explore 38+ literary pieces including short stories, novels, plays, essays, and poetry from Spain, Latin America, and U.S. Hispanic authors along with other non-required texts.

It is important for students to check with their prospective colleges/universities regarding the acceptance of computer science as a world language credit.

0505 AP COMPUTER SCIENCE PRINCIPLES

Grade: 9 - 12

Credit: 1

Prerequisite: Geometry. Freshmen can enroll in the course if they are taking MAP Geometry or Algebra II

This course may count as a world language credit. Not all colleges accept Computer Science as a world language credit.

MAP CS and the AP CS classes are not necessary to enroll in this course. It is a survey of computer science and not a programming course like AP CS. The course will teach technological skills of the 21st century.

This course will help learners problem solve, analyze data, be creative thinkers and collaborate while learning new computer skills. This course is taught with two concurrent computer science strands: creativity and principles. The creativity theme topics are: Computing as a creative activity, processing of data creates knowledge, abstraction, levels of abstraction, managing complexity, computational thinking and programming and debugging. The Principles theme topics are: Data and information, algorithms, basic ideas behind technologies including computers, networks, search engines, and multimedia. Topics also include social uses and abuses of information, and the foundations of privacy.

0510 AP COMPUTER SCIENCE A

Grade: 11 - 12

Credit: 1

Prerequisite: Algebra II, Computer Science II

This course will count as a math and world language credit. Not all colleges accept Computer Science as a world language credit.

The math credit will be transcribed as an earned grade with AP weight.

The world language credit will be transcribed as a Pass/Fail credit.

AP Computer Science stresses object-oriented programming methodology (OOP) with an emphasis on problem solving and algorithmic development. This course is meant to be the equivalent of a first semester college course in computer science. It goes beyond merely learning to use applications like word processing, spreadsheets, and Internet browsers. Learners with an interest related to engineering, business, the computer professions, bioinformatics, genetics, physics, chemistry, pre-med or math should take this course. This course uses the Java language and focuses on the basic principles needed to design and build applications. At the end of the course, learners will have the choice to take the AP Computer Science test. If a student passes the test, college credit for a semester of computer science may be awarded to the student. Learners will be expected to participate by solving problems, implementing those solutions on the computer, and then testing the problems using reasonable data to ensure accuracy. The problems solved will come from a variety of disciplines including mathematics, physics, chemistry, biology, economics, business and engineering. Students should consider their prior mathematical experiences when considering this course. There will be a strong emphasis on logical reasoning in addition to the use of mathematical concepts from Algebra, Geometry and Statistics. Students are encouraged to compete in local programming contests to improve their programming skills as well UIL competitions.

0500 COMPUTER SCIENCE I

Grade: 9 - 12

Credit: 1

Corequisite: Algebra I

This course will count as a world language credit. Not all colleges accept Computer Science as a world language credit.

Computer Science I is designed to introduce students to coding through an exploration of engaging content. The Carnegie Mellon University (CMU) Academy curriculum is used throughout the year. The programs that the students write start off with programming simple cartoon characters, landscapes and other various items using geometric concepts. Afterwards, they dive into functions and understand how useful they can be in coding. Step by step the class begins to add more coding features to their programs, even adding animation to their characters. Students will team up to create an animated game using their knowledge of coding concepts that they had practiced in their mini programs. CMU has built their own graphics library into the Python programming language into their curriculum making it easier to learn how to code.

0530 COMPUTER SCIENCE II, WEIGHTED COURSE

Grade: 10 - 12

Credit: 1

Prerequisite: CSI or AP Computer Science Principles, and Geometry

This course may count as a world language credit. Not all colleges accept Computer Science as a world language credit.

The goal of this course is to teach students the Python programming language by creating simple games. Python is a language with a simple syntax, and has a powerful set of libraries. It is an interpreted language, with a rich programming environment, including a robust debugger and profiler. While it is easy for beginners to learn, it is widely used in many scientific areas for data exploration. This course is an introduction to the Python programming language for students without prior programming experience. We cover data types, control flow, object-oriented programming, and graphical user interface-driven applications. The examples and problems used in this course are drawn from diverse areas such as text processing, simple graphics creation and image manipulation, genomics and arcade game development. Instead of written finals for the semesters, there will be collaborative projects that the students will manage and create an application with documentation that they will be presenting on the final day.

Due to the emphasis on object-oriented programming, students who take this course will be prepared to take the AP Computer Science course the following year.

0535 COMPUTER SCIENCE III, WEIGHTED COURSE

Grade: 11-12

Credit: 1

Prerequisite: AP Computer Science A

This course may count as a world language credit. Not all colleges accept Computer Science as a world language credit.

This course is a continuation of AP Computer Science delving into advanced topics within Java. A great emphasis is placed on the organization of information through the implementation of data structures: two-dimensional arrays, array lists, linked lists, stacks, queues, trees, sets, maps, and hash tables. The discussion of algorithmic analysis using Big-O notation is a key concept of promoting efficiency in programs. Dynamic programming is introduced as well as other algorithmic programming techniques. Students learn to analyze large projects of interacting classes. Learners will become familiar with the interaction of hardware and software components and the ethical and social implications of computing.

PHYSICAL EDUCATION

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
Physical Education - Lifetime Fitness & Wellness	BOYS - 9611 GIRLS - 9011	X	X	X	X	1	None
Physical Education - Skill Based Lifetime Activities	BOYS - 9612 GIRLS - 9012	X	X	X	X	1	None
Health (Principles of Health Science can be substituted for the required .5 credit of Health.)	9405	X	X	X	X	.5	None
Boys Athletics	Refer to course number sheet	X	X	X	X	1	Tryout*
Girls Athletics	Refer to course number sheet	X	X	X	X	1	Tryout*
Dance	9010P	X	X	X	X	1	None
Drill Training	9014P	X	X	X		1	Audition
Advanced Dance	9017P		X	X	X	1	Dance, Audition; Instructor Approval
Cheerleading	Refer to course number sheet	X	X	X	X	1	Tryout*

*Refer to grade level sheets for course numbers

**Tryouts required for: Baseball, Basketball, Golf, Soccer, Softball, Swimming, Tennis, Volleyball and Cheerleading

*** Coach's approval and signature required on choice sheet to be in Baseball, Basketball, Cross Country, Football, Golf, Soccer, Softball, Swimming, Tennis, Track, Volleyball and Wrestling Athletic period. No freshman allowed into 7th period athletics without coach's consent.

PHYSICAL EDUCATION

9611 BOYS PHYSICAL EDUCATION - LIFETIME FITNESS & WELLNESS
9011 GIRLS PHYSICAL EDUCATION - LIFETIME FITNESS & WELLNESS

Grade: 9 - 12
Credit: 1
Prerequisite: None

Learners are expected to participate in a wide range of sports that can be pursued for a lifetime. The continued development of health-related fitness and the selection of sport activities that are enjoyable are major objectives of this course. Learners will be expected to exhibit a level of competency in two or more sports.

9612 BOYS PHYSICAL EDUCATION - SKILL BASED LIFETIME ACTIVITIES
9012 GIRLS PHYSICAL EDUCATION - SKILL BASED LIFETIME ACTIVITIES

Grade: 9 - 12
Credit: 1
Prerequisite: None

Learners enrolled in Team Sports are expected to develop health-related fitness and an appreciation for teamwork and fair play. The study of team sports includes rules, strategies, safety and protocol of each, and is an integral part of an overall Lifetime Fitness program. The inclusion of lifetime recreational activities and sports emphasizes, encourages, and promotes positive personal wellness, fitness and healthy habits. This course reinforces the concept of incorporating physical activity into a lifestyle beyond high school.

MEDICAL EXCUSES DO NOT EXEMPT A STUDENT FROM THE P.E. REQUIREMENT OF ONE CREDIT.

All learners are required to take 1 credit of Physical Education. A medical excuse does not constitute a waiver of physical education requirements. (Learners may be classified for physical education on the basis of health or disability as unrestricted, restricted, and adapted or remedial instruction as per Chapter 75.151 of the State of Texas Education Code.) Learners may substitute certain physical activities for the 1 required unit of physical education.

9405 HEALTH

Grade: 9 - 12
Credit: .5
Prerequisite: None

The principles of health education at Friendswood High School deal with aspects of physical, mental, and social well being with special emphasis on preventive techniques. Students learn how to approach health problems of the teenage years, and how to reduce the risk of adult health problems. Health education encourages learners to look closely at their own life-styles, learn the skills necessary for changing negative behavior, and set goals for improving their well being. Reinforcement of the importance of responsible decision making to good health is also emphasized. Training in First Aide and CPR is included in this course.

Principles of Health Science can be substituted for the required .5 credit of Health.



Information Packet for Off-Campus Physical Education Substitution Friendswood ISD Grades 6th (Level 1 Olympic Only) and 7th – 12th (Level 1 and Level II)

In order to honor your request for physical education substitution, comply with required curriculum standards, and maintain quality education for the whole child, Friendswood ISD has provided guidelines and procedures to facilitate the physical education substitution process. These guidelines ensure that FISD remains in compliance with FISD policy. (Local and Legal)

PRIVATE OR COMMERCIALY SPONSORED PHYSICAL ACTIVITY PROGRAMS:

The Board may award up to 4 credits, which may be substituted for state graduation credit in physical education in appropriate private or commercially sponsored physical activity programs conducted either on or off campus, upon approval by the Commission of Education. 19 TAC 74.11

OTHER PHYSICAL ACTIVITY PROGRAMS

The district may award up to 4 credits for physical education for appropriate private or commercially sponsored physical activity programs conducted either on or off campus, upon approval by the commissioner of education.

The FISD guidelines below should be considered before application to the program.

- Examples of physical activities include but are not limited to: Ice-skating, Ice hockey, Equestrian training, Gymnastics, Competitive dance, and Ballet
- The physical activity program is conducted by a private or commercially sponsored center, which provides BOTH instruction and physical application.
- Level 1 Olympic-Time on task equals no less than 15 hours per week under the direct supervision of a coach or professional trainer, not to include actual time in competition performance, or travel time. Time on task must occur Monday through Friday. Weekend training hours do not count toward the total 15 hours.
- Level II time on task equals no less than 5 hours per week, under the direct supervision of a private or commercially sponsored physical activities program and is certified by the superintendent to be of high quality and well supervised by appropriately trained instructors. Time on task must occur Monday through Friday.
- Parents are responsible for providing transportation to and from the physical activity program.
- The student may participate in the Fitness-gram Fitness Test at the pretest and post-test levels.
- Documentation by nine-week period of attendance and assessment of achievement in the substituted activity is to be submitted to FJH/FHS prior to the end of each grading period. Participation will be denied if documentation is not submitted in a timely manner. Grade weight: 60% from coach, 40% completed training log.
- Applicant must resubmit an application each year to the FJH/FHS student's counselor. Packets are available from the counselor.

FRESHMAN BOYS ATHLETICS*

Grade: 9
Credit: 1
Prerequisite: None

This part of the Boys Athletic Program is limited to 9th grade male learners. Boys must go through tryouts each year in order to stay in athletics. Boys are expected to practice before or after school during the time their sport is in season. Learners will attend out of town and home games. Athletes who are not selected or are otherwise removed from athletics will get a schedule change. Learners will participate in an off season training program before or after the competitive season. No freshmen are allowed into 7th period athletics without coach's consent.

FRESHMAN GIRLS ATHLETICS*

Grade: 9
Credit: 1
Prerequisite: None

This part of the Girls Athletic Program is limited to 9th grade female learners. Girls must go through tryouts each year in order to stay in athletics. Girls may participate in football if they choose. Girls are expected to practice before or after school during the time their sport is in season. Learners will attend out of town and home games. Athletes who are not selected or are otherwise removed from athletics will get a schedule change. Learners will participate in an off season training program before or after the competitive season. No freshmen are allowed into 7th period athletics without coach's consent.

BOYS ATHLETICS*

Grade: 10 - 12
Credit: 1
Prerequisite: Tryouts

Boys with athletic interest and skill compete in Inter-Scholastic League competition with learners in the athletic programs at other high schools in our district. Boys are expected to practice before or after school during the time their sport is in season. Boys must go through tryouts each year in order to stay in athletics. Boys are involved in off-season programs when they are not competing in a sport. Athletes who are not selected or are otherwise removed from athletics will get a schedule change. Learners will participate in an off season training program before or after the competitive season.

GIRLS ATHLETICS*

Grade: 10 - 12
Credit: 1
Prerequisite: Tryouts

Girls with athletic interest and skill compete in Inter-Scholastic League competition with learners in the athletic programs at other high schools in our district. Girls are expected to practice before or after school during the time their sport is in season. Girls must go through tryouts each year in order to stay in athletics. Girls may participate in football if they choose. Girls are involved in an off-season program when they are not competing in a sport. Athletes who are not selected or are otherwise removed from athletics will get a schedule change.

BOYS ATHLETIC SPORTS OFFERED:

BASEBALL, BASKETBALL, CROSS COUNTRY, FOOTBALL, GOLF, LACROSSE, SOCCER, SWIMMING, TENNIS, TRACK, WATER POLO, AND WRESTLING

GIRLS ATHLETIC SPORTS OFFERED:

BASKETBALL, CHEER, CROSS COUNTRY, GOLF, LACROSSE, SOCCER, SOFTBALL, SWIMMING, TENNIS, TRACK, VOLLEYBALL, WATER POLO AND WRESTLING

*Refer to grade level sheets for course numbers

NOTES:

1. Cross Country, Football and Track are the only non-cut sports
2. Lacrosse is offered as a club sport with NO athletic period

9010P DANCE (PE Credit)

Grade: 9 - 12

Credit: 1

Prerequisite: None

This course will give learners an opportunity to learn and practice basic dance movement and technique in several genres. Strengthening and limbering exercises will be used consistently, and learners will learn to choreograph dances as well. Mandatory performances will include Fall Demonstration and Spring Show.

9014P 9TH GRADE DRILL TRAINING (PE Credit)

Grade: 9 - 11

Credit: 1

Prerequisite: Audition

The Drill Training class is a prerequisite course for Drill Team. It is a year-long class, which serves as a training program for Drill Team. Stretches, high kick, and jazz dances will be taught throughout the year with a strong emphasis on technique. Participation in Drill Training does not guarantee placement in the Drill Team.

9350/9355 9TH GRADE CHEERLEADING

9360/9365 10TH GRADE CHEERLEADING

9366/9367 11TH GRADE CHEERLEADING

9370/9375 12TH GRADE CHEERLEADING

Grade: 9 - 12

Credit: 1

Prerequisite: Tryouts

The purpose of the cheerleaders is to support the curricular and extracurricular activities of FHS by promoting school spirit.

Cheerleaders and mascots exist to promote good sportsmanship, good citizenship, and wholesome and enthusiastic school spirit. Cheerleaders and mascots are first and foremost representatives and ambassadors of their school. Cheerleaders are expected to be skilled in learning and remembering cheers. They are also expected to be able to publicly demonstrate a skill level suitable for group performance. Members are chosen by a panel of judges on the basis of ability, scholarship, and devotion to school. They are expected to maintain and further skills. They must also compete if they are placed on the UIL or competition teams as a participant or alternate.

9017P ADVANCED DANCE (PE Credit)

Grade: 10 - 12

Credit: 1

Prerequisite: Dance, Audition, & Instructor Approval

This course is a continuation of the training one receives in Dance. This class is for serious dance learners who want to increase their skill and knowledge of the art. Activities will include more advanced technique in several genres and a more in-depth look at dance history. The elements of choreography will be reviewed and studies on a larger scale with more emphasis on improvisation, manipulation of movement, and overall composition. Mandatory performances will include Fall Demonstration and Spring Show.

Physical forms must be on file in the
Athletic Training Office
before a student is allowed to participate in any
Athletics, Band or Drill Training/Drill Team.

ART CAN GROW OUR CREATIVITY WHILE GROWING OUR MINDS.



EXPLORE THE
FRIENDSWOOD HIGH SCHOOL
FINE ARTS PROGRAMS

ART BAND CHOIR DANCE DEBATE THEATER

ARTS EDUCATION DEVELOPS 21ST CENTURY SKILLS



Critical Thinking



Innovation



Creativity



Collaboration



Problem Solving



Communication

Source: Partnership for 21st Century Learning

ARTS EDUCATION & SOCIAL AND EMOTIONAL LEARNING SKILLS:



Increase the likelihood of high school graduation



Improve readiness for postsecondary education



Directly impact career success



Positively impact family and work relationships



Improve mental health



Reduce criminal behavior



Produce more engaged citizens



FINE ARTS ELECTIVES

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
Art I	7501	X	X	X	X	1	None
Art II	7502		X	X	X	1	Art I
Art III	7503			X	X	1	Art I, Art II
Art IV	7504				X	1	Art I, II, III
AP 2D Art and Design	7515			X	X	1	Art I & Teacher Recommendation
AP 3D Art and Design	7530			X	X	1	Art I & Teacher Recommendation
AP Drawing	7520			X	X	1	Art I & Teacher Recommendation
Wind Ensemble	7000*	X	X	X	X	1	Audition
Ceramics I	7505		X	X	X	1	Art I
Ceramics II				X	X	1	Ceramics I
Symphonic Band	7028*	X	X	X	X	1	Audition
Concert Band I	7008*	X	X	X	X	1	Audition
Concert Band II	7018*	X	X	X	X	1	Audition
Jazz Band	7060*	X	X	X	X	1	Audition
Marching Percussion	7078*	X	X	X	X	.5	Audition
Pit Percussion	7088*	X	X	X	X	.5	Audition
Junior Varsity Color Guard	7048*	X	X	X	X	1	Audition
Varsity Color Guard	7050*	X	X	X	X	1	Audition
Advanced Treble Choir	7318*		X	X	X	1	Audition
Varsity Mixed Choir B	7330*		X	X	X	1	Audition
Treble Choir	7350*	X	X	X	X	1	None
Tenor Bass Choir	7320*	X	X	X	X	1	None
Varsity Mixed Choir A	7335*			X	X	1	Audition
Applied Music I	7052			X	X	1	Membership in Varsity Mixed Choir A or B, Symphonic Band or Wind Ensemble
AP Music Theory	7340			X	X	1	Band or Choir Director Approval

FINE ARTS ELECTIVES CONTINUED

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
Dance	9010*	X	X	X	X	1	None
Drill Team I Drill Team II Drill Team III	refer to course number sheet		X	X	X	1	Audition and Drill Training
Dance Welness	9075*		X	X	X	1	Current Enrollment in FHS Athletics
Advanced Dance	9017*		X	X	X	1	Dance I or Drill Training, and Instructor Approval
Theatre Arts I	7401	X	X	X	X	1	None
Theatre Arts II	7402		X	X	X	1	Theatre Arts I, Audition & Instructor Approval
Theatre Arts III	7418			X	X	1	Theatre Arts I & II, Audition & Instructor Approval
Theatre Arts IV	7438				X	1	Theatre Arts I, II, III, Audition& Instructor Approval
Musical Theatre I	7480	X	X	X	X	1	None
Musical Theatre II	7481		X	X	X	1	Musical Theatre I
Musical Theatre III	7482			X	X	1	Musical Theatre II
Technical Theatre I	7440	X	X	X	X	1	Recommended: Theatre Arts I
Technical Theatre II	7450		X	X	X	1	Tech Theatre I,Audition & Instructor Approval
Technical Theatre III	7460		X	X	X	1	Tech Theatre I,II, Audition & Instructor Approval
Technical Theatre IV	7470		X	X	X	1	Tech Theatre I,II,III,Audition & Instructor Approval
Theatre Production II	7358		X	X	X	1	Audition Only
Theatre Production III	7362		X	X	X	1	Audition Only
Theatre Production IV	7364		X	X	X	1	Audition Only
Floral Design	5175		X	X	X	1	None
Debate I	7210		X	X	X	1	See ELA Electives
Debate II	7215			X	X	1	See ELA Electives
Debate III	7218				X	1	See ELA Electives
Professional Communications	7220	X	X	X	X	.05	None

*Refer to grade level sheets for course numbers

FINE ARTS ELECTIVES

7501 ART I

Grade: 9-12

Credit: 1

Prerequisite: None

This entry level art course allows students to explore the Elements of Art while applying the Principles of Art/Design to develop and create original artworks/compositions using a variety of media such as pencil, pen, ebony pencils, pastels, oil pastels, colored pencils and water colors. Students will analyze, interpret, and evaluate their own artwork as well as those of well-known artists comparing the different styles and techniques used throughout the various periods of art history. Project emphasize developing a sense of composition and drawing skills. A sketchbook is required periodically that reinforces these skills. Art history is included as it relates to specific art projects. In the fall learners participate in Houston Livestock Show and Rodeo Art competition, an other competitions may be available.

7502 ART II

Grade: 10-12

Credit: 1

Prerequisite: Art 1

Selected assignments are given that apply toward AP Studio Art, AP Drawing and portfolios for college acceptance.

This course is designed as an extension of Art 1. Students will continue to use the Elements of Art and the Principles of Design to create original compositions. The learners are exposed to Art History from the Renaissance to Contemporary Art with emphasis on selected artists. Assignments relate to drawing from real life objects and human figures, 3D work, sculpture and painting with a variety of media. The Elements of Art and the Principles of Design are implemented. A sketchbook is submitted. All learners will participate in the Houston Livestock Show and Rodeo Art Competition in the fall. (Other competitions may be available) This class is for learners who were successful in Art 1.

7503 ART III

Grade: 11-12

Credit: 1

Prerequisite: Art I, Art II

Selected assignments are given that apply toward AP Studio Art, AP Drawing and portfolios for college acceptance.

Learners are involved in research concerning possible careers in art and a study of art in terms of how it reflects the times in which it was produced. Selected assignments are given and at times the student has a choice of media, subject matter and technique. Assignments relate to graphics, commercial art, figure drawing, art history, and higher-level thinking. The Elements of Art and the Principles of Design are implemented. A sketchbook and class critiques are required. All learners will participate in the Houston Livestock Show and Rodeo Art Competition in the fall. Learners should be seriously thinking of Art as a career choice at this level.

7504 ART IV (Art in Action)

Grade: 12

Credit: 1

Prerequisite: Art I, II, III

Learners are involved in serious art choices concerning artistic careers. Selected assignments are given that apply toward AP Studio Art, AP Drawing and portfolios for college acceptance. Assignments relate to drawing from real life: figure drawing, portraits and still life, imaginative subject matter, print making, mixed media, painting and sculpture. A sketchbook and class critiques are required. Contemporary Art is studied and emphasized. All learners will participate in the Houston Livestock Show and Rodeo Art Competition. Self-directed art projects are encouraged. Learners are exposed to presentations given by representatives from some of the top U.S. art institutions.

7505 CERAMICS

Grade: 10 - 12

Credit: 1

Prerequisite: Art I

Ceramics I will introduce students to working with clay. The course will teach hand building techniques and methods of glazing and decorating pottery. Students will incorporate their understanding of the elements and principles of art into their pieces, as well as use critical thinking skills to develop creative works of art in 3D. Students will also create pieces for competitions such as rodeo art.

7506 CERAMICS II

Grades 11-12

Credit: 1

Prerequisite: Ceramics I

Ceramics 2 is an extension of Ceramics I and is geared toward students who want to further their artistic expression in 3D. Students will have the opportunity to work on competition pieces as well as create college level work for portfolios. They will be able to work independently and use higher level critical thinking skills. This class will give students who love working with clay and ceramics the option to continue creating 3D art.

AP ART PORTFOLIOS

The Advanced Placement Art Program makes it possible for highly motivated high school learners to do college-level work. The student is asked to submit a portfolio of work for evaluation at the end of the school year. AP art candidates prepare their portfolios through organized AP instruction. Portfolios must be submitted to your art teacher at the beginning of May. With 50-minute classes it is IMPERATIVE that the student have outside of school time to complete any portfolios. All students are required to participate in the Houston Livestock Show and Rodeo Art/Photography Competition.

The 3 different portfolios include: AP 2D Art and Design, AP 3D Art and Design, AP Art Drawing. An interview process, summer assignments, and attendance at AP Student/parent meeting.

7515 AP 2D ART AND DESIGN

Grade: 11 - 12

Credit: 1

Prerequisite: Art I & teacher recommendation

2D Design involves purposeful decision-making about how to use the elements and principles of art in an integrative way. Students will expand their two-dimensional design skills and advance their visual communication skills by exploring a variety of design processes and techniques, and compositional and aesthetic concepts. Students will produce a portfolio that includes a minimum of 15 pieces from a sustained investigation, and five selected works that will be submitted to the College Board.

7530 AP 3D ART AND DESIGN

Grade: 11 - 12

Credit: 1

Prerequisite: Art I & teacher recommendation

The 3-D Portfolio is intended to address a broad interpretation of sculptural issues in depth and space. These may include mass, volume, form, plane, light and texture. Such elements and concepts may be articulated through additive, subtractive, and/or fabrication processes. Students will expand their three-dimensional design skills and advance their visual communication skills by exploring a variety of design processes and techniques, and compositional and aesthetic concerns. Students will produce a portfolio that includes a minimum of 15 pieces from a sustained investigation, and five selected works that will be submitted to the College Board.

7520 AP DRAWING

Grade: 11 - 12

Credit: 1

Prerequisite: Art I & teacher recommendation

The Drawing Portfolio is designed to address a broad interpretation of drawing issues. Students will expand their drawing and two-dimensional design skills and advance their visual communication skills by exploring a variety of design processes and techniques, and compositional and aesthetic concepts. Students will produce a portfolio that includes a minimum of 15 pieces from a sustained investigation, and five selected works that will be submitted to the College Board

70001 9 WIND ENSEMBLE
70002 10 WIND ENSEMBLE

70003 11 WIND ENSEMBLE
70004 12 WIND ENSEMBLE

Grade: 9 - 12

Credit: 1 Prerequisite: Audition

The Wind Ensemble is the first ranked band. The band attends all UIL music competitions. Each member will prepare for participation in all TMEA honor groups. The band rehearses during the regular school day and each member is required to attend a section rehearsal, full band rehearsal and a fifteen-minute individual listening every week outside of the school day. Other rehearsals and clinics as scheduled are required. Attendance at all rehearsals and performances is mandatory. Membership by audition only. All enrolled band students are required to participate in marching band. (Waives .5 PE Credit upon completion of fall marching band requirements)

70081 9 CONCERT BAND I
70082 10 CONCERT BAND I

70083 11 CONCERT BAND I
70084 12 CONCERT BAND I

Grade: 9 - 12

Credit: 1

Prerequisite: Audition

The Concert Band is the third ranked band. The band attends all UIL music competitions. Each member is encouraged to prepare for and participate in TMEA honor groups. The band rehearses during the regular school day and each member is required to attend a section rehearsal and fifteen-minute individual listening each week outside of the school day. Other rehearsals and clinics as scheduled are required. Attendance at all rehearsals and performances is mandatory. Membership by audition only. All enrolled band students are required to participate in marching band. (Waives .5 PE Credit upon completion of fall marching band requirements)

70181 9 CONCERT BAND II
70182 10 CONCERT BAND II

70183 11 CONCERT BAND II
70184 12 CONCERT BAND II

Grade: 9 - 12

Credit: 1

Prerequisite: Audition

The Concert Band II is the fourth ranked band. The band, depending on enrollment and instrumentation, will participate in school concerts. The group rehearses during the regular band period. Extra rehearsals and clinics will be scheduled as needed. Attendance at all rehearsals and performances is mandatory. Membership by audition only. All enrolled band student are required to participate in marching band. (Waives .5 PE Credit if there is participation in marching band)

70281 9 SYMPHONIC BAND
70282 10 SYMPHONIC BAND

70283 11 SYMPHONIC BAND
70284 12 SYMPHONIC BAND

Grade: 9 - 12
Credit: 1 Prerequisite: Audition

The Symphonic Band is the second ranked band. The band attends all UIL music competitions. Each member will prepare for participation in TMEA honor groups. The band rehearses during the regular school day and each member is required to attend a section rehearsal and fifteen-minute individual listening each week outside of the school day. Other rehearsals and clinics scheduled are required. Attendance at all rehearsals and performances is mandatory. Membership by audition only. All enrolled band student are required to participate in marching band. (Waives .5 PE Credit upon completion of fall marching band requirements)

70601 9 JAZZ BAND
70602 10 JAZZ BAND

70603 11 JAZZ BAND
70604 12 JAZZ BAND

Grade: 9 -12
Credit: 1
Prerequisite: Audition

The Jazz Band program is open to any interested student (drums, saxophone, trombone, trumpet) who is currently enrolled in the band program. Students outside of the band program may audition for enrollment based on the instrumentation needs of the ensemble. The class meets daily, and all students must remain enrolled in a concert band to maintain membership in this class.

Interested learners must have auditioned and have instructor approval before enrolling in the course. The audition consists of music excerpts, etudes, and/or scales as determined by the instructor. Jazz band is a two-semester course; therefore, learners should enroll for the entire year. Special emphasis is placed on the performance of swing, Latin, funk, jazz-rock, and blues. Specific topics and elements to be discussed include style, form, balance, expression, improvisational skills, and concert etiquette. Because Jazz Band is a course within the performing arts, some non-class time activities include performance for community programs, contests, concerts, and festivals. Enrollment in the course constitutes an agreement to fulfill all curricular, co-curricular, and extra-curricular requirements.

70781 9 MARCHING PERCUSSION
70782 10 MARCHING PERCUSSION

70783 11 MARCHING PERCUSSION
70784 12 MARCHING PERCUSSION

Grade: 9 -12
Credit: .5
Prerequisite: Audition

A percussion course which will provide marching percussion techniques, exercises, and ensemble work for snare drum, quads, bass drum and cymbals. Learners who enroll for this class will study and practice the elements of marching. Enrollment for this class is mandatory to participate in marching band. Attendance at all rehearsals and performances is required. This is a Fall only class. Before the Spring semester, auditions will then be held to have the percussion learners placed into a specific band period. Membership by audition only. (Waives .5 PE Credit upon completion of fall marching band requirements)

70881 9 PIT PERCUSSION
70882 10 PIT PERCUSSION

70883 11 PIT PERCUSSION
70884 12 PIT PERCUSSION

Grade: 9-12
Credit: .5
Prerequisite: Audition

A percussion course which will provide pit percussion techniques, exercises, and ensemble work. Learners who enroll for this class will study and practice the elements of pit percussion. Enrollment for this class is mandatory to participate in marching band. Attendance at all rehearsals and performances is required. This is a fall only class. Before the Spring semester, auditions will be held to have the learners placed into a specific band period. Membership by audition only. (Waives .5 PE Credit upon completion of fall marching band requirements)

70481 9 JUNIOR VARSITY COLOR GUARD
70482 10 JUNIOR VARSITY COLOR GUARD

70483 11 JUNIOR VARSITY COLOR GUARD
70484 12 JUNIOR VARSITY COLOR GUARD

Grade: 9 - 12
Credit: 1
Prerequisite: Audition

The Color Guard is comprised of those learners interested in work with flag, rifle, saber and related equipment. The Color Guard participates in all marching band rehearsals and performances in the fall. The Color Guard participates in the Texas Color Guard Circuit. Attendance at all rehearsals and performances outside of school are mandatory both in the fall and spring semesters. (Waives .5 PE credit for successful completion of the fall marching band requirements and waives .5 Fine Art credit for successful completion of the spring winter guard requirements) Audition required for membership only.

70501 9 VARSITY COLOR GUARD
70502 10 VARSITY COLOR GUARD

70503 11 VARSITY COLOR GUARD
70504 12 VARSITY COLOR GUARD

Grade: 9 - 12
Credit: 1
Prerequisite: Audition

The Varsity Guard is the top ranked color guard. Members are trained in advanced flag, rifle, saber and dance. This class participates in all marching band rehearsals and performances in the fall. They are required to compete in the WGI competitions. Attendance at all rehearsals and performances outside the school day are mandatory both in the fall and spring semesters. (Waives .5 PE credit for successful completion of the fall marching band requirements and waives .5 Fine Arts credit for successful completion of the spring winter guard requirements.)

73501 9 TREBLE CHOIR
73502 10 TREBLE CHOIR

73503 11 TREBLE CHOIR
73504 12 TREBLE CHOIR

Grade: 9-12
Credit: 1
Prerequisite: None

This choir consists of girls new to high school choir, as well as returning singers continuing to improve music proficiency. Students will learn concepts of vocal and choral technique, music theory, sight-reading, music history, and will be provided opportunities for creative self-expression through performance of a wide variety of choral literature. Singers in this group will participate in University Scholastic League concert & sight-reading contests. Learners are encouraged to participate in solo & ensemble contests, and TMEA District and Region Choir auditions. The choir will give concerts during the year, and learners must participate in all performances whether competitive or entertainment.

73201 9 TENOR BASS CHOIR
73202 10 TENOR BASS CHOIR

73203 11 TENOR BASS CHOIR
73204 12 TENOR BASS CHOIR

Grade: 9 - 12
Credit: 1
Prerequisite: None

This choir is open to all boys new to high school choir, as well as returning singers continuing to improve music proficiency. Students will learn concepts of vocal and choral technique, music theory, sight-reading, music history, and will be provided opportunities for creative self-expression through performance of a wide variety of choral literature. Singers in this group will participate in University Scholastic League concert & sight-reading contests. Learners are encouraged to participate in solo & ensemble contests, and TMEA District and Region Choir auditions. The choir will give concerts during the year, and learners must participate in all performances whether competitive or entertainment.

73181 09 ADVANCED TREBLE CHOIR
73182 10 ADVANCED TREBLE CHOIR

73183 11 ADVANCED TREBLE CHOIR
73184 12 ADVANCED TREBLE CHOIR

Grade: 9 - 12
Credit: 1
Prerequisite: Audition

This choir is selected from open auditions, through sight-reading and solo singing ability. Students will learn concepts of vocal and choral technique, music theory, sight-reading, music history, and will be provided opportunities for creative self-expression through performance of a wide variety of choral literature. Singers in this group will participate in University Scholastic League concert & sight-reading contests. Learners are encouraged to participate in solo & ensemble contests, and TMEA District and Region Choir auditions. The choir will give concerts during the year, and learners must participate in all performances whether competitive or entertainment.

73301 09 VARSITY MIXED CHOIR B
73302 10 VARSITY MIXED CHOIR B

73303 11 VARSITY MIXED CHOIR B
73304 12 VARSITY MIXED CHOIR B

Grade: 9 - 12
Credit: 1
Prerequisite: Audition

This choir is selected from auditions of students currently enrolled in Choir, through sight-reading and solo singing ability. Students will learn concepts of vocal and choral technique, music theory, sight-reading, music history, and will be provided opportunities for creative self-expression through performance of a wide variety of choral literature. Singers in this group will participate in University Scholastic League concert & sight-reading contests. Learners are encouraged to participate in solo & ensemble contests, and TMEA District and Region Choir auditions. The choir will give concerts during the year, and learners must participate in all performances whether competitive or entertainment.

73352 10 VARSITY MIXED CHOIR A
73353 11 VARSITY MIXED CHOIR A
73354 12 VARSITY MIXED CHOIR A

Grade: 10 - 12
Credit: 1
Prerequisite: Audition

This choir is selected from auditions of students currently enrolled in Choir, through sight-reading and solo singing ability. Students will learn concepts of vocal and choral technique, music theory, sight-reading, music history, and will be provided opportunities for creative self-expression through performance of a wide variety of choral literature. Singers in this group will participate in University Scholastic League concert & sight-reading contests. Learners are encouraged to participate in solo & ensemble contests, and TMEA District and Region Choir auditions. The choir will give concerts during the year, and learners must participate in all performances whether competitive or entertainment.

70523 11 APPLIED MUSIC I
70524 12 APPLIED MUSIC I

Grade: 11-12
Credit: 1
Prerequisite: Membership in Varsity Mixed Choir A or B, Symphonic Band, or Wind Ensemble

The Applied Music Course allows students in grades 11-12 to advance their development of proficiency in vocal performance. The course addresses specific needs of each student and provides individualized feedback and instruction on competition and concert repertoire. Students will be required to participate in the TMEA Region/All-State Process as well as UIL Solo & Ensemble and may also use this time to work on college audition repertoire, or any other audition music they may have. This is an independent study class that allows students to have time to practice during school rather than having to commit time outside of the school day. A director is always available for personal feedback when requested.

7340 AP MUSIC THEORY

Grade: 11-12

Credit: 1

Prerequisite: Band or Choir Director approval

The goal of this course is to develop a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. To achieve this goal, students will complete listening, performance, written, creative, and analytical exercises both in class and at home. Like most first-year college music theory courses, this course will emphasize aural and visual components of the common practice period (1600-1900): four-voice texture, cadences, melodic and harmonic compositional technique, standard rhythms and meters, phrase structure, small forms and modulation. Students will use a college textbook and workbook and will have the opportunity to take the Advanced Placement Music Theory exam for college credit.

7220 PROFESSIONAL COMMUNICATIONS (SPEECH)

Grade: 9 - 12

Credit: .5

Prerequisite: None

This course will blend oral, written and graphic communication. Units will cover public speaking experienced through individual and group presentations. Learners will be expected to develop and expand their ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics and conduct internet research. Additional units will emphasize interpersonal communication skills including effective listening, conflict resolution and professional and social communication. Professional Communications is a local requirement, which counts as a state elective.

90101 9TH GRADE DANCE
90102 10TH GRADE DANCE

90103 11TH GRADE DANCE
90104 12TH GRADE DANCE

Grade: 9 - 12

Credit: 1

Prerequisite: None

This course is designed to provide students with the fundamentals of dance achieved through learning different styles of dance, terminology, history, choreography, and performance through participation. We will explore all dance qualities by creating an atmosphere where students learn, observe, create, perform, and gain self-confidence. Students may receive Fine Arts, PE, or elective credit for this course. Mandatory performances include Fall Demonstration and Spring Show.

9014P 9TH GRADE DRILL TRAINING
90142 10TH GRADE DRILL TRAINING

90143 11TH GRADE DRILL TRAINING
90144 12TH GRADE DRILL TRAINING

Grade: 9 - 11

Credit: 1

Prerequisite: Audition

This yearlong course is a prerequisite for the Wranglerettes and is designed to serve as a training program for the Wranglerettes. Students will study and train in drill team technique and genres of dance performed by the Wranglerettes, including but not limited to jazz, pom, kick, lyrical, and contemporary. Participation in the drill training program does not guarantee placement on the Wranglerette Drill Team. Performance opportunities include select home football games, Wranglerette Pregame Dinner, Fall Demonstration, and Spring Show.

DRILL TEAM I (1ST YEAR) 90182 - 10TH GRADE, 90183 - 11TH GRADE, 90184 - 12TH GRADE
DRILL TEAM II (2ND YEAR) 90503 - 11TH GRADE, 90504 - 12TH GRADE
DRILL TEAM III (3RD YEAR) 90704 - 12TH GRADE

Grade: 10 - 12

Credit: 1

Prerequisite: Drill Training, Audition

The Wranglerette Drill Team is composed of 10th, 11th, and 12th grade girls. The Wranglerettes are a precision dance team that performs at football games, basketball games, pep rallies, contests, fall demonstration, spring show, and other school/community events. Girls are chosen for the drill team by the director and a panel of judges based on dance ability, scholarship, and devotion to school.

90752 10TH GRADE DANCE WELLNESS
90753 11TH GRADE DANCE WELLNESS
90754 12TH GRADE DANCE WELLNESS

Grade: 10 - 12

Credit: 1

Prerequisite: Students must be currently enrolled in Athletics at FHS

This course is designed to provide athletes with fundamental skills to promote injury prevention, flexibility, mobility, body awareness, coordination and training that will supplement what athletes are working on in the weight room and practice. Mandatory performances include Fall Demonstration and Spring Show.

90172 10TH ADVANCED DANCE
90173 11TH ADVANCED DANCE
90174 12TH ADVANCED DANCE

Grade: 10 – 12

Credit: 1

Prerequisite: Dance, Audition, & Instructor Approval

This course is a continuation of Dance I. Students in this course will study different styles of dance, dance terminology, dance history, choreography, and performance through active participation at a more in-depth level than Dance I. We will explore all its qualities by creating an atmosphere where students learn, observe, create, perform, and gain self-confidence. Students may receive Fine Art, PE, or elective credit for this course. Mandatory performances include Fall Demonstration and Spring Show.

7401 THEATRE ARTS I

Grade: 9 - 12

Credit: 1

Prerequisite: None

Theatre Arts I is offered to learners who are new to high school theatre and who want to learn basic theatrical skills. This is a survey course on theatre heritage, the play and its performance with an emphasis on acting. One extra-curricular public performance per semester is required in Theatre Arts I.

7402 THEATRE ARTS II

Grade: 10- 12

Credit: 1

Prerequisite: Theatre Arts I and audition, instructor approval.

Theatre Arts II is offered to learners who want to further their theatrical skills through work in acting, directing, and theater heritage. Basic principles of production are studied and applied through performances in various theatrical applications. Production work required. Enrollment in the course constitutes agreement to fulfill all curricular, co-curricular, and extra-curricular requirement per semester. By audition, instructor approval.

7418 THEATRE ARTS III

Grade: 11 - 12

Credit: 1 audition, instructor approval.

Prerequisite: Theatre Arts I, Theater Arts II and audition, instructor approval

Theatre Arts III learners will continue the study of theater with greater emphasis, on the historical evolution and cultural contributions of Theater, production styles, and performance. Learners study basis components of production and apply them through performance. Production work required. Enrollment in the course constitutes agreement to fulfill all curricular, co-curricular, and extra-curricular requirements. By audition, instructor approval.

7438 THEATRE ARTS IV

Grade: 11 - 12

Credit: 1

Prerequisite: Theatre Arts I, Theatre Arts II, Theatre Arts III and audition, instructor approval.

Theatre Arts IV learners will do advanced work in acting, directing, and set design, and will continue the study of theater with greater emphasis on the historical evolution and cultural contributions of theater, production styles, and performance. Learners study basic components of production, and apply them through performance. Production work required. Enrollment in the course constitutes agreement to fulfill all curricular, co-curricular, and extra-curricular requirements. By audition, instructor approval.

7480 MUSICAL THEATRE LEVEL I

Grade: 9-12

Credit: 1

Prerequisite: None

Musical Theatre, Level I will expose students to a wide range of onstage performance disciplines, including acting performance, vocal performance, and dance performance. The course will also provide an atmosphere in which student benefit from a teaching and learning experiences in these performance disciplines of musical theatre. The course will enhance and cultivate the creative gifts of each student. The course will enable students to study and perform the varied styles of musical theatre with special attention to the principals of stage movement, stage vocal technique, stage choreography, acting, characterization, and all other aspects of a musical production.

7481 MUSICAL THEATRE II 7482 MUSICAL THEATRE III

Grades: 10 - 12

Credit: 1

Prerequisite: Musical Theatre I

Musical Theatre, Level II and III builds on the performance skills and historical heritage of Musical Theatre. Level II will expose students to a wider range of onstage performance disciplines including acting performance, vocal performance, and dance performance. The course will also provide an atmosphere in which students benefit from teaching and learning experiences in these performance disciplines of musical theatre. The course enhances and cultivates the creative gifts of each student. The course enables students to study and perform the varied styles of musical theatre with special attention to the principals of stage movement, stage vocal technique, stage choreography, acting, characterization, and all other aspects of a musical production.

7440 TECHNICAL THEATRE I

Grade: 9 - 12

Credit: 1

Prerequisite: Recommended: Theatre Arts I

Technical Theatre I is a course designed to provide learners with a basic understanding of the aesthetics and practical application of all phases of technical production. This would include the study of all visual aesthetics, the physical theater, scenic design, scenery construction and painting, property construction and design, costuming, lighting, sound engineering, and back stage organization. Production work required. Enrollment in the course constitutes agreement to fulfill all curricular, co-curricular, and extra-curricular requirements.

7450 TECHNICAL THEATRE II
7460 TECHNICAL THEATRE III
7470 TECHNICAL THEATRE IV

Grade: 10 - 12

Credit: 1

Prerequisite: Tech Theatre I - audition, instructor approval.

Will do advanced work in all phases of theatrical production. This includes advanced study of all visual aesthetics including the physical theatre, scenic design & construction, properties, costumes, lighting, sound engineering and back stage organization. Production work required for UIL Design Contest (not OAP). Enrollment in the course constitutes agreement to fulfill all curricular and extracurricular requirements. One extra-curricular public performance per semester is required. By audition, instructor approval.

7358 THEATRE PRODUCTION II
7362 THEATRE PRODUCTION III
7364 THEATRE PRODUCTION IV

Grade: 10 - 12

Credit: 1

Prerequisite: Audition Only

Theatre Production provides practical hands-on experiences in acting and stagecraft through the preparation and public performances of plays. This curricular laboratory for the exploration, development, and synthesis of all elements of theater supplements the other theatre courses that concentrate on theories, information, and techniques by providing for the integration and implementation of these ideas and skills. Production work required. Enrollment in the course constitutes agreement to fulfill all curricular and extracurricular requirements.

5175 FLORAL DESIGN

Grades: 10-12

Credit: 1

This course may count as a fine arts credit

Prerequisite: None

This course prepares students for careers in floral art and design. It is a laboratory-oriented course designed to provide students technical knowledge and skills related to horticultural systems, career opportunities, entry requirements, and industry expectations. This course is designed to develop students' ability to identify and demonstrate the principles and the techniques related to floral design as well as develop an understanding of the management of floral enterprises.

OTHER ELECTIVES

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
Teen Leadership	0300	X	X	X	X	.5	None
SAT Review (Counts as local credit)	0149		X	X	X	.5	Geometry and Algebra II
AD ISM I (Academic Decathlon) Counts as AP course for grade point earned)	0055		X	X	X	1	Sponsor Signature
AD ISM II (Academic Decathlon) Counts as AP course for grade point earned)	0056			X		1	Sponsor Signature
AD ISM III (Academic Decathlon) Counts as AP course for grade point earned)	0057				X	1	Sponsor Signature
Peer Assistance and Leadership(PALS)	0050				X	1	Application
Senior Mentorship (Counts as local credit)	0011				X	.5 - 1	Seniors Only, Application
Teacher Aide (Counts as local credit)	013SM1 013SM2				X	.5 - 1	Seniors Only, Application
Project Based Research (Zero-hour course that counts as MAP course for grade points earned)	0100	X				1	Concurrent enrollment in MAP Biology
Project Based Research (Zero-hour course that counts as MAP course for grade points earned)	0300 ISM 1		X			1	Biology, Concurrent enrollment in MAP Chemistry
Project Based Research (Zero-hour course that counts as MAP course for grade points earned)	0030 ISM 1 0035 ISM II 0038 ISM III			X	X	1	Biology & Chemistry
Athletic Training	Refer to course number		X	X	X	1	Application & Interview

*Seniors - If you select off campus, you must provide own transportation home.

OTHER ELECTIVES

0300 TEEN LEADERSHIP

Grade: 9 - 12
Credit: .5
Prerequisite: None

This is a program which learners develop leadership, professional, and business skills. They learn to develop healthy self concepts, healthy relationships, and learn to understand the concept of personal responsibility. Learners also develop an understanding of Emotional Intelligence and its measured skills, skills in public speaking, an understanding of principle-based decision making, effects of peer pressure, skills to counteract bad effects, problem-solving skills, an understanding of parenting, and skills to be better family members and citizens.

0149 SAT REVIEW

Grade: 10 – 12
Credit: .5 (Local)
Prerequisite: Geometry and Algebra II

Emphasis will be placed on vocabulary, analogies, critical reading and test taking techniques. Learners will gain information about the content of the SAT mathematical questions, practice sample math questions, and learn when and how to use the calculator.

0055 AD ISM I (Academic Decathlon) (This course may count as a Speech or Fine Arts credit)
0056 AD ISM II (Academic Decathlon)
0057 AD ISM III (Academic Decathlon)

Grade: 10 - 12
Credit: 1 (Counts as AP course for grade points earned)
Prerequisite: Sponsor Signature

Academic Decathlon involves research of ten academic areas including economics, history, language and literature, science, fine arts, and others. A team of 3 A, 3 B and 3 C average learners will be selected to compete in the Academic Decathlon competition during the spring semester. Region and state contests are held for schools categorized as large, medium and small. Based on a point system, the highest scoring team represents Texas at the national USAD competition. All members of the winning team receive scholarships. Texas provides \$150,000 in scholarship money each year. Overall individual winners also win scholarships. Registration fees and the Texas Education Agency contribute to this scholarship fund.

0050 PALS (PEER ASSISTANCE LEADERSHIP and SERVICE

Grade: 12 – Selection by Committee Only
Credit: 1 – (State)
Prerequisite: Application

PALS (Peer-Assisted Leadership and Service) is a peer-helping program in which selected high school students are trained to serve as peer facilitators, supporting their fellow students on campus and those from feeder middle and elementary schools. The program also provides valuable field experience for students interested in careers in education or related helping professions.

Through PALS, participants receive training in various helping skills, empowering them to support others and create a more positive and productive school experience. Central to the program is the use of positive peer influence to address critical issues such as at-risk youth, dropout prevention, substance abuse, teen pregnancy, suicide prevention, absenteeism, academic challenges, behavior problems, and support for students with special needs.

Enrollment in the course requires a commitment to fulfilling all curriculum, co-curricular, and extra-curricular responsibilities associated with the program.

0011 SENIOR MENTORSHIP

Grade: 12

Credit: .5 – 1 (Local)

Prerequisite: Seniors Only, Application

The student will serve as a mentor or tutor in a course. A mentor is assigned to a course where he/she has displayed a particular strength; based on an application process and teacher/department approval. This position requires that students display exceptional levels of responsibility, dependability and respect. Students may be assigned to a specific teacher or a department; assignments are set in the fall. Requirements for participation in community service outside of the assigned class/office will apply. No grade points. A student can earn only one (1) credit of senior mentor.

013SM1 TEACHER AIDE (FALL SEMESTER)

013SM2 TEACHER AIDE (SPRING SEMESTER)

Grade: 12

Credit: .5 – 1 (Local)

Prerequisite: Seniors Only, Application

Students serving as teacher aides will work collaboratively with professional campus staff. This position requires that students display exceptional levels of responsibility, dependability and respect. Students may be assigned to a specific teacher or a department; assignments are set in the fall. Requirements for participation in community service outside of the assigned class/office will apply. No grade points. A student can earn only one (1) credit of teacher aide.

9530/9535 ATHLETIC TRAINING I

9598/9599 ATHLETIC TRAINING III

9596/9597 ATHLETIC TRAINING II

Grade: 10 - 12

Credit: 1

Prerequisite: Application and Interview with staff athletic trainers

All individuals interested in being a student athletic trainer must fill out an application and be interviewed before being accepted into the Sports Medicine Program. Students must be enrolled in course to participate. Athletic Training is not a PE credit.

Athletic Training is a regular class period, but also an extra-curricular activity. The student athletic trainer assists the Head Athletic Trainer in the duties of injury prevention, first aid, treatment, and rehabilitation of the athlete. Learners interested in sports and/or the medical field might enjoy this course and should contact the Head Athletic Trainer for an application

0100 PROJECT BASED RESEARCH (Freshman)

Grade: 9

Credit: 1 (Counts as MAP course for grade points earned)

Prerequisite: Concurrent enrollment in MAP Biology

Zero hour course outside of regular school day.

This Project-Based Research course allows academically advanced freshman students an opportunity to conduct science fair research investigations through an independent study format. Students use scientific methods of investigation to conduct in-depth research, compile findings, and present their findings to an audience that includes experts in the field. Students in this course develop, research, and conduct a science fair project under the guidance of a teacher facilitator and a professional in the field of research. This course is designed to support students through the science fair process.

0030 INDEPENDENT STUDY/MENTORSHIP I (Sophomore)

Grade: 10

Credit: 1 (Counts as AP course for grade points earned)

Prerequisite: Biology; concurrent enrollment in MAP Chemistry

Zero hour course outside of regular school day.

This Independent Study Mentorship (ISM) is designed for self-motivated learners with a desire to develop their Independent Science Fair Research Project at a higher level. All Science Fair ISM learners will research, design, and present an Independent Science Fair Project in conjunction with their MAP Chemistry course. The ISM class allows learners to work with experts in various fields, acquiring practical knowledge and hands-on experience. It also presents learners an opportunity to accept the type of responsibility that is usually only given to college learners and business professionals.

General information:

- Facilitator: Only available to MAP Chemistry learners during zero hour
- Learners meet with the facilitator in a pre-scheduled one on one meeting for 25 minutes once every 2 weeks. Other 45 minute mandatory meetings (general instructions, science fair process, research techniques, etc) are scheduled throughout the year.
- Learners are required to log 140 hours (outside of MAP Chemistry class time) as they develop and complete a senior level science fair project under the guidance of a mentor
- Learners will analyze quantitative data using higher level statistics.
- Grade carries AP points for class rank determination
- A full listing of ISM requirements and time schedules will be given to MAP Chemistry learners the first week of school and a parent meeting will be scheduled to discuss the details
- This course may count as a science credit

0030 INDEPENDENT STUDY/MENTORSHIP I

0035 INDEPENDENT STUDY/MENTORSHIP II

0038 INDEPENDENT STUDY/MENTORSHIP III

Grade: 11- 12

Credit: 1 (Counts for AP course for grade points earned)

Prerequisite: Biology and Chemistry

Seniors may not enroll in ISM as their 4th year science credit

This Scientific Research and Design course known as ISM allows academically advanced junior, and senior learners an opportunity to conduct career and science research investigations through an independent study mentorship. Students conduct empirical research under the guidance of a teacher, facilitator and mentor. Learners must be self-motivated and have transportation to visit off-campus mentors.



2025 - 2026

Career and Technical Education Guide





FHS CTE

Career Clusters and Programs of Study



Agriculture, Food and Natural Resources
Agribusiness, Leadership, and Communications
Animal Science
Environmental and Natural Resources
Plant Science



Arts, Audio Visual Technology and Communication
Digital Communications
Graphic Design and Interactive Media



Business, Marketing and Finance
Accounting and Financial Services
Business Management
Entrepreneurship
Marketing and Sales



Education and Training
Teaching and Training



Energy
Refining and Chemical Processing



Engineering
Engineering Foundations



Health Science
Biomedical Science
Diagnostic and Therapeutic Services



Hospitality and Tourism
Culinary Arts



Human Services
Cosmetology and Personal Care Services



Information Technology
Cybersecurity
Programming and Software Development



Law and Public Service
Law Enforcement
Legal Studies



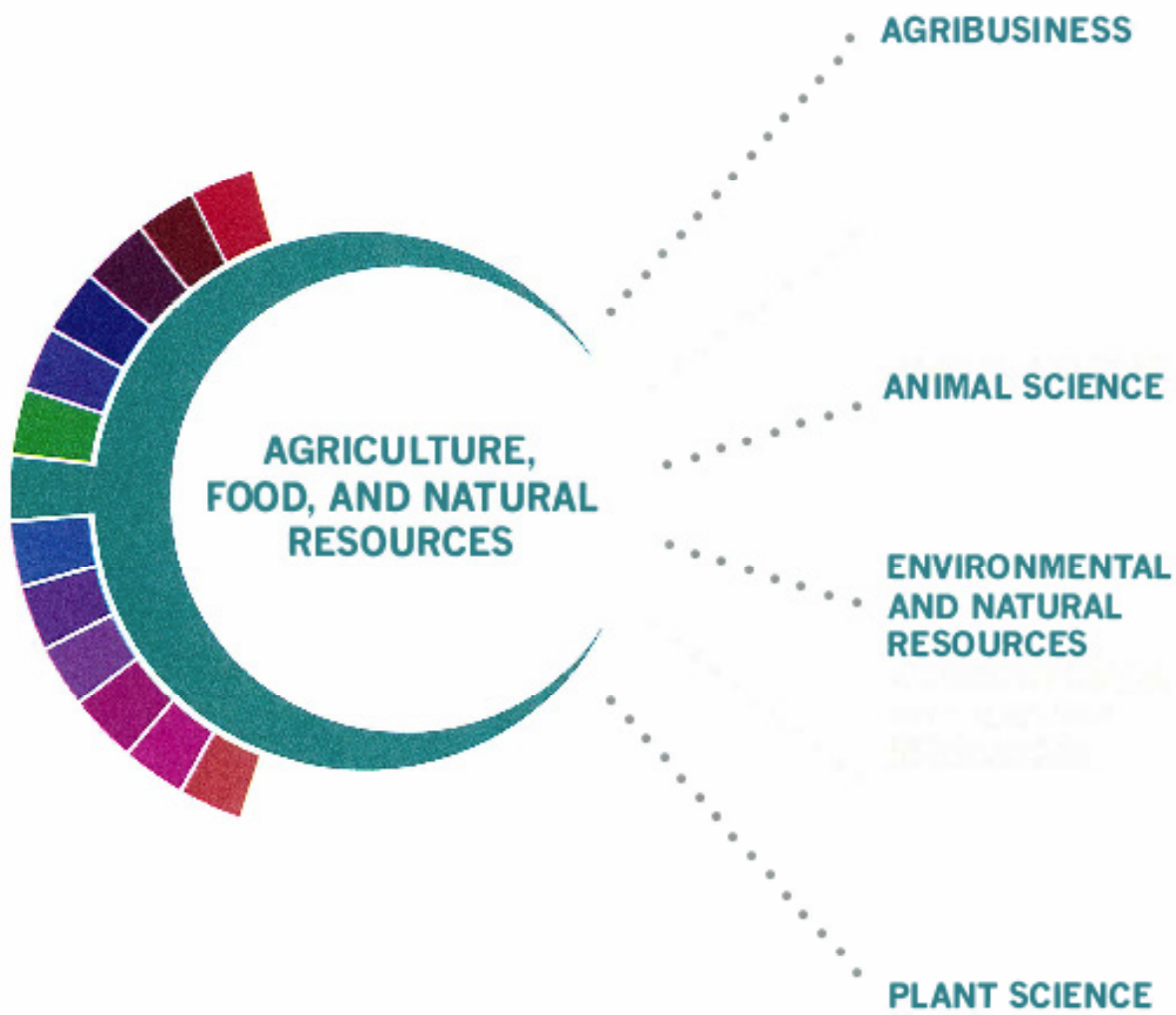
Manufacturing
Welding



Transportation, Distribution and Logistics
Maritime

TEA INDUSTRY BASED CERTIFICATIONS AT A GLANCE

CAREER CLUSTER	COURSE	CERTIFICATION
AGRICULTURE	PRACTICUM IN AG - VET ASSISTANT	Certified Veterinary Assistant, Level 1
	FLORAL DESIGN	Benz Principles of Floral Design Certification
ARTS, AV TECH	PRACTICUM IN AUDIO VIDEO PRODUCTION I OR II	Adobe Certified Professional in Digital Video Using Adobe Premiere Pro
BUSINESS	REAL ESTATE	Real Estate Sales Agent License
HEALTH SCIENCE	HEALTH SCIENCE THEORY	Patient Care Technician
	PRACTICUM IN HEALTH SCIENCE - EMT	Emergency Medical Responder
	PRACTICUM IN HEALTH SCIENCE - EMT	Emergency Medical Technician - Basic
	PRACTICUM IN HEALTH SCIENCE - CCMA	Certified Clinical Medical Assistant
	PRACTICUM IN HEALTH SCIENCE - CCMA	Certified EKG Technician
	PRACTICUM IN HEALTH SCIENCE - PHARM TECH	Pharmacy Technician
CULINARY	PRACTICUM IN CULINARY ARTS II	ServSafe Manager
STEM	CYBERSECURITY	CompTIA Security+





Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) career cluster focuses on the essential elements of life, food, water, land, and air. This career cluster includes occupations ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

Statewide Program of Study: *Agriculture Business, Leadership, and Communications*

The Agriculture Business, Leadership, and Communications program of study focuses on occupational and educational opportunities associated with farming and agriculturally related businesses that supply farm inputs, such as machinery and seeds. This program of study includes exploration of farm product marketing, the purchase of farm products either for processing or resale, and the process of grading or classifying unprocessed food or other agricultural products.



Secondary Courses for High School Credit

- | | |
|----------------|--|
| Level 1 | <ul style="list-style-type: none"> Principles of Agriculture, Food, and Natural Resources Professional Communications |
| Level 2 | <ul style="list-style-type: none"> Mustang INCubatoredu – Entrepreneurship I |
| Level 3 | <ul style="list-style-type: none"> Agribusiness Management and Marketing |
| Level 4 | <ul style="list-style-type: none"> Career and Technical Education Project-Based Capstone Practicum in Agriculture, Food, and Natural Resources Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation |

Aligned Advanced Academic Courses

AP	AP Economics AP Statistics
Dual Credit	3470W DC College Math for Business & Social Science 3425W DC College Calculus for Business and Social Science

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Shadow at a farm or ranch that manages livestock and crops to learn about processing and sales Intern at an agrochemical manufacturer to learn about new technologies in agribusiness
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in an FFA career, leadership, and speaking contest like an agriscience fair Attend an agricultural industry seminar

Aligned Industry-Based Certifications

- Entrepreneurship and Small Business
- Microsoft Office Specialist: Microsoft Excel Expert (Excel 2019)
- Production Agriculture - Job Ready



Successful completion of the Agriculture Business, Leadership, and Communications program of study will fulfill requirements of the Business and Industry endorsement.



Example Postsecondary Opportunities

Associate Degrees

- Accounting
- Agribusiness

Bachelor's Degrees

- Agriculture Economics
- Agribusiness

Master's, Doctoral, and Professional Degrees

- Accounting
- Applied Economics

Additional Stackable IBCs/License

- Accredited Farm Manager



Example Aligned Occupations

Loan Interviewers and Clerks

Median Wage: \$46,572
Annual Openings: 2,307
10-Year Growth: 10%

Loan Officers

Median Wage: \$66,285
Annual Openings: 2,261
10-Year Growth: 14%

Farmers, Ranchers, and Other Agricultural Managers

Median Wage: \$65,490
Annual Openings: 28,020
10-Year Growth: 4%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024

















For more information visit:
<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Agriculture, Food, and Natural Resources Career Cluster

Statewide Program of Study: Agriculture Business, Leadership, and Communications

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
	5100 Principles of Agriculture, Food, and Natural Resources* 13000200 (1 credit)	Prerequisites: None Grades: 9-12	
	7220 Professional Communications 13009900 (0.5 credit)	Prerequisites: None Grades: 9-12	   
Level 2	Course	Prerequisites Corequisites	Career Clusters
	5040 Mustang INCubatoredu Entrepreneurship I* 13011101 (1 credit)	Recommended Prerequisites: Principles of Business, Marketing and Finance Grades: 11-12	       
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5101 Agribusiness Management and Marketing 13000900 (1 credit)	Recommended Prerequisites: Principles of Agriculture or Principles of Business Grades: 10-12	
	<i>Continued on next page</i>		

* Indicates course is included in more than one program of study.

For additional information on the Agriculture, Food, and Natural Resources career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



Friendwood ISD does not discriminate on the basis of race, color, national origin, sex, or disability in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: Lindsey Foley, Executive Director Human Resources, 302 Laurel Dr., Friendwood, TX 77546 (281-482-1267) lfoley@friendwood12.org. Further nondiscrimination information can be found at [Notification of Nondiscrimination in Career and Technical Education Programs](#).








































Agriculture, Food, and Natural Resources Career Cluster

Statewide Program of Study: Agriculture Business, Leadership, and Communications

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
5008 Career and Technical Education Project-Based Capstone* First Time Taken: 12701101 (1 credit)	Prerequisites: None Grades: 11-12	           
5130 Practicum in Agriculture, Food, and Natural Resources* Second Time Taken: 13002510 (2 credits)	Recommended Prerequisites: Agribusiness Management & Marketing Grades: 11-12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	           
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	           

* Indicates course is included in more than one program of study.

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Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) career cluster focuses on the essential elements of life, food, water, land, and air. This career cluster includes occupations ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

Statewide Program of Study: Animal Science

The Animal Science program of study focuses on occupational and educational opportunities associated with the science, research, and business of animals and other living organisms. This program of study includes applying 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 will research and analyze the growth and destruction of species and research or diagnose diseases and injuries of animals.



Secondary Courses for High School Credit

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

Level 2 • Small Animal Management
• Equine Science

Level 3 • Livestock Production

Level 4 • Advanced Animal Science
• Veterinary Medical Applications
• Practicum in Agriculture, Food, and Natural Resources



Example Postsecondary Opportunities

Apprenticeships
• Reproduction Technician

Associate Degrees
• Biological and Physical Sciences
• Entomology

Bachelor's Degrees
• Animal Science
• Zoology/Animal Biology

Master's, Doctoral, and Professional Degrees
• Marine Sciences
• Biotechnology

Additional Stackable IBCs/License
• Veterinarian
• Certified Veterinary Technician



Aligned Advanced Academic Courses

AP or IB	AP Biology AP Chemistry AP Calculus AB
Dual Credit	No Dual Credit options currently.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Shadow an animal scientist in a biology lab to learn about applying science to understand animals and wildlife Intern in a veterinary clinic, caring for animals and wildlife being treated in the clinic
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in an FFA career, leadership, and speaking contest like an agriscience fair Attend an agricultural industry seminar

Aligned Industry-Based Certifications

- Agricultural Biotechnology
- AgriLife Veterinary Assistant Certificate
- Certified Veterinary Assistant, Level I
- Elanco Fundamentals of Animal Science Certification
- Elanco Veterinary Medical Applications Certification
- Equine Management and Evaluation Certification
- Feedyard Technician in Cattle Care and Handling
- Licensed Veterinary Technician
- Production Agriculture - Job Ready
- Small Animal Science and Technology



Successful completion of the Animal Science program of study will fulfill requirements of a Business and Industry endorsement.



Example Aligned Occupations

Veterinary Assistants and Laboratory Animal Caretakers

Median Wage: \$29,906
Annual Openings: 1,348
10-Year Growth: 24%

Veterinary Technologists and Technicians

Median Wage: \$33,679
Annual Openings: 1,217
10-Year Growth: 24%

Veterinarian

Median Wage: \$103,160
Annual Openings: 347
10-Year Growth: 26%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/6/2024

For more information visit:
<https://tea.texas.gov/academics/college-career-and-military-pros/career-and-technical-education/programs-of-study-additional-resources>





Agriculture, Food, and Natural Resources Career Cluster

Statewide Program of Study: *Animal Science*

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
	5100 Principles of Agriculture, Food, and Natural Resources* 13000200 (1 credit)	Prerequisites: None Grades: 9-12	
Level 2	Course	Prerequisites Corequisites	Career Clusters
	5190 Small Animal Management 13000400 (0.5 credit)	Recommended Prerequisites: Principles of Agriculture Grades: 9-12	
	5135 Equine Science 13000500 (0.5 credit)	Recommended Prerequisites: Principles of Agriculture Grades: 9-12	
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5185 Livestock Production 13000300 (1 credit)	Recommended Prerequisites: Principles of Agriculture Grades: 10-12	
Level 4	Course	Prerequisites Corequisites	Career Clusters
	5155 Advanced Animal Science 13000700 (1 credit)	Prerequisites: Biology and Chemistry or IPC; Algebra I and Geometry; and either Small Animal Management/Equine Science, or Livestock Production Recommended Prerequisites: Veterinary Medical Applications Grades: 11-12	
	5105 Veterinary Medical Applications 13000600 (1 credit)	Prerequisites: Small Animal Management/ Equine Science, or Livestock Production Grades: 11-12	
	5150 Practicum in Agriculture, Food, and Natural Resources* First Time Taken: 13002500 (2 credits)	Prerequisites: Veterinary Medical Applications Grades: 12	

* Indicates course is included in more than one program of study.

For additional information on the Agriculture, Food, and Natural Resources career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) career cluster focuses on the essential elements of life, food, water, land, and air. This career cluster includes occupations ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

Statewide Program of Study: *Environmental and Natural Resources*

The Environmental and Natural Resources program of study focuses on occupational and educational opportunities associated with the research, design, and engineering of plans for prevention and control of environmental hazards. This program of study includes conducting research for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or the health of the population.



Secondary Courses for High School Credit

- | | |
|----------------|--|
| Level 1 | <ul style="list-style-type: none"> Principles of Agriculture, Food, and Natural Resources |
| Level 2 | <ul style="list-style-type: none"> Wildlife, Fisheries, and Ecology Management |
| Level 3 | |
| Level 4 | <ul style="list-style-type: none"> Career and Technical Education Project-Based Capstone Practicum in Agriculture, Food, and Natural Resources |

Aligned Advanced Academic Courses

AP or IB	AP Biology AP Environmental Science
Dual Credit	No Dual Credit options currently.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Intern in an environmental services office in local government to learn about sanitation and waste management Participate in a water treatment plant operator apprenticeship at a local water management company
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in an FFA career, leadership, and speaking contest like an agriscience fair Attend an agricultural industry seminar

Aligned Industry-Based Certifications

- Ducks Unlimited Ecology Conservation and Management Certification
- Natural Resources Systems Water Operators, Class D



Successful completion of the Environmental and Natural Resources program of study will fulfill requirements of the Business and Industry endorsement.



Example Postsecondary Opportunities

Apprenticeships

- Water Treatment Plant Operator



Associate Degrees

- Environmental/Environmental Engineering Technology
- Water Quality and Wastewater Treatment Management and Recycling Technology

Bachelor's Degrees

- Environmental Engineering
- Environmental Health

Master's, Doctoral, and Professional Degrees

- Biology/Biological Sciences
- Ecology

Additional Stackable IBCs/License

- Pesticide Dealer License



Example Aligned Occupations

Environmental Engineering Technologists and Technicians

Median Wage: \$48,124
Annual Openings: 186
10-Year Growth: 18%

Environmental Scientists and Specialists

Median Wage: \$75,421
Annual Openings: 731
10-Year Growth: 25%

Environmental Engineers

Median Wage: \$103,246
Annual Openings: 316
10-Year Growth: 18%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/6/2024



For more information visit:

<https://tea.texas.gov/education/career-and-military/career-and-technical-education/programs-of-study-additional-resources>



Agriculture, Food, and Natural Resources Career Cluster

Statewide Program of Study: *Environmental and Natural Resources*

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
5100 Principles of Agriculture, Food, and Natural Resources* 13000200 (1 credit)	Prerequisites: None Grades: 9-12	

Level 2

Course	Prerequisites Corequisites	Career Clusters
5165 Wildlife, Fisheries, and Ecology Management 13001500 (1 credit)	Recommended Prerequisites: Principles of Agriculture Grades: 10-12	

Level 3

Course	Prerequisites Corequisites	Career Clusters
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Level 4

Course	Prerequisites Corequisites	Career Clusters
5008 Career and Technical Education Project-Based Capstone* First Time Taken: 12701101 (1 credit)	Prerequisites: None Grades: 11-12	
5130 Practicum in Agriculture, Food, and Natural Resources* Second Time Taken: 13002510 (2 credits)	Recommended Prerequisites: Wildlife, Fisheries, and Ecology Management Grades: 11-12	

* Indicates course is included in more than one program of study.

For additional information on the Agriculture, Food, and Natural Resources career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) career cluster focuses on the essential elements of life, food, water, land, and air. This career cluster includes occupations ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

Statewide Program of Study: **Plant Science**

The Plant Science program of study focuses on occupational and educational opportunities associated with the science, research, and business of plants and other living organisms. This program of study includes the application of biology and life science to real-world life processes of plants and vegetation, either in laboratories or in the field.

Secondary Courses for High School Credit



Level 1	<ul style="list-style-type: none"> Principles of Agriculture, Food, and Natural Resources
Level 2	<ul style="list-style-type: none"> Mustang INCubator edu – Entrepreneurship I
Level 3	<ul style="list-style-type: none"> Horticultural Science Floral Design
Level 4	<ul style="list-style-type: none"> Advanced Plant and Soil Science Advanced Floral Design Career and Technical Education Project-Based Capstone Practicum in Agriculture, Food, and Natural Resources

Aligned Advanced Academic Courses

AP or IB	AP Biology AP Environmental Science AP Chemistry
Dual Credit	No Dual Credit options currently.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Work in a part-time job at a landscaping company to learn about production and management of plants. Intern at an agricultural research company, working alongside a biological technician to learn about application of biology to plant production
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in an FFA career, leadership, and speaking contest like an agriscience fair Participate in an industry-related competition like an agriscience fair

Aligned Industry-Based Certifications

- Agricultural Biotechnology
- BASF Plant Science Certification
- Commercial/Noncommercial Pesticide Applicator
- Commercial/Noncommercial Pesticide Applicator "Vegetation Management" License
- Horticulture - Landscaping - Job Ready
- Landscape Irrigator
- Principles of Floral Design Certification
- Production Agriculture - Job Ready
- Texas Certified Landscape Associate (TCLA)
- Texas Certified Nursery Professional
- Texas State Florists' Association Knowledge Based Floral Certification
- Texas State Florists' Association Level I Floral Certification
- Texas State Florists' Association Level II Floral Certification



Successful completion of the Plant Science program of study will fulfill requirements of the Business and Industry endorsement.



Example Postsecondary Opportunities

Apprenticeships

- Horticulturist

Associate Degrees

- Biology/Biological Sciences
- Biological and Physical Sciences

Bachelor's Degrees

- Horticulture
- Plant Pathology/Phytopathology

Master's, Doctoral, and Professional Degrees

- Plant Breeding
- Botany/Plant Biology

Additional Stackable IBCs/License

- Nursery Floral License
- Horticulturist Certification



Example Aligned Occupations

Pesticide Handlers, Sprayers, and Applicators, Vegetation

Median Wage: \$46,153
Annual Openings: 205
10-Year Growth: 17%

Biological Technicians

Median Wage: \$45,787
Annual Openings: 879
10-Year Growth: 14%

Farmers, Ranchers, and Other Agricultural Managers

Median Wage: \$65,490
Annual Openings: 28,020
10-Year Growth: 4%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/6/2024.



For more information visit:
















<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Agriculture, Food, and Natural Resources Career Cluster

Statewide Program of Study: *Plant Science*

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
	5100 Principles of Agriculture, Food, and Natural Resources* 13000200 (1 credit)	Prerequisites: None Grades: 9-12	
Level 2	Course	Prerequisites Corequisites	Career Clusters
	5040 Mustang INCubatoredu Entrepreneurship I* 13011101 (1 credit)	Recommended Prerequisites: Principles of Business, Marketing and Finance Grades: 11-12	         
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5195 Horticultural Science 13002000 (1 credit)	Prerequisites: At least one credit in a course from the Ag career cluster Grades: 10-12	
	5175 Floral Design 13001800 (1 credit)	Prerequisites: None Grades: 10-12	
Level 4	Course	Prerequisites Corequisites	Career Clusters
	5160 Advanced Plant and Soil Science 13002100 (1 credit)	Recommended Prerequisites: Biology, IPC, Chemistry, or Physics and a minimum of one credit in a course from the Ag career cluster Grades: 11-12	
	5180 Advanced Floral Design N1300270 (1 credit)	Prerequisites: Floral Design Grades: 11-12	
<i>Continued on next page</i>			

* Indicates course is included in more than one program of study.

For additional information on the Agriculture, Food, and Natural Resources career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Agriculture, Food, and Natural Resources Career Cluster

Statewide Program of Study: *Plant Science*

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
5008 Career and Technical Education Project-Based Capstone* First Time Taken: 12701101 (1 credit)	Prerequisites: None Grades: 11-12	         
5130 Practicum in Agriculture, Food, and Natural Resources* Second Time Taken: 13002510 (2 credits)	Prerequisites: A minimum of two credits with at least one course in a Level 2 or higher course from the Ag career cluster OR if a Floral Practicum - Advanced Floral Design Grades: 11-12	

* Indicates course is included in more than one program of study.

For additional information on the Agriculture, Food, and Natural Resources career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Career & Technical Education Electives

Courses in this cluster will count toward the
Business & Industry Endorsement

AGRICULTURE, FOOD AND NATURAL RESOURCES CAREER CLUSTER

5100 PRINCIPLES OF AGRICULTURE, FOOD & NATURAL RESOURCES

Grades: 9 - 12

Credit: 1

Prerequisite: None

This course is designed to allow learners to gain knowledge about plant and animal agriculture while also studying career opportunities, leadership skills, and professional communication skills. This class is suggested prior to taking other agriculture science classes.

5190 SMALL ANIMAL MANAGEMENT

Grades: 9 - 12

Credit: .5

Prerequisite: None

Recommended: Principles of Agriculture, Food & Natural Resources

This course is designed to prepare students in the field of small animal management. It will provide students the skills regarding career opportunities, entry requirements, and industry expectations in veterinary careers. Students will develop knowledge and skills pertaining to animal ownership, industry hazards, current topics associated with animal rights/welfare, management and career opportunities. Suggested small animals which may be included in the course of study, but are not limited to small animals, amphibians, reptiles, avian, dogs and cats.

5135 EQUINE SCIENCE

Grades: 9 - 12

Credit: .5

Prerequisite: None

Recommended: Principles of Agriculture, Food & Natural Resources

This technical course is designed to develop knowledge and skills pertaining to the selection, nutrition, reproduction, health, and management of horses.

5185 LIVESTOCK PRODUCTION

Grades: 10 - 12

Credit: 1

Prerequisite: None

Recommended: Principles of Agriculture, Food & Natural Resources

This technical course is designed to develop knowledge and skills pertaining to the nutrition, reproduction, health and management of livestock. Animal genetics, reproduction, and anatomy and physiology are covered. The selection and carcass evaluation of all classes of livestock is also covered.

5101 AGRIBUSINESS MANAGEMENT AND MARKETING

Grade Placement: 10–12

Credit: 1

Prerequisite: None

Recommended: Principles of Agriculture, Food, and Natural Resources or Principles of Business, Marketing, and Finance

Agribusiness Management and Marketing is designed to provide a foundation to agribusiness management and the free enterprise system. Instruction includes the use of economic principles such as supply and demand, budgeting, record keeping, finance, risk management, business law, marketing, and careers in agribusiness.

5165 WILDLIFE, FISHERIES AND ECOLOGY MANAGEMENT

Grades: 10 - 12

Credit: 1

Prerequisite: None

Recommended: Principles of Agriculture, Food & Natural Resources

This course emphasized environmental issues and environmental topics of local and state concern. Learners are given the opportunity to receive certification for hunting and boating through the Texas Parks and Wildlife Educational Program. During each unit, safety is stressed. Other topics studied include species of mammals, birds, fish, reptiles, and game. Also, environmental concerns that lead to the species becoming threatened or endangered are covered. Activities include outdoor games, projects, videos, and discussion of current topics.

5175 FLORAL DESIGN

Grades: 10 - 12

Credit: 1

Prerequisite: None

This course may count as a fine arts credit

This course prepares students for careers in floral art and design. It is a laboratory-oriented course designed to provide students technical knowledge and skills related to horticulture systems, career opportunities, entry requirements, and industry expectations. This course is designed to develop students' ability to identify and demonstrate the principles and the techniques related to floral design as well as develop an understanding of the management of floral enterprise. This course will prepare students for the Texas Floral Design Level 1 certification.

5195 HORTICULTURE

Grades: 10 - 12

Credit: 1

Prerequisite: None

Recommended: At least one credit in a course from the Ag Career Cluster

This course is designed to develop an understanding of common horticulture management practices as they relate to food and ornamental plant production. Landscape design, greenhouse management, farm to table projects, turf maintenance, plant nutrition, plant use and identification, plant chemical uses and precaution are introduced along with tools and equipment used in the industry.

5105 VETERINARY MEDICAL APPLICATIONS

Grades: 11 - 12

Credit: 1

Prerequisite: Equine Science/Small Animal Management or Livestock Production

This course is designed to meet the growing demand for qualified employees in the fast growing veterinary medicine field. Learners will study examination procedures, laboratory procedures, radiology, kennel, cage and stall care, surgical preparation, pharmacology and office procedures.

5155 ADVANCED ANIMAL SCIENCE

Grades: 11 - 12

Credit: 1

Prerequisite: Biology & IPC or Chemistry, Algebra I, Geometry, and either Small Animal Management/Equine Science or Livestock Production.

Recommended: Veterinary Medical Applications.

This course may count as a science credit

This course is designed to build on knowledge gained in prior animal agriculture classes covering such topics as animal reproduction, genetics, anatomy and physiology, nutrition, formulating feed rations, livestock handling, harvesting and marketing of livestock, and research in the field of animal agriculture.

5040 MUSTANG INCUBATOR-ENTREPRENEURSHIP I

Grades: 11 - 12

Credit: 1

Prerequisite: None

Recommended: Principles of Business Marketing & Finance

This course is designed to get students excited about becoming true entrepreneurs by giving them the opportunity to create and fully develop their own product and/or service. Real-world entrepreneurs and business experts will serve as coaches and mentors guiding student teams through the process of ideation, market research, and business plan development. Over the course of the year, student teams will learn about marketing, accounting, human resources, how to run experiments on their Business Model Canvas, customer segmentation, pricing, web development, as well as the legal aspects of starting a business. They will have access to a network of professionals to further develop their skills (teamwork, problem solving, presentation, communication) for college and career readiness.

5130 PRACTICUM IN AGRICULTURE, FOOD AND NATURAL RESOURCES

Grades: 11-12

Credit: 2

Prerequisite: 1 course from Agriculture, Food & Natural Resources related to the Program of Study or if a Practicum for Floral Design - must complete Advanced Floral

Principles of Agriculture, Food & 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.

5150 PRACTICUM IN AGRICULTURE, FOOD AND NATURAL RESOURCES (Certified Veterinary Assistant)

Grades: 12

Credit: 2

Prerequisite: Completed 5105 Veterinary Medical Applications.

The practicum course is a paid or unpaid internship experience for students who are interested in the field of veterinary science. Students who complete this course will be prepared to take the Certified Veterinary Assistant 1 certification through Texas Veterinary Medical Association.

5180 ADVANCED FLORAL DESIGN

Grades: 11 - 12

Credit: 1

Prerequisite: Floral Design and Principles of Floral Design Certification from Benz School of Floral Design

This class combines both traditional classroom activities and “on-the-job” real-life experiences. The classroom portion is designed to acquaint the student with theories and principles of artistic design. This is an advanced laboratory-oriented course designed to provide real world applications in floral design. This course will prepare students for the Texas Floral Design Level II certification

5160 ADVANCED PLANT & SOIL SCIENCE

Grades: 11-12

Credit: 1

Prerequisite: 1 course from Plant Science and Biology, IPC, Chemistry or Physics.

This course maybe used as a Science credit.

This course provides a way of learning about the natural world. Students learn 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. Investigations, laboratory practices, and field exercises are used to develop an understanding of current plant and soil science. This course is designed to prepare students for careers in the food and fiber industry.

5008 CTE PROJECT BASED CAPSTONE

Grade: 11-12

Credit: 1

Prerequisite: None

Project-Based Research is a course for students to research a real-world problem. Students are matched with a mentor from the business or professional community to develop an original project on a topic related to career interests. Students use scientific methods of investigation to conduct in-depth research, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

5090/5091 CAREER PREPARATION I/EXTENDED CARRER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course

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.

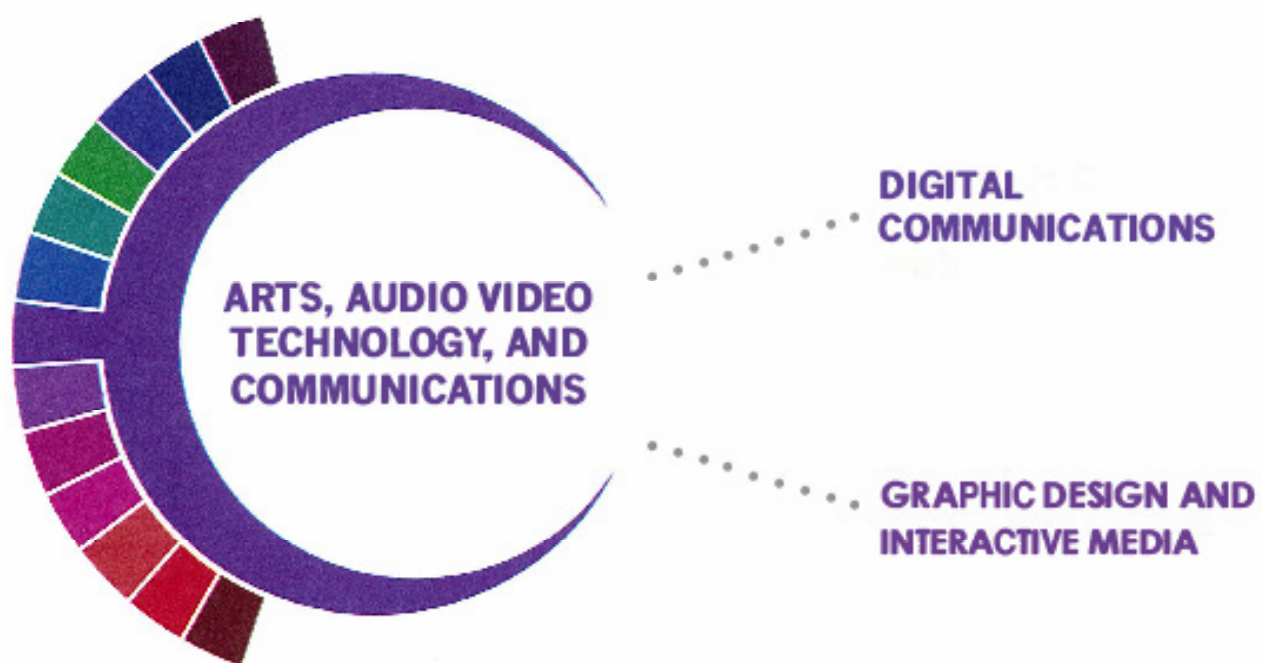
5092/5093 CAREER PREPARATION II / EXTENDED CAREER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course.

Career Preparation II provides an opportunity 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.





Arts, Audio Visual Technology, and Communication Career Cluster

The Arts, Audio Visual Technology, and Communication (AAVTC) career cluster focuses on designing, producing, exhibiting, performing, writing, and publishing multimedia content requiring creative aptitude, fluency in computer and technology applications, and proficiency in oral and written communication. This career cluster includes occupations ranging from camera operator, audio and video technician, director, and producer to graphic designer and web and digital interface designer.

Statewide Program of Study: *Digital Communications*

The Digital Communications program of study focuses on occupational and educational opportunities associated with the production of audio and visual media formats for various purposes, such as TV broadcasts, advertising, video production, or motion pictures. The program of study includes operating machines and equipment such as microphones, sound speakers, video screens, projectors, video monitors, sound and mixing boards, and related electronic equipment to record sound and images.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Film Appreciation - Principles of Arts, Audio/Video Technology, and Communications Digital Communications in the 21st Century - FJH Professional Communications
Level 2	<ul style="list-style-type: none"> Audio/Video Production I Digital Audio Technology I Mustang INCubatoredu – Entrepreneurship I
Level 3	<ul style="list-style-type: none"> Audio/Video Production II + Audio/Video Production II Lab Digital Audio Technology II
Level 4	<ul style="list-style-type: none"> Practicum in Audio/Video Production Practicum in Digital Audio Technology Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

AP or IB	
Dual Credit	No Dual Credit options currently.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Shadow a sound designer to learn how sound and Foley are created for movies or podcasts Intern with a technical director at a sports team, recording studio, or radio station Shadow a technician on a live news broadcast, concert, or other event
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in SkillsUSA or TSA Participate in Student Television Network Capture and edit film and audio for a podcast with a local community organization

Aligned Industry-Based Certifications

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



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



Example Postsecondary Opportunities

Apprenticeships

- Light Technician

Associate Degrees

- Commercial and Advertising Art
- Animation, Interactive Technology, Video Graphics, and Special Effects

Bachelor's Degrees

- Cinematography and Film/Video Production
- Recording Arts Technology

Master's, Doctoral, and Professional Degrees

- Animation, Interactive Technology, Video Graphics, and Special Effects
- Communications Technology

Additional Stackable IBCs/License

- CompTIA Digital Media and Entertainment Professional Certification (DMEP)



Example Aligned Occupations

Camera Operators, Television, Video, and Film

Median Wage: \$48,422
Annual Openings: 155
10-Year Growth: 20%

Audio and Video Technicians

Median Wage: \$46,319
Annual Openings: 626
10-Year Growth: 30%

Producers and Directors

Median Wage: \$65,029
Annual Openings: 522
10-Year Growth: 12%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:

<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Arts, Audio Visual Technology, and Communication Career Cluster

Statewide Program of Study: *Digital Communications*

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
	7105 Film Appreciation - Principles of Arts, Audio/Video Technology, and Communications* 13008200 (1 credit)	Prerequisites: None Grades: 9-12	
	7220 Professional Communications 13009900 (0.5 credit)	Prerequisites: None Grades: 9-12	
Level 2	Course	Prerequisites Corequisites	Career Clusters
	7108 Audio/Video Production I 13008500 (1 credit)	Prerequisites: None Grades: 9-12	
	7185 Digital Audio Technology I 13009950 (1 credit)	Prerequisites: None Grades: 9-12	
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5040 Mustang INCubatoredu Entrepreneurship I* 13011101 (1 credit)	Recommended Prerequisites: Principles of Business, Marketing and Finance Grades: 11-12	
	7100 Audio/Video Production II + Audio/Video Production II Lab (MCS I) 13008610 (2 credits)	Prerequisites: Audio/Video Production I Grades: 10-12	
	7186 Digital Audio Technology II 13009960 (1 credit)	Prerequisites: Digital Audio Technology I Grades: 10-12	
<i>Continued on next page</i>			

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Arts, Audio Visual Technology, and Communication Career Cluster

Statewide Program of Study: *Digital Communications*

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
7125 Practicum in Audio/Video Production I (MCS II) First Time Taken: 13008700 (2 credits)	Prerequisites: Audio/Video Production II and Audio/Video Production II Lab Grades: 11-12	
7150 Practicum in Audio/Video Production II (MCS III) Second Time Taken: 13008710 (2 credits)	Prerequisites: Practicum in Audio/Video Production I Grade: 12	
7156 Practicum in Digital Audio Technology N1300996 (2 credits)	Prerequisites: Digital Audio Technology II Grades: 11-12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

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Arts, Audio Visual Technology, and Communication Career Cluster

The Arts, Audio Visual Technology, and Communication (AAVTC) career cluster focuses on designing, producing, exhibiting, performing, writing, and publishing multimedia content requiring creative aptitude, fluency in computer and technology applications, and proficiency in oral and written communication. This career cluster includes occupations ranging from camera operator, audio and video technician, director, and producer to graphic designer and web and digital interface designer.

Statewide Program of Study: *Graphic Design and Interactive Media*

The Graphic Design and Interactive Media program of study focuses on occupational and educational opportunities associated with designing or creating graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. The program of study includes designing clothing and accessories and creating special effects, animation, or other visual images using film, video, computers, or other electronic tools and media for use in computer games, movies, music videos, and commercials.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Film Appreciation - Principles of Arts, Audio/Video Technology, and Communications Digital Media - FJH
Level 2	<ul style="list-style-type: none"> Graphic Design and Illustration I Commercial Photography I
Level 3	<ul style="list-style-type: none"> Graphic Design and Illustration II Commercial Photography II
Level 4	<ul style="list-style-type: none"> Practicum in Graphic Design and Illustration Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

AP or IB	AP Studio Art: Two-Dimensional Design Portfolio
Dual Credit	No Dual Credit options currently.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Shadow an art director at a branding firm or design agency Intern in the marketing and communications department of a technology company
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in SkillsUSA or TSA Participate in Student Television Network Join a related co-curricular or extracurricular club such as web development or computer coding

Aligned Industry-Based Certifications

- Adobe Certified Professional in Digital Video Using Adobe Premiere Pro
- Adobe Certified Professional in Graphic Design and Illustration Using Adobe Illustrator
- Adobe Certified Professional in Print and Digital Media Publication Using Adobe InDesign
- Adobe Certified Professional in Visual Design
- Adobe Certified Professional in Visual Design Using Adobe Photoshop
- Adobe Certified Professional in Visual Effects and Motion Graphics Using Adobe After Effects
- Audio-Visual Communications - Job Ready
- Autodesk Associate (Certified User) 3ds MAX
- C++ Certified Associate Programmer
- Certified Entry-Level Python Programmer (CELP)
- Certified Professional Photographer
- Certified Professional Programmer
- Certified User: Programmer
- CodeHS Python Level 1 Certification
- Graphic Production Technology - Job Ready
- Oracle Certified Associate Java SE 8 Programmer



Example Postsecondary Opportunities

Associate Degrees

- Graphic Design
- Digital Arts



Bachelor's Degrees

- Web Page, Digital/Multimedia and Information Resources Design
- Design and Visual Communications

Master's, Doctoral, and Professional Degrees

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

Additional Stackable IBCs/License

- Certified Textile Designer (CTD)



Example Aligned Occupations

Software Developers

Median Wage: \$111,705
Annual Openings: 15,324
10-Year Growth: 36%

Graphic Designers

Median Wage: \$50,973
Annual Openings: 1,766
10-Year Growth: 10%

Art Directors

Median Wage: \$81,926
Annual Openings: 619
10-Year Growth: 18%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024



For more information visit:

<https://www.texas.gov/academics/college-career-and-military-programs/academic-and-technical-education/programs-of-study/additional-resources>



Successful completion of the Graphic Design and Interactive Media program of study will fulfill requirements of the Business and Industry endorsement.



Arts, Audio Visual Technology, and Communication Career Cluster

Statewide Program of Study: *Graphic Design and Interactive Media*

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
7105 Film Appreciation - Principles of Arts, Audio + Video Technology, and Communications* 13008200 (1 credit)	Prerequisites: None Grades: 9-12	

Level 2

Course	Prerequisites Corequisites	Career Clusters
7165 Graphic Design and Illustration I* 13008800 (1 credit)	Prerequisites: None Grades: 9-12	
7616 Commercial Photography I 13009100 (1 credit)	Recommended Prerequisites: Journalism Grades: 10-12	
5040 Mustang INCubatoredu Entrepreneurship I* 13011101 (1 credit)	Recommended Prerequisites: Principles of Business, Marketing and Finance Grades: 11-12	

Level 3

Course	Prerequisites Corequisites	Career Clusters
7170 Graphic Design and Illustration II 13008900 (1 credit)	Prerequisites: Graphic Design and Illustration I Grades: 10-12	
7617 Commercial Photography II 13009200 (1 credit)	Prerequisites: Commercial Photography I Grades: 11-12	

Continued on next page

* Indicates course is included in more than one program of study.

For additional information on the Arts, Audio Visual Technology, and Communication career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Level 4

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Career & Technical Education Electives

Courses in this cluster will count toward the
Business & Industry Endorsement

ARTS, AUDIO/VIDEO TECHNOLOGY AND COMMUNICATION CAREER CLUSTER

7105 FILM APPRECIATION - PRINCIPLES OF ARTS, A/V TECHNOLOGY AND COMMUNICATIONS

Grade: 9 - 12
Credit: 1
Prerequisite: None

Students who would like to enter into the Graphic Design or AV Production pathways, but are unsure of which discipline to pursue should take this course. Film Appreciation is an introductory course that provides students an opportunity to explore various types of media careers. Emphasis will be placed on understanding filmmaking and graphic design work through a wide variety of hands-on projects. These projects include script writing, video production and editing (Adobe Premiere) , digital photography and editing (Adobe Photoshop), graphic design (Adobe Illustrator) and series of film study and media literacy lessons. This course is also ideal for students already in the AV Production pathway as a concurrent course to reinforce concepts in AV Production I and II and Practicum in AV Production I and II.

7108 AUDIO/VIDEO PRODUCTION I

Grade: 9 - 12
Credit: 1
Prerequisite: None

Students wishing to pursue the AV Production pathway (MCS) should begin with this course. AV Production students will increase their understanding of the messages they are exposed to through television, film, radio, print and the Internet. Hands-on projects utilizing audio/video equipment and computer programs such as Adobe Illustrator and Adobe Premiere Pro are the backbone of the course. Students will practice interview skills, design a production company logo, film and edit a TV commercial, movie scene, documentary and music video. This class is required as a prerequisite to enroll in Audio/Video Production II and participate in the MCS program.

7185 DIGITAL AUDIO TECHNOLOGY I

Grade: 9 - 12
Credit: 1
Prerequisite: None

Digital Audio Technology I is designed for students interested in audio production careers such as audio for radio and television broad-casting, audio for video and film, audio for animation and game design and music production and live sound. Students will become on-air personalities(D. Js) creating play lists and hosting a regular program on The Stang, FHS's own streaming radio station. Additional projects include recording and editing sounds for Skills USA Audio/Radio competitions, music remixing, ADR, and more!

7100 AUDIO/VIDEO PRODUCTION II (MCS I)

Grade: 10 - 12
Credit: 2
Prerequisite: Audio/Video Production I

This course is the advanced level continuation of the AV Production pathway. Focus will be on broadcast television and film study. Students will build on their skills from the Audio/Video Production I course and supplement with advanced techniques and methods in organization, script writing, camera work, editing and critique. Students will be responsible for the daily production of a quality MCS news program broadcast for the students of FHS as well as creating short films for contest and festival entry. Participation in SkillsUSA contests, video production of FHS Winston Stadium sporting events and other co-curricular video opportunities is expected of all MCS students. This course is only offered as a two period block with AV Production II Lab. Students will earn their OSHA 10 hour safety certification.

5040 MUSTANG INCUBATOR-ENTREPRENEURSHIP I

Grades: 11 - 12

Credit: 1

Prerequisite: None

Recommended: Principles of Business Marketing & Finance

This course is designed to get students excited about becoming true entrepreneurs by giving them the opportunity to create and fully develop their own product and/or service. Real-world entrepreneurs and business experts will serve as coaches and mentors guiding student teams through the process of ideation, market research, and business plan development. Over the course of the year, student teams will learn about marketing, accounting, human resources, how to run experiments on their Business Model Canvas, customer segmentation, pricing, web development, as well as the legal aspects of starting a business. They will have access to a network of professionals to further develop their skills (teamwork, problem solving, presentation, communication) for college and career readiness.

7186 DIGITAL AUDIO TECHNOLOGY II

Grade: 10-12

Credits: 1

Prerequisite: Digital Audio Technology I.

Digital Audio Technology II was designed to provide additional opportunities and skill sets for students interested in audio production careers such as audio for radio and television broadcasting, audio for video and film, audio for animation and game design, and music production and live sound. Students will be expected to develop an understanding of the audio industry with a technical emphasis on production and critical-listening skills. Students will program and host their own radio shows on FHS streaming station The Stang and participate in the SkillsUSA audio production competitions. Students will earn their OSHA 10 hour safety certification.

7125 PRACTICUM IN AUDIO/VIDEO PRODUCTION I (MCS II)

Grade: 11 - 12

Credit: 2

Prerequisite: AV Production II

This advanced course is a continuation in the MCS program. Students will perform at the Practicum level of electronic media and practice production skills and techniques. Students enrolling in this course are expected to take on leadership roles and set a good example in the classroom in addition to their continued participation in SkillsUSA, UIL Film and FHS Winston Stadium video scoreboard shifts. Practicum AVP students will also work to satisfy the needs of FISD and/or external clients through internships and mentorships. This course is only offered as a 2 period block. Students will be expected to challenge industry certification exams in Adobe Software Literacy.

7150 PRACTICUM IN AUDIO/VIDEO PRODUCTION II (MCS III)

Grade: 12

Credit: 2

Prerequisite: Practicum in Audio/Video I

This senior only, capstone course will offer students an opportunity to be leaders in the MCS broadcast and explore individual studies in film production. Students will be expected to participate in Skills USA/AV competition, Internship opportunities with the City of Friendswood, industry level certifications.

7156 PRACTICUM OF DIGITAL AUDIO TECHNOLOGY

Grade: 11-12

Credit: 2

Prerequisite: Digital Audio Technology II

Practicum of Digital Audio Technology is designed to provide additional opportunities and skill sets for students interested in audio production careers such as audio for radio and television broadcasting, audio for video and film, audio for animation and game design, and music production and live sound. Students will be expected to develop an understanding of the audio industry with a technical emphasis on production and critical-listening skills. Students will program and host their own radio shows on FHS streaming station The Stang and participate in the SkillsUSA audio production competitions. Internship opportunities through FISD Communications, FHS Athletics, and the City of Friendswood Communications will be made available to students enrolled in this course.

7165 GRAPHIC DESIGN I

Grade: 9 - 12

Credit: 1

Prerequisite: None

Students wishing to pursue the Graphic Design pathway should begin with this course. Graphic Design students will increase their understanding of the visual arts they are exposed to through television, print and the Internet. Hands-on projects utilizing art supplies, photography equipment and computer programs such as Adobe Photoshop and Adobe Illustrator are central to the course. Students will practice drawing skills, corporate branding, page layout design, illustration, and product package design. This class is required as a prerequisite to enroll in Graphic Design II.

7170 GRAPHIC DESIGN II

Grade: 10 - 12

Credits: 1

Prerequisite: Graphic Design I

This course is the advanced level continuation of the Graphic Design pathway. Focus will be on problem solving through visual design. Students will build on their skills from the Graphic Design I course and supplement with advanced techniques and methods in organization, workplace skills, photography, computer software and critique. Students will be responsible for the production of graphic design needs for FHS clubs, athletics and events. As well as creating designs for contest and festival entry. Participation in Skills USA contests, and other co-curricular graphic design opportunities is expected of all Graphic Design II students. Students will collaborate with the Retail Management class and design products to be sold in The Stable school store.

7180 PRACTICUM IN GRAPHIC DESIGN

Grade: 11-12

Credit: 2

Prerequisite: Graphic Design II

This advanced course is a continuation of participation in the Graphic Design program. Students will continue to increase their understanding of visual arts, electronic media and practice design skills and techniques. Students enrolling in this course are expected to take on leadership roles and set a good example in the classroom in addition to their continued participation in SkillsUSA. Practicum AVP students will also work to satisfy the needs of FISD and/or external clients through internships and mentorships. This course is only offered as a 2 period block and can be repeated for credit, provided students are able to learn through different opportunities in the second year. Students will be expected to challenge industry certification exams in Adobe Software Literacy.

7616 ANNUAL/COMMERCIAL PHOTOGRAPHY I

Grade: 10 - 12

Credit: 1

Prerequisite: Journalism

Learners electing this course work prepare the yearbook for publication. Positions include editor, news editor, feature editor, sports editor, business manager, staff artist, photographers, and reporters. Design, photography, and all aspects of publishing the yearbook are involved in this course. Coverage of activities, sports, and campus life will require students to work before and/or after school. Staff members make decisions concerning theme, type of arrangement, and pictures that appear in the yearbook. Class is limited to 25 learners.

7617 ANNUAL/COMMERCIAL PHOTOGRAPHY II

Grade: 11 - 12

Credit: 1

Prerequisite: Commercial Photography I

Learners electing this course work prepare the yearbook for publication. Positions include editor, news editor, feature editor, sports editor, business manager, staff artist, photographers, and reporters. Design, photography, and all aspects of publishing the yearbook are involved in this course. Coverage of activities, sports, and campus life will require students to work before and/or after school. Staff members make decisions concerning theme, type of arrangement, and pictures that appear in the yearbook. Class is limited to 25 learners.

7615 ANNUAL/COMMERCIAL PHOTOGRAPHY III

Grade: 11 - 12

Credit: 1

Prerequisite: Commercial Photography II

Learners electing this course work prepare the yearbook for publication. Positions include editor, news editor, feature editor, sports editor, business manager, staff artist, photographers, and reporters. Design, photography, and all aspects of publishing the yearbook are involved in this course. Coverage of activities, sports, and campus life will require students to work before and/or after school. Staff members make decisions concerning theme, type of arrangement, and pictures that appear in the yearbook. Class is limited to 25 learners.

5090/5091 CAREER PREPARATION I/EXTENDED CARRER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course

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.

5092/5093 CAREER PREPARATION II / EXTENDED CAREER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course.

Career Preparation II provides an opportunity 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.





Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance career cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations. This career cluster includes occupations ranging from business owner and entrepreneur to accountant, retail manager, and market analyst.

Statewide Program of Study: **Accounting and Financial Services**

The Accounting and Financial Services program of study focuses on occupational and educational opportunities associated with examining, analyzing, and interpreting financial records. It includes exploration of financial services, preparing financial statements, auditing financial statements prepared by others, and interpreting accounting records. This program of study also introduces students to mathematical modeling tools.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Principles of Business, Marketing, and Finance Money Matters
Level 2	<ul style="list-style-type: none"> Accounting I Mustang INCubatoredu - Entrepreneurship I
Level 3	<ul style="list-style-type: none"> Accounting II
Level 4	<ul style="list-style-type: none"> Stock Market Practicum in Business Management Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation



Example Postsecondary Opportunities

Associate Degrees

- Accounting
- Bookkeeping



Bachelor's Degrees

- Accounting
- Banking and Financial Support Services

Master's, Doctoral, and Professional Degrees

- Business Administration and Management
- Finance

Additional Stackable IBCs/License

- Project Management Professional
- Property Tax Consultants Service Contract Providers

Aligned Advanced Academic Courses

AP or IB	
Dual Credit	3470W DC College Math for Business & Social Science 3425W DC College Calculus for Business and Social Science

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Intern with a certified public accountant (CPA) at a local business Intern with a city or county auditor's office Shadow a financial advisor as an intern at an investment company
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in BPA, DECA, or FBLA Explore student membership in professional organizations such as AICPA, CIMA, or TXCPA

Aligned Industry-Based Certifications

- Accounting – Basic
- Accounting Foundations
- Certified Insurance Service Representative
- Intuit QuickBooks Certified User
- MB-920: Microsoft Dynamics 365 Fundamentals Finance and Operations Apps
- Microsoft Office Specialist: Microsoft Access Expert (Access 2019)
- Microsoft Office Specialist: Microsoft Excel Expert (Excel 2019)
- Volunteer Income Tax Assistance/Tax Counseling Certification: Advanced
- Volunteer Income Tax Assistance/Tax Counseling Certification: Basic
- Volunteer Income Tax Assistance/Tax Counseling Certification: Volunteer for Elderly



Example Aligned Occupations

Tax Preparers

Median Wage: \$56,956
Annual Openings: 898
10-Year Growth: 14%

Accountants and Auditors

Median Wage: \$78,022
Annual Openings: 12,989
10-Year Growth: 20%

Personal Financial Advisors

Median Wage: \$77,605
Annual Openings: 1,877
10-Year Growth: 21%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/6/2024.



For more information visit:
<https://tea.texas.gov/academics/career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>


















Successful completion of the Accounting and Financial Services program of study will fulfill requirements of the Business and Industry endorsement.



Business, Marketing, and Finance Career Cluster

Statewide Program of Study: *Accounting and Financial Services*

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
	5000 Principles of Business, Marketing, and Finance* 13011200 (1 credit)	Prerequisites: None Grades: 9-12	 
	5020 Money Matters 13016200 (1 credit)	Recommended Prerequisites: Principles of Business, Marketing, and Finance Grades: 10-12	
Level 2	Course	Prerequisites Corequisites	Career Clusters
	5050 Accounting I 13016600 (1 credit)	Prerequisites: Principles of Business, Marketing, and Finance Grades: 10-12	
	5040 Mustang INCubatoredu - Entrepreneurship I* 13011101 (1 credit)	Recommended Prerequisites: Principles of Business, Marketing, and Finance Grades: 11-12	         
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5053 Accounting II 13016700 (1 credit)	Prerequisites: Accounting I Grades: 11-12	
	<i>Continued on next page</i>		

* Indicates course is included in more than one program of study.

For additional information on the Business, Marketing, and Finance career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Business, Marketing, and Finance Career Cluster

Statewide Program of Study: *Accounting and Financial Services*

Course Information

Level 4	Course	Prerequisites Corequisites	Career Clusters
	5070 Stock Market - Securities and Investments 13016400 (1 credit)	Prerequisites: Principles of Business, Marketing, & Finance and Money Matters Grades: 11-12	
	5010 Business Intern - Practicum in Business Management* First Time Taken: 13012200 (2 credits)	Prerequisites: Principles of Business, Marketing & Finance and 1 additional Business, Marketing, or Finance course Grades: 11-12	
	5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
	5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

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Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance career cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations. This career cluster includes occupations ranging from business owner and entrepreneur to accountant, retail manager, and market analyst.

Statewide Program of Study: **Business Management**

The Business Management program of study focuses on occupational and educational opportunities associated with planning, directing, and coordinating the administrative services and operations of an organization. It includes formulating policies, managing daily operations, and allocating the use of materials and human resources. This program of study also introduces students to mathematical modeling tools and organizational evaluation methods.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Principles of Business, Marketing, and Finance
Level 2	<ul style="list-style-type: none"> Virtual Business - Entrepreneurship FJH Business Law Mustang INCubatoredu - Entrepreneurship I
Level 3	
Level 4	<ul style="list-style-type: none"> Practicum in Business Management Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

AP or IB	AP Economics AP Statistics
Dual Credit	3470W DC College Math for Business & Social Science 3425W DC College Calculus for Business and Social Science

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Intern at local business in the HR department Shadow the COO of a local business or chamber of commerce
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in BPA, DECA, FBLA, or related UIL events Explore student membership in related professional organizations

Aligned Industry-Based Certifications

<ul style="list-style-type: none"> Administrative Assistant Certified Associate in Project Management (CAPM) Entrepreneurship and Small Business General Management MB-920: Microsoft Dynamics 365 Fundamentals Finance and Operations Apps Microsoft Office Specialist 2016 Master Microsoft Office Specialist: Microsoft Access Expert (Access 2019) 	<ul style="list-style-type: none"> Microsoft Office Specialist: Microsoft Excel Expert (Excel 2019) Microsoft Office Specialist: Microsoft Word Expert (Word 2019) Project Management Institute (PMI) Project Management Ready Business of Retail: Certified Specialist Customer Service and Sales: Certified Specialist Student Social Media Marketing Certification
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Successful completion of the Business Management program of study will fulfill requirements of the Business and Industry endorsement.



Example Postsecondary Opportunities

Associate Degrees

- Business Administration and Management
- Human Resources Management

Bachelor's Degrees

- Business Analytics
- Accounting and Business

Master's, Doctoral, and Professional Degrees

- Business Administration and Management
- Organizational Leadership

Additional Stackable IBCs/License

- Professional Certificate in Team Leadership
- Property Tax Professionals



Example Aligned Occupations

First-Line Supervisors of Administrative Support Workers

Median Wage: \$59,585
Annual Openings: 13,885
10-Year Growth: 9%

Human Resources Specialists

Median Wage: \$61,278
Annual Openings: 6,239
10-Year Growth: 23%

General and Operations Managers

Median Wage: \$83,220
Annual Openings: 25,450
10-Year Growth: 23%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/6/2024.



For more information visit:
















<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Business, Marketing, and Finance Career Cluster

Statewide Program of Study: *Business Management*

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
	5000 Principles of Business, Marketing, and Finance* 13011200 (1 credit)	Prerequisites: None Grades: 9-12	 
Level 2	Course	Prerequisites Corequisites	Career Clusters
	5067 Business Law* 13011700 (1 credit)	Recommended Prerequisites: Principles of Business or Principles of Law Grades: 11-12	 
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5040 Mustang INCubatoredu - Entrepreneurship I* 13011101 (1 credit)	Recommended Prerequisites: Principles of Business, Marketing, and Finance Grades: 11-12	         
Level 4	Course	Prerequisites Corequisites	Career Clusters
	5010 Business Intern - Practicum in Business Management* First Time Taken: 13012200 (2 credits)	Prerequisites: Principles of Business, Marketing & Finance and 1 additional Business, Marketing, or Finance course Grades: 11-12	

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* Indicates course is included in more than one program of study.

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Business, Marketing, and Finance Career Cluster

Statewide Program of Study: *Business Management*

Course Information

Level 4	Course	Prerequisites Corequisites	Career Clusters
	5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
	5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

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Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance career cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations. This career cluster includes occupations ranging from business owner and entrepreneur, to accountant, retail manager, and market analyst.

Statewide Program of Study: **Entrepreneurship**

The Entrepreneurship program of study focuses on occupational and educational opportunities associated with planning, launching, directing, and coordinating public or private sector ventures. This program of study includes formulating policies, launching businesses or organizations, managing daily operations, analyzing management structures, and planning for the use of materials and human resources.



Secondary Courses for High School Credit

- | | |
|---------|---|
| Level 1 | <ul style="list-style-type: none"> Principles of Business, Marketing, and Finance |
| Level 2 | <ul style="list-style-type: none"> Mustang INCubatoredu - Entrepreneurship I |
| Level 3 | <ul style="list-style-type: none"> Mustang ACCEleratoredu - Entrepreneurship II |
| Level 4 | <ul style="list-style-type: none"> Career and Technical Education Project-Based Capstone Practicum in Business Management Practicum in Marketing Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation |

Aligned Advanced Academic Courses

AP or IB	AP Statistics
Dual Credit	3470W DC College Math for Business & Social Science 3425W DC College Calculus for Business and Social Science

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Intern at a local start-up or a business incubator Participate in the development and launch of a school-based enterprise
Expanded Learning Opportunities	<ul style="list-style-type: none"> Job shadow an entrepreneur Participate in BPA, DECA, FBLA, or related UIL events

Aligned Industry-Based Certifications

- Entrepreneurship and Small Business
- Facebook Digital Marketing Associate Certification
- Stukent Social Media Marketing Certification
- Customer Service and Sales: Certified Specialist
- Business of Retail: Certified Specialist



Example Postsecondary Opportunities

Associate Degrees

- Operations Management and Supervision
- Organizational Leadership

Bachelor's Degrees

- Business Administration and Management
- Public Administration

Master's, Doctoral, and Professional Degrees

- Business Administration
- Public Administration

Additional Stackable IBCs/License

- Salesforce
- Service Contract Providers



Example Aligned Occupations

General and Operations Managers

Median Wage: \$83,220
Annual Openings: 25,450
10-Year Growth: 23%

Management Analysts

Median Wage: \$93,983
Annual Openings: 6,030
10-Year Growth: 25%

Chief Executives

Median Wage: \$163,567
Annual Openings: 648
10-Year Growth: 3%

























Business, Marketing, and Finance Career Cluster

Statewide Program of Study: *Entrepreneurship*

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
	5000 Principles of Business, Marketing, and Finance* 13011200 (1 credit)	Prerequisites: None Grades: 9-12	 
Level 2	Course	Prerequisites Corequisites	Career Clusters
	5040 Mustang INCubatoredu - Entrepreneurship I* 13011101 (1 credit)	Recommended Prerequisites: Principles of Business, Marketing, and Finance Grades: 11-12	       
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5080 Mustang ACCeleratoredu - Entrepreneurship II 13011102 (1 credit)	Prerequisites: Mustang INCubatoredu - Entrepreneurship I Grade: 12	
Level 4	Course	Prerequisites Corequisites	Career Clusters
	5008 Career and Technical Education Project-Based Capstone* First Time Taken: 12701101 (1 credit)	Prerequisites: None Grades: 11-12	       
	5010 Business Intern - Practicum in Business Management* First Time Taken: 13012200 (2 credits)	Prerequisites: Principles of Business, Marketing & Finance and 1 additional Business, Marketing, or Finance course Grades: 11-12	
	<i>Continued on next page</i>		

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Business, Marketing, and Finance Career Cluster

Statewide Program of Study: *Entrepreneurship*

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
5510 Practicum in Marketing I* First Time Taken: 13034800 (2 credits)	Prerequisites: Principles of Business, Marketing, & Finance and 1 other course in Marketing Grades: 11-12	
5545 Practicum in Marketing II Second Time Taken: 13034810 (2 credits)	Prerequisites: Practicum in Marketing I Grade: 12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

* Indicates course is included in more than one program of study.

For additional information on the Business, Marketing, and Finance career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Business, Marketing, and Finance Career Cluster

The Business, Marketing, and Finance career cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations. This career cluster includes occupations ranging from business owner and entrepreneur to accountant, retail manager, and market analyst.

Statewide Program of Study: **Marketing and Sales**

The Marketing and Sales program of study focuses on occupational and educational opportunities associated with collecting information to estimate potential sales of a product or service and create campaigns to market or distribute goods and services. It includes applying data related to customer demographics, preferences, needs, and buying habits.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Principles of Business, Marketing, and Finance Digital Media - FJH
Level 2	<ul style="list-style-type: none"> Sports and Entertainment Marketing Virtual Business - Entrepreneurship FJH Mustang INCubatoredu - Entrepreneurship I
Level 3	<ul style="list-style-type: none"> Fundamentals of Real Estate Social Media Marketing The Stable - Retail Management
Level 4	<ul style="list-style-type: none"> Practicum in Marketing I Practicum in Marketing II Marketing Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation



Example Postsecondary Opportunities

Associate Degrees

- Marketing/Marketing Management
- Retail Management

Bachelor's Degrees

- Business Administration
- Marketing/Marketing Management
- Fashion Merchandising

Master's, Doctoral, and Professional Degrees

- Business Administration
- Applied Economics
- Business Analytics

Additional Stackable IBCs/License

- Salesforce
- Service Contract Providers



Aligned Advanced Academic Courses

AP or IB	AP Statistics
Dual Credit	3470W DC College Math for Business & Social Science 3425W DC College Calculus for Business and Social Science

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Intern at a marketing and advertising company Job shadow a pharmaceutical sales representative Intern at a local retail company
Expanded Learning Opportunities	<ul style="list-style-type: none"> Job shadow an account representative at a marketing firm Participate in BPA, DECA, FBLA, or related UIL events

Aligned Industry-Based Certifications

- Business of Retail: Certified Specialist
- Certified Insurance Service Representative
- Customer Service and Sales: Certified Specialist
- Entrepreneurship and Small Business
- Facebook Digital Marketing Associate Certification
- Retail Merchandising - Job Ready
- Stukent Social Media Marketing Certification
- Real Estate Sales Agent License



Example Aligned Occupations

Retail Salespersons

Median Wage: \$28,356
Annual Openings: 56,132
10-Year Growth: 15%

Market Research Analysts

Median Wage: \$60,926
Annual Openings: 5,688
10-Year Growth: 35%

Sales Managers

Median Wage: \$123,729
Annual Openings: 3,368
10-Year Growth: 21%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:

<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Business, Marketing, and Finance Career Cluster

Statewide Program of Study: *Marketing and Sales*

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
	5000 Principles of Business, Marketing, and Finance* 13011200 (1 credit)	Prerequisites: None Grades: 9-12	
Level 2	Course	Prerequisites Corequisites	Career Clusters
	5465 Sports and Entertainment Marketing 13034600 (0.5 credit)	Recommended Prerequisites: Principles of Business, Marketing and Finance Grades: 10-12	
	5040 Mustang INCubatoredu - Entrepreneurship I* 13011101 (1 credit)	Recommended Prerequisites: Principles of Business, Marketing, and Finance Grades: 11-12	
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5485/5486 Fundamentals of Real Estate* N1301120 (2 credits) Two-year course – 1 credit per year	Recommended Prerequisites: Principles of Business Marketing and Finance Junior year - 5486 Senior year - 5485	
	5480 Social Media Marketing 13034650 (0.5 credit)	Recommended Prerequisites: Principles of Business, Marketing, and Finance Grades: 10-12	
	5003 The Stable - Retail Management* N1303420 (1 credit)	Prerequisites: Principles of Business, Marketing, and Finance or Graphic Design I Recommended Corequisites: Accounting I or Social Media Marketing Grades: 10-12	

Continued on next page

* Indicates course is included in more than one program of study.

For additional information on the Business, Marketing, and Finance career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Business, Marketing, and Finance Career Cluster

Statewide Program of Study: **Marketing and Sales**

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
5510 Practicum in Marketing I* First Time Taken: 13034800 (2 credits)	Prerequisites: Principles of Business, Marketing, & Finance and 1 other course in Marketing Grades: 11-12	
5545 Practicum in Marketing II Second Time Taken: 13034810 (2 credits)	Prerequisites: Practicum in Marketing I Grade: 12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

* Indicates course is included in more than one program of study.

For additional information on the Business, Marketing, and Finance career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Career & Technical Education Electives

Courses in this cluster will count toward the

Business & Industry Endorsement

BUSINESS, MARKETING AND FINANCE CAREER CLUSTER

5000 PRINCIPLES OF BUSINESS, MARKETING AND FINANCE

Grades: 9 - 11

Credit: 1

Prerequisite: None

Project based learning class

Learners gain knowledge and skills that impact U.S. business as well as global business. They learn the process of business ethics, marketing, advertising, sales, and financial management principles. This course teaches a variety of skills needed in the 21st century business. A variety of interesting and relevant activities will be taught using Microsoft Office applications.

5020 MONEY MATTERS

Grades: 10 - 12

Credit: 1

Prerequisite: None

Recommended: Principles of Business, Marketing & Finance

Learn how to manage personal finances while investigating the free-enterprise system and its impact on consumers and businesses. Students will learn how to set specific and attainable financial goals and apply effective budgeting and money management techniques. In addition, learners will analyze methods of achieving long-term financial goals through investments, tax planning, asset allocation, risk management, retirement and estate planning.

5070 STOCK MARKET

Grades: 11 - 12

Credit: 1

Prerequisite: Principles of Business, Marketing & Finance and Money Matters

Financial markets exert a powerful presence in our lives and are central to the functioning of our economy. What role does the stock market play and how does it function? What factors govern stock market behavior and lead to market booms and busts? This course introduces the basic financial principles necessary to understand the role of the stock market in our economy and in our personal lives. Learners will explore careers in the securities and real estate industry and the licenses and certifications necessary to work in this field. The stock market game allows students to monitor a simulated investor's portfolio and apply investment techniques and analysis tools for selection of securities.

5067 BUSINESS LAW

Grades: 11 - 12

Credit: 1

Prerequisite: None

Recommended - Principles of Business, Marketing & Finance and/or Principles of Law, Public Safety, Corrections & Security

Students will examine the relationship between business and law. Areas of study include contracts, government regulations, human resources, personal injury and other law suits, financing a business, risk management, and other aspects of starting and operating a business that present legal challenges. Typically students choose a business they would like to start and identify how these legal challenges would apply.

5040 MUSTANG BUSINESS INCUBATOR-ENTREPRENEURSHIP I

Grades: 11 - 12

Credit: 1

Prerequisite: None

Recommended: Principles of Business Marketing & Finance

This course is designed to get students excited about becoming true entrepreneurs by giving them the opportunity to create and fully develop their own product and/or service. Real-world entrepreneurs and business experts will serve as coaches and mentors guiding student teams through the process of ideation, market research, and business plan development. Over the course of the year, student teams will learn about marketing, accounting, human resources, how to run experiments on their Business Model Canvas, customer segmentation, pricing, web development, as well as the legal aspects of starting a business. They will have access to a network of professionals to further develop their skills (teamwork, problem solving, presentation, communication) for college and career readiness.

5050 ACCOUNTING I

Grades: 10 - 12

Credit: 1

Prerequisite: Principles of Business, Marketing and Finance

A one-year course designed for learners to consider the field of accounting, including how it is impacted by business standards as well as the economic, financial, technological, legal and ethical factors. Learners reflect on this knowledge as they take in the process of recording, classifying, summarizing, analyzing, and communicating financial information. Learners will prepare and interpret financial reports for use in business decision-making. This course is a must if the student wants to pursue a business major in college.

5053 ACCOUNTING II

Grades: 11 - 12

Credit: 1

Prerequisite: Accounting I

This course may count as a math credit

Accounting II emphasizes the computer applications of accounting principles through on-line curriculum. Students will review the full accounting cycle on the computer. Additional concepts will be introduced in this course to advance the student's knowledge of the accounting field. The course will cover such topics as careers in accounting, review of the accounting cycle, partnerships, corporations, departmentalized accounting, delinquent accounts, plant assets, accruals, financial statement analysis, cash accounting, budgeting, computerized payroll problems and management decision making.

5010 BUSINESS INTERN: PRACTICUM IN BUSINESS MANAGEMENT

Grades: 11 - 12

Credit: 2

Prerequisite: Principles of Business, Marketing and Finance, and at least one other course in the Business, Marketing and Finance Program of Study.

The primary purpose of the business internship program is to provide learners exposure to different facets of business operations. Learners will be given opportunities to develop marketable skills through on-the-job training at businesses working with the cooperation with the Friendswood Independent School District. In addition to skill development, considerable emphasis is placed on the development of good work habits, responsibility, ethical behavior in business, honesty, loyalty and leadership. While working as an intern, the student may, or may not, earn wages. To be determined by each business/training site.

5465 SPORTS & ENTERTAINMENT MARKETING

Grades: 10 - 12

Credit: .5

Prerequisite: None

Recommended: Principles of Business, Marketing & Finance

Learn how to market local and nationally recognized sports franchise. This course is designed to develop a thorough understanding of the marketing concepts and theories that apply to sports and events. Learners will be given the opportunity to develop promotional plans, scholarship proposals, endorsement deals and evaluate management techniques.

5480 SOCIAL MEDIA MARKETING

Grades: 10 - 12

Credits: .5

Prerequisites: None

Recommended Principles of Business, Marketing and Finance

Social Media Marketing is designed to look at the rise of social media and how marketers are integrating social media tools in their overall marketing strategy. This course will investigate how the marketing community measures success in the world of social media. Learners will understand how to manage a successful social media presence for an organization. They will also learn techniques for gaining customer and consumer buy-in to achieve their marketing goals. How to properly select social media platforms to engage consumers, monitor and measure the results of these efforts will also be discussed.

5485/5486 FUNDAMENTALS OF REAL ESTATE

Grade Placement: 11 and 12

Credits: Jr and Sr Years 1 credit per year

Prerequisite: None

Recommended: Principles of Business, Marketing, and Finance.

Students must be 18 years old or turn 18 shortly after graduation.

Are you interested in becoming a real estate agent in the state of Texas? This 180 hour licensing course will guide you through an online curriculum to complete the pre-licensure education requirements of the Texas Real Estate Commission to obtain a real estate salesperson license. Students will work at their own pace through the curriculum and exam prep materials.

Pioneer School of Real Estate fees apply for course, textbook, background check, test, and license.

5003 THE STABLE – (MUSTANG STORE) – RETAIL MANAGEMENT

Grade: 10-12

Credit: 1

Prerequisite: Principles of Business or Graphic Design

Recommended: Accounting I or Social Media Marketing

Students will manage the Mustang Store both online and on campus store. Retail management focuses on the distribution and selling of products to consumers using various vending points such as chain stores, department stores, stand-alone stores, and various online markets. The course highlights the everyday mechanisms necessary to operate a successful retail establishment. The student is taught to evaluate methods for promoting merchandise, supervising employees, handling customer needs, and maintaining inventories.

5510 PRACTICUM IN MARKETING I

Grades: 11 - 12

Credit: 2, total of 3 credits when taken with Extended Practicum in Marketing

Prerequisite: Principles of Business and 1 course in Business, Marketing or Finance

Learners will gain knowledge and skills that help them become proficient in one or more of the marketing areas. Learners will be exposed to appropriate management and research skills needed to compete in a global marketing world. This practicum is designed to give learners supervised practical application of previously studied knowledge and skills. This practicum course is a paid or unpaid experience and can occur in a variety of locations.

5545 PRACTICUM IN MARKETING II

Grade: 12

Credit: 2, total of 3 credits when taken with Extended Practicum in Marketing II

Prerequisite: Practicum in Marketing I

This senior capstone course is for learners who will be experiencing different aspects of the industry. Learners will gain additional and more advanced knowledge and skills in the marketing field. This capstone course may be a paid or unpaid experience for learners.

5080 MUSTANG BUSINESS ACCELERATOR - ENTREPRENEURSHIP II

Grade: 12

Credit: 1

Prerequisite: Mustang Business INCubator - Entrepreneurship I

ACCELerator fosters startup development to transition the business founded in INCubatoredu into a sustainable, functioning business. Students will be challenged to think critically about the process of getting, growing and keeping customers, developing business processes, and continuing to build, test, and iterate the product or service. Emphasis will be placed on predicting, measuring, analyzing and concluding strategies developed and applied to promote the above mentioned process.

5008 CTE PROJECT BASED CAPSTONE

Grade: 11-12

Credit: 1

Prerequisite: None

Project-Based Research is a course for students to research a real-world problem. Students are matched with a mentor from the business or professional community to develop an original project on a topic related to career interests. Students use scientific methods of investigation to conduct in-depth research, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

5090/5091 CAREER PREPARATION I/EXTENDED CARRER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course

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.

5092/5093 CAREER PREPARATION II / EXTENDED CAREER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course.

Career Preparation II provides an opportunity 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.





Education and Training Career Cluster

The Education and Training career cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training career cluster. This career cluster includes a diverse spectrum of occupations, ranging from teaching assistant, classroom teacher, to school administrator.

Statewide Program of Study: Teaching and Training

The Teaching and Training program of study focuses on occupational and educational opportunities associated with careers related to teaching, instructing, and creating instructional and enrichment materials. The program of study includes recognizing a variety of student groups and their corresponding needs, identifying processes for developing curriculum and coordinating educational content, and coaching groups and individuals.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Principles of Education and Training
Level 2	<ul style="list-style-type: none"> Child Development
Level 3	<ul style="list-style-type: none"> Ready, Set, Teach I - Instructional Practices
Level 4	<ul style="list-style-type: none"> Ready Set Teach II - Practicum in Education and Training Career and Technical Education Project-Based Capstone Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

Dual Credit	5386 Dual Credit Ready Set Teach II
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Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Serve as a camp counselor to learn mentoring, facilitation, and lesson planning skills Volunteer in a tutoring center to learn lesson planning and skills assessment
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in FCCLA Participate in TAFE

Aligned Industry-Based Certifications

- Educational Aide I



Example Postsecondary Opportunities

Apprenticeships

- Teacher Apprentice



Associate Degrees

- Adult and Continuing Education and Teaching
- Educational/Instructional Technology

Bachelor's Degrees

- Elementary Education and Teaching
- Secondary Education and Teaching

Master's, Doctoral, and Professional Degrees

- Educational Leadership and Administration, General
- Curriculum and Instruction

Additional Stackable IBCs/License

- Generalist, Grades EC-4



Example Aligned Occupations

Teaching Assistants, Except Postsecondary

Median Wage: \$28,066
Annual Openings: 10,000
10-Year Growth: 15%

Secondary School Teachers, Except Special Education and CTE

Median Wage: \$61,035
Annual Openings: 8,288
10-Year Growth: 14%

Education Administrators, Kindergarten through Secondary

Median Wage: \$81,976
Annual Openings: 2,676
10-Year Growth: 14%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/1/2024.



For more information visit:
<https://tea.texas.gov/academic-college-career-and-military-career-and-technical-education/communities-of-study/additional-resources>



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



Education and Training Career Cluster

Statewide Program of Study: Teaching and Training

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
	5360 Principles of Education and Training* 13014200 (1 credit)	Prerequisites: None Grades: 9-12	
Level 2	Course	Prerequisites Corequisites	Career Clusters
	5370 Child Development* 13024700 (1 credit)	Recommended Prerequisites: Principles of Education and Training Grades: 9-12	
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5380 Ready Set Teach I - Instructional Practices 13014400 (2 credits)	Prerequisites: Principles of Education and Training or Child Development Grades: 11-12	
Level 4	Course	Prerequisites Corequisites	Career Clusters
	5385 Ready Set Teach II - Practicum in Education and Training 5386 A/B Dual Credit Ready Set Teach II - Practicum in Education and Training First Time Taken: 13014500 (2 credits)	Prerequisites: Ready Set Teach I - Instructional Practices Grade: 12	
Continued on next page			

* Indicates course is included in more than one program of study.

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Education and Training Career Cluster

Statewide Program of Study: Teaching and Training

Course Information

Course	Prerequisites Corequisites	Career Clusters
Level 4 5008 Career and Technical Education Project-Based Capstone* First Time Taken: 12701101 (1 credit)	Prerequisites: None Grades: 11-12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

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Career & Technical Education Electives

Courses in this cluster will count toward the

Public Service Endorsement

EDUCATION AND TRAINING CAREER CLUSTER

5360 PRINCIPLES OF EDUCATION AND TRAINING

Grades: 9 - 12

Credits: 1

Prerequisites: None

This course will serve as a foundation for students interested in teaching fields ranging from preschool to high school. Students will explore the various roles and responsibilities of schools and describe typical personal characteristics, qualities and aptitudes of education professionals. Student will also investigate post secondary options.

5370 CHILD DEVELOPMENT

Grade: 9 - 12

Credit: 1

Prerequisite: None

Recommended – Principles of Education and Training

This course is designed to study human growth and development from newborns through school-age children. Emphasis will be on current trends and studies in child behaviors guidance and childcare for optimal family management. Students will analyze these topics to promote the well-being and healthy development of children.

5380 READY SET TEACH I: INSTRUCTIONAL PRACTICES

Grade: 11 - 12

Credit: 2

Prerequisite: Principles of Education and Training or Child Development.

This course allows an opportunity for field-based internship that provides students with knowledge of child and adolescent development as well as principles of effective teaching practices. Students work under the joint direction of their classroom teacher and a mentoring teacher in Fisd. Students will plan instructional activities and lessons as well as understand the responsibilities of teachers and all careers related to the Education field.

5385 READY SET TEACH II: PRACTICUM IN EDUCATION OR 5386A/ DUAL CREDIT COLLEGE READY SET TEACH II: PRACTICUM IN EDUCATION 5386B AND TRAINING (WEIGHTED COLLEGE CREDIT)

Grade: 12

Credit: 2

Prerequisite: Ready, Set Teach I: Instructional Practices

This course is designed for the student who demonstrated success in Teacher Education Training I. Students will be more intensely immersed in the educational process by job-shadowing their mentoring teacher in all aspects of the teaching profession or have the opportunity to work with the FHS Mustang Preschool. All careers in education will be explored in depth. Students will have the opportunity to earn the Region IV Substitute Training Certificate.

Students who:

- Take the practicum courses in the Education and Training Cluster
- Graduate from college as an Education Major with a passing GPA

Will be guaranteed an interview in Friendswood ISD upon college graduation. This will not guarantee a job, only an interview.

5008 CTE PROJECT BASED CAPSTONE

Grade: 11-12

Credit: 1

Prerequisite: None

Project-Based Research is a course for students to research a real-world problem. Students are matched with a mentor from the business or professional community to develop an original project on a topic related to career interests. Students use scientific methods of investigation to conduct in-depth research, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

5090/5091 CAREER PREPARATION I/EXTENDED CARRER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course

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5092/5093 CAREER PREPARATION II / EXTENDED CAREER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course.

Career Preparation II provides an opportunity 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.



**REFINING AND
CHEMICAL
PROCESSES**



Energy Career Cluster

The Energy career cluster prepares individuals for careers in the designing, processing, planning, maintaining, generating, transmission, and distribution of traditional and alternative energy. This career cluster includes occupations ranging from petroleum engineers, rotary drill operators, chemical technicians and, power plant operators to solar photovoltaic installers and wind turbine service technicians.

Statewide Program of Study: Refining and Chemical Processes

The Refining and Chemical Processes program of study focuses on occupational and educational opportunities associated with how to monitor, adjust, and operate equipment housed in petrochemical plants and refineries. This program of study includes exploration of computer technology and instrumentation used to operate a variety of systems and industrial processes.



Secondary Courses for High School Credit

Level 1

Level 2

- Level 3
- Math for PTEC
 - Humanities for PTEC
 - Introduction to Process Technology
 - Speech for PTEC

- Level 4
- Principles of Quality PTEC
 - English for PTEC
 - Technical Writing for PTEC
 - Government for PTEC

Aligned Advanced Academic Courses

AP or IB	AP Chemistry
Dual Credit	Dual Credit Process Technology at the LyondellBasell Center for Petrochemical, Energy, and Technology San Jacinto College

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count toward concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> • Shadow a chemical technician in a laboratory at a chemical manufacturing plant • Intern at a power plant to learn about industrial processes and plant operations
Expanded Learning Opportunities	<ul style="list-style-type: none"> • Tour a refining and chemical plant • Participate in SkillsUSA

Aligned Industry-Based Certifications

- NCCER Core
- NCCER Electronic System Technician Level I
- NCCER Instrumentation Level I
- Certified Production Technician (CPT) 4.0
- Lean Six Sigma Green Belt Certification
- Industrial Technology Maintenance (ITM) - Process Control Systems



Example Postsecondary Opportunities

Associate Degrees

- Chemical Process Technology
- Instrumentation Technology/Technician
- Manufacturing Engineering Technology/Technician
- Industrial Technology/Technician



Bachelor's Degrees

- Chemical Engineering
- Engineering/Industrial Management
- Industrial Engineering
- Manufacturing Engineering

Master's, Doctoral, and Professional Degrees

- Mechanical Engineering
- Chemical Engineering
- Engineering/Industrial Management
- Industrial Engineering



Example Aligned Occupations

Chemical Technicians

Median Wage: \$58,129
Annual Openings: 892
10-Year Growth: 17%

Power Plant Operators

Median Wage: \$94,669
Annual Openings: 231
10-Year Growth: 3%

Petroleum Engineers

Median Wage: \$134,225
Annual Openings: 1,443
10-Year Growth: 27%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/6/2024



For more information visit:

<https://www.texas.gov/education/college-career-and-military/career-and-technical-education/programs-of-study-additional-resources>



Successful completion of the Refining and Chemical Processes program of study will fulfill requirements of the Business and Industry endorsement.



Energy Career Cluster

Statewide Program of Study: Refining and Chemical Processes

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
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Level 2

Course	Prerequisites Corequisites	Career Clusters
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Level 3

Course	Prerequisites Corequisites	Career Clusters
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5903 Math for PTEC - Applied Mathematics for Technical Professionals*
12701410 (0.5 credit)

Prerequisites: None
Junior Year - Fall



5905 Humanities for PTEC
03221600 (0.5 credit)

Prerequisites: None
Junior Year - Fall



5802 Introduction to Process Technology
13040502 (1 credit)

Prerequisites: None
Junior Year - Spring



5901 Speech for PTEC
03240900 (1 credit)

Prerequisites: None
Junior Year - Spring



Level 4

Course	Prerequisites Corequisites	Career Clusters
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5807 Principles of Quality PTEC
13040504 (1 credit)

Prerequisites: Introduction to Process Technology
Senior Year - Fall



5808 English for PTEC
03220400 (0.5 credit)

Prerequisites: None
Senior Year - Fall



5809 Technical Writing for PTEC
03220400 (0.5 credit)

Prerequisites: English for PTEC
Senior Year - Spring



5810 Government for PTEC
03330100 (0.5 credit)

Prerequisites: None
Senior Year - Spring



* Indicates course is included in more than one program of study.

For additional information on the Energy career cluster, contact cte@tee.texas.gov or visit <https://tee.texas.gov/cte>



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Refining and Chemical Processes

Career & Technical Education Electives

Courses in this cluster will count toward the

Business and Industry Endorsement

ENERGY CAREER CLUSTER

5903 WORKFORCE DUAL CREDIT MATH FOR PROCESS TECHNOLOGY

Grade Placement: Fall Junior Year

Credit: .5

Prerequisite: TSI Reading, Writing, and Math Level 6

Applied Mathematics for Technical Professionals uses problem-solving situations, hands-on activities, and technology to extend mathematical thinking and engage student reasoning. Situations relating to technical applications provide students opportunities to make connections with mathematics and the workplace. In addition, students will learn the skills necessary to communicate using mathematics. Hands-on activities will allow students to model, explore, and develop abstract concepts applicable to technical careers. This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.

5905 WORKFORCE DUAL CREDIT HUMANITIES FOR PROCESS TECHNOLOGY

Grade Placement: Fall Junior Year

Credit: .5

Prerequisite: TSI Reading, Writing, and Math Level 6

This stand-alone course is an interdisciplinary survey of cultures focusing on the philosophical and aesthetic factors in human values with an emphasis on the historical development of the individual and society and the need to create. This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.

5802 WORKFORCE DUAL CREDIT INTRODUCTION TO PROCESS TECHNOLOGY

Grade Placement: Spring Junior Year

Credit: 1

Prerequisite: TSI Reading, Writing, and Math Level 6

This course covers math skills applicable to industrial occupations. Includes fraction and decimal manipulation, measurement, percentage, and problem solving techniques for equations and ratio/proportion applications. This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.

5901 WORKFORCE DUAL CREDIT PUBLIC SPEAKING FOR PROCSS TECHNOLOGY

Grade Placement: Spring Junior Year

Credit: 1 Prerequisite: TSI Reading, Writing, and Math Level 6

This course is an application of communication theory and practice to the public speaking context, with emphasis on audience analysis, speaker delivery, ethics of communication, cultural diversity, and speech organizational techniques to develop students' speaking abilities, as well as ability to effectively evaluate oral presentations. This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.

5807 WORKFORCE DUAL CREDIT PRINCIPLES OF QUALITY FOR PROCESS TECHNOLOGY

Grade Placement: Fall Senior Year

Credit: 1

Prerequisite: Introduction to Process Technology

In this study of the background and application of quality concepts, topics include team skills, quality tools, statistics, economics and continuous improvement. As part of the course, students use statistical process control to collect, organize, and analyze data; describe the principles of quality control; demonstrate team skills; and apply quality tools to process systems.

This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.

5808 WORKFORCE DUAL CREDIT ENGLISH FOR PROCESS TECHNOLOGY

Grade Placement: Fall Senior Year

Credit: 0.5

Prerequisite: TSI Reading, Writing, and Math Level 6

This course provides an intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis is on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus is on writing the academic essay as a vehicle for learning, communicating, and critical analysis. This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.

5809 WORKFORCE DUAL CREDIT INTRO TO TECHNICAL WRITING FOR PROCESS TECHNOLOGY

Grade Placement: Spring Senior Year

Credit: 0.5

Prerequisite: TSI Reading, Writing, and Math Level 6

This course introduces the principles, techniques, and skills needed for scientific, technical, and business writing. This course is designed for technical students. This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.

5810 WORKFORCE DUAL CREDIT GOVERNMENT FOR PROCESS TECHNOLOGY

Grade Placement: Spring Senior Year

Credit: 0.5

Prerequisite: TSI Reading, Writing, and Math Level 6

This course is an introductory survey of the United States political system. Topics include origin and development of the U.S. Constitution; structure and powers of the national government including the legislative, executive, and judicial branches; federalism; political participation; the national election process; public policy; civil rights and civil liberties. This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.



Engineering Career Cluster

The Engineering career cluster focuses on planning, designing, testing, building, and maintaining of machines, structures, materials, systems, and processes using empirical evidence and science, technology, and math principles. This career cluster includes occupations ranging from mechanical engineer and drafter to electrical engineer and to mapping technician.

Statewide Program of Study: Engineering Foundations

The Engineering Foundations program of study focuses on occupational and educational opportunities associated with a wide range of skills applied in the Engineering industry. Students will design, test, and evaluate projects related to engines, machines, and structures. This program of study includes applying scientific, mathematical, and empirical evidence to solve problems through innovation, design, construction, operation, and maintenance of different engineering systems.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Principles of Applied Engineering - FJH Introduction to Engineering Design (PLTW)
Level 2	<ul style="list-style-type: none"> Robotics I
Level 3	<ul style="list-style-type: none"> SystemsGo Rocketry - Engineering Design and Presentation I Engineering Science (PLTW -POE) Digital Electronics (PLTW DE) Computer Integrated Manufacturing (PLTW) Aerospace Engineering (PLTW) Civil Engineering and Architecture (PLTW) Engineering Design and Development (PLTW)
Level 4	<ul style="list-style-type: none"> Career and Technical Education Project-Based Capstone Practicum in Science, Technology, Engineering, and Mathematics Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

AP or IB	AP Calculus AB AP Computer Science A	AP Physics 1 AP Physics 2 AP Statistics
Dual Credit	UT OnRamps Physics	PLTW Dual Credit Opportunities

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Intern at an engineering, robotics, or aerospace company. Visit an engineering firm and shadow multiple types of engineers.
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in SkillsUSA or TSA Join a local engineering association and attend meetings.

Aligned Industry-Based Certifications

<ul style="list-style-type: none"> Autodesk Associate (Certified User) AutoCAD Autodesk Associate (Certified User) Fusion 360 Autodesk Associate (Certified User) Inventor for Mechanical Design Autodesk Associate (Certified User) Revit Architecture Autodesk Associate (Certified User) Revit for Electrical Autodesk Associate (Certified User) Revit for Structural Design Autodesk Certified Professional Fusion 360 Autodesk Certified Professional in AutoCAD for Design and Drafting Autodesk Certified Professional in Civil 3D for Infrastructure Design Autodesk Certified Professional in Inventor for Mechanical Design Autodesk Certified Professional in Revit for Architectural Design Autodesk Certified Professional in Revit for Electrical Design Autodesk Certified Professional in Revit for Structural Design C-200 Certified Industry 4.0 Associate – Robot System Operations Certified SOLIDWORKS Associate (CSWA) – Academic 	<ul style="list-style-type: none"> Certified SOLIDWORKS Associate (CSWA) – Mechanical Design Certified SOLIDWORKS Associate (CSWA) – Simulation Certified SOLIDWORKS Associate (CSWA) – Sustainability Certified SOLIDWORKS (CSWP) – Academic Certified SOLIDWORKS Professional (CSWP) – Mechanical Design Certified SOLIDWORKS Professional (CSWP) – Model Based Definition Certified SOLIDWORKS Professional (CSWP) – Simulation Certified SOLIDWORKS Professional (CSWP) – Drawing Tools Engineering Technology Foundations Pre-Engineering/Engineering Technology – Job Ready SEMIAC Robot Operator 1 Certified Logistics Technician (COT) Certified Production Technician (CPT) 4.0 Lean Six Sigma Green Belt Certification
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Successful completion of the Engineering Foundations program of study will fulfill requirements of the Business and Industry endorsement or the STEM endorsement if the math and science requirements are met.



Example Postsecondary Opportunities

Apprenticeships

- Industrial Engineering Technician Apprenticeship



Associate Degrees

- Manufacturing Engineering Technology/Technician
- Robotics Technology/Technician

Bachelor's Degrees

- Electrical and Electronics Engineering
- Engineering, General

Master's, Doctoral, and Professional Degrees

- Electrical and Electronics Engineering
- Engineering, General

Additional Stackable IBCs/Licensures

- Professional Engineer (PE License)
- Engineer in Training Certification (EIT)



Example Aligned Occupations

Civil Engineering Technologists and Technicians

Median Wage: \$61,138
Annual Openings: 765
10-Year Growth: 11%

Aerospace Engineers

Median Wage: \$115,694
Annual Openings: 483
10-Year Growth: 18%

Mechanical Engineers

Median Wage: \$99,937
Annual Openings: 1,755
10-Year Growth: 19%

Data Source: TexasWages, Texas Workforce Commission, Retrieved 3/8/2024.



For more information visit:
<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Engineering Career Cluster

Statewide Program of Study: Engineering Foundations

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
5270W Introduction to Engineering Design (PLTW-IED)* N1303742 (1 credit)	Prerequisites: None Grades: 9-12	

Level 2

Course	Prerequisites Corequisites	Career Clusters
5272 Robotics I* 13037000 (1 credit)	Prerequisites: None Grades: 9-12	

Level 3

Course	Prerequisites Corequisites	Career Clusters
5271 SystemsGo Rocketry -Engineering Design and Presentation I* 13036500 (1 credit)	Prerequisites: IED Corequisites: Algebra II Grades: 10-12	
4900W Engineering Science* (PLTW-POE) 13037500 (1 credit)	Prerequisites: IED, Algebra I, Biology Recommended Prerequisites: Geometry and IPC, Chemistry, or Physics Grades: 10-12	
3605W Digital Electronics* (PLTW-DE) 13037600 (1 credit)	Prerequisites: IED, Geometry, and CEA or ES Grades: 11-12	
5290W Aerospace Engineering (PLTW-AE)* N1303745 (1 credit)	Prerequisites: IED, Geometry, and CEA or ES Grades: 11-12	

Continued on next page

* Indicates course is included in more than one program of study.

For additional information on the Engineering career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Engineering Career Cluster







































Statewide Program of Study: Engineering Foundations

Course Information

Level 3

Course	Prerequisites Corequisites	Career Clusters
5280W Civil Engineering and Architecture (PLTW-CEA)* N1303747 (1 credit)	Prerequisites: IED and Algebra I Grades: 10-12	 
5255W Computer Integrated Manufacturing (PLTW-CIM) N1303748 (1 credit)	Prerequisites: Engineering Science Grades: 11-12	
5295 Engineering Design and Development (PLTW)* N1303749 (1 credit)	Prerequisites: IED Recommended Prerequisites: At least two courses in engineering with at least one being a Level 2 or higher course	

Level 4

Course	Prerequisites Corequisites	Career Clusters
5008 Career and Technical Education Project-Based Capstone* First Time Taken: 12701101 (1 credit)	Prerequisites: None Grades: 11-12	         
5085 Practicum in Science, Technology, Engineering, and Mathematics* First Time Taken: 13037400 (2 credits)	Prerequisites: Algebra I and Geometry Recommended Prerequisites: 1 Engineering course Level 3 or higher Grade: 12	   
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	           
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	           

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Career & Technical Education Electives

Courses in this cluster will count toward the
STEM Endorsement

ENGINEERING CAREER CLUSTER

PROJECT LEAD THE WAY (PLTW)

As a PLTW student, you have exclusive access to a variety of recognition opportunities including college credit, scholarships, preferred admissions at colleges and universities, internships, apprenticeships, and other avenues to highlight your unique skills. It is important for students to check with their prospective colleges/universities regarding the acceptance of credits.

pltw.org/experience-pltw/student-opportunities

5270W INTRODUCTION TO ENGINEERING DESIGN, WEIGHTED COURSE (PLTW IED)

Grade: 9 - 12

Credit: 1

Prerequisite: None

Introduction to Engineering is the first course in engineering sequence and it uses a project-based curriculum that focuses on making math and science relevant for students. By engaging in hands-on, real-world projects and state-of-the-art software, students understand how math and science concepts, design processes teamwork lead to solutions. Learners taking this class will be required to present one of the classroom projects to a group of engineers at a STEM fair held at FHS during the spring semester for real world feedback and insight in the field.

5272 ROBOTICS I

Grade: 9 - 12

Credit: 1

Prerequisite: None

In Robotics I, students will transfer academic skills to component designs in a project based environment through implementation of the design process. Students will build prototypes or use simulation software to test their designs. Additionally, students will explore career opportunities, employer expectations, and educational needs in the robotic and automation industry.

5280W CIVIL ENGINEERING AND ARCHITECTURE, WEIGHTED COURSE (PLTW CEA)

Grades: 10 - 12

Credit: 1

Prerequisite: IED and Algebra I

This project-based course provides an overview of the fields of Civil Engineering and Architecture, while emphasizing how these fields work together to build a functional artful structure. Students will investigate current industry developments in the site planning, green and sustainable design in both residential and commercial design. Learners taking this class will be required to present one of the classroom projects to a group of engineers at a STEM fair held at FHS during the spring semester for real world feedback and insight in the field.

4900W ENGINEERING SCIENCE , WEIGHTED COURSE (PLTW ES)

Grades: 10 - 12

Credit: 1

Prerequisite: IED, Algebra I, and Biology

Recommended: Geometry; and IPC, Chemistry, or Physics

This course may count as a science credit

This course explores the field of engineering and engineering technology. Learners will explore various technology systems and manufacturing processes in order help them understand how engineers and technicians use math, science and technology to solve engineering problems. ES focuses heavily on group design and Project Based Learning. Learners will gain hands on insight into various engineering disciplines. Learners will present a classroom project to a group of engineers for real world feedback at a STEM Fair held at FHS in the spring semester.

5290W AEROSPACE ENGINEERING, WEIGHTED COURSE (PLTW AE)

Grade: 11 - 12

Credit: 1

Prerequisite: IED, Geometry and CEA or ES

Aerospace Engineering (AE) is the study of the engineering discipline, which develops new technologies for use in aviation, defense systems, and space exploration. The course explores the evolution of flight, flight fundamentals, navigation and control, aerospace materials, propulsion, space travel, orbital mechanics, ergonomics, remotely operated systems and related careers. In addition the course presents alternative applications for aerospace engineering concepts. Learners taking this class will be required to present one of the classroom projects to a group of engineers at a STEM fair held at FHS during the spring semester for real world feedback and insight in the field.

5255W COMPUTER INTEGRATED MANUFACTURING (PLTW CIM)

Grade: 11-12

Credit: 1

Prerequisite: Engineering Science

The course deepens the skills and knowledge of an engineering student within the context of efficiently creating the products around us. Students build upon their Computer Aided Design (CAD) experience through the use of Computer Aided Manufacturing (CAM) software. CAM transforms a digital design into a program that a Computer Numerical Controlled (CNC) mill uses to transform a block of raw material into a product designed by a student. Students learn and apply concepts related to integrating robotic systems such as Automated Guided Vehicles (AGV) and robotic arms into manufacturing systems. Throughout the course students learn about manufacturing processes and systems. This course culminates with a capstone project where students design, build, program, and present a manufacturing system model capable of creating a product.

3605W DIGITAL ELECTRONICS, WEIGHTED COURSE (PLTW DE)

Grade: 11 - 12

Credit: 1

Prerequisite: IED, Geometry, and CEA or ES

This course may count as math credit.

This course is designed to teach you about applied logic, which introduces you to the basics of electronics and digital systems - the building blocks to many products you use. The course is designed to expose learners to engineering design, and troubleshooting techniques that are used in the electronics field. Computer simulation software is used to design and test digital circuitry in addition to actually constructing them. The projects are traditional in which you will learn how machines think. You will also learn a systematic approach that engineers use to design the electronics that are used every day. Learners taking this class will be required to present one of the classroom projects to a group of engineers at a STEM fair held at FHS during the spring semester for real world feedback and insight in the field.

5295W ENGINEERING DESIGN & DEVELOPMENT, WEIGHTED COURSE (PLTW EDD)

Grades: 11 - 12

Credit: 1

Prerequisite: IED, ES, and 1 additional PLTW course

This is an engineering research course in which learners work in pairs to research, design and construct a solution to an open-ended engineering problem. Learners apply principles developed in the three preceding courses and are guided by a community mentor. They must present progress reports, submit a final written report and defend their solutions to a panel of outside reviewers at the end of the school year.

5271 SYSTEMSGO TSOILSKOVSKY ROCKETRY-ENGINEERING DESIGN AND PRESENTATION I

Grade Placement: 10-12

Credit: 1

Prerequisite: IED and concurrent Algebra II

Students enrolled in this course will demonstrate knowledge and skills of the design process as it applies to Rocketry using multiple software applications and tools necessary to produce and present working drawings, solid model renderings, and prototypes. Students will design and build three small rockets, each with more difficult criteria. The goal of the course is for students to design, develop, test, and analyze a rocket to carry a 1 pound payload to an apogee of 1 mile.

5085 PRACTICUM IN STEM

Grade: 12

Credit: 2

Prerequisite: Algebra I and Geometry

Recommended: At least one course from Engineering

Practicum in STEM is designed to give students supervised hands-on, real world practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations in Science, Technology, Engineering or Math appropriate to the nature and level of experience. This practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Science, Technology, Engineering, and Mathematics (STEM) Career Cluster

5008 CTE PROJECT BASED CAPSTONE

Grade: 11-12

Credit: 1

Prerequisite: None

Project-Based Research is a course for students to research a real-world problem. Students are matched with a mentor from the business or professional community to develop an original project on a topic related to career interests. Students use scientific methods of investigation to conduct in-depth research, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

5090/5091 CAREER PREPARATION I/EXTENDED CARRER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course

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.

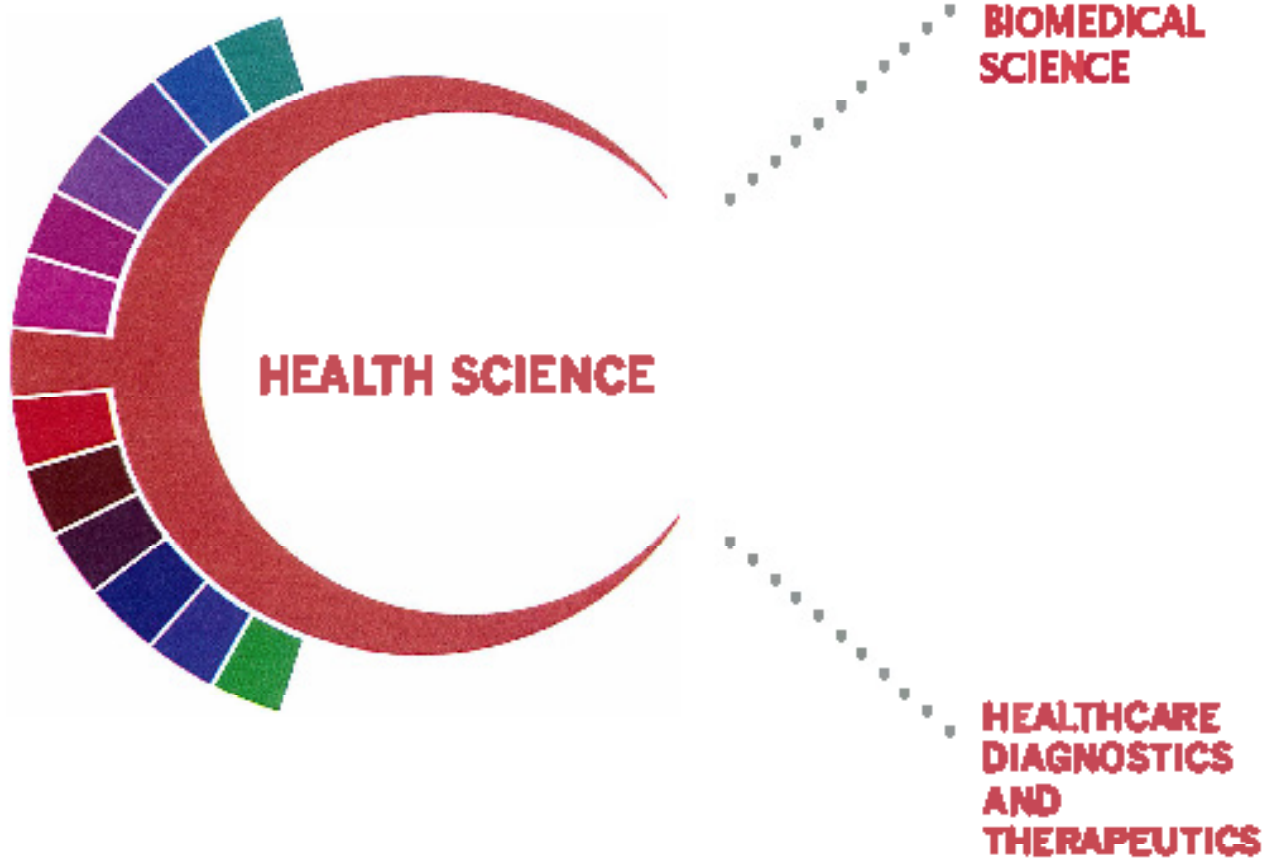
5092/5093 CAREER PREPARATION II / EXTENDED CAREER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course.

Career Preparation II provides an opportunity 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.





Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

Statewide Program of Study: **Biomedical Science**

The Biomedical Science program of study focuses on occupational and educational opportunities associated with the study of biology and medicine. This program of study includes researching and diagnosing diseases, pre-existing conditions, and other determinants of health. Students will also practice patient care and communication.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Principles of Health Science Principles of Biomedical Science (PLTW)
Level 2	<ul style="list-style-type: none"> Medical Terminology - FJH Human Body Systems (PLTW)
Level 3	<ul style="list-style-type: none"> Medical Interventions (PLTW)
Level 4	<ul style="list-style-type: none"> Biomedical Innovation (PLTW) Career and Technical Education Project-Based Capstone Practicum in Health Science Practicum in Science, Technology, Engineering, and Mathematics Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

AP or IB	AP Biology	AP Chemistry
Dual Credit	Dual credit Emergency Medical Technician	

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

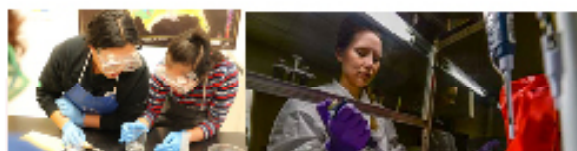
Work-Based Learning Activities	<ul style="list-style-type: none"> Intern with a biological or medical scientist at a healthcare organization or health research company to learn scientific testing methods Shadow a clinical laboratory technician to observe laboratory testing processes
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in Health Occupations Students of America (HOSA)

Aligned Industry-Based Certifications

- Biotechnician Assistant Credentialing Exam (BACE)
- Medical Laboratory Assistant
- Medical Laboratory Technician



Successful completion of the Biomedical program of study will fulfill requirements of the Public Services endorsement or the STEM endorsement if the math and science requirements are met.



Example Postsecondary Opportunities

Apprenticeships

- Medical Laboratory Technician

Associate Degrees

- Biotechnology
- Biological Sciences

Bachelor's Degrees

- Biology
- Cellular and Molecular Biology

Master's, Doctoral, and Professional Degrees

- Forensic Science and Technology
- Biomedical Sciences

Additional Stackable IBCs/License

- Cytotechnologist



Example Aligned Occupations

Medical Equipment Preparers

Median Wage: \$38,827
Annual Openings: 519
10-Year Growth: 18%

Forensic Science Technicians

Median Wage: \$56,971
Annual Openings: 249
10-Year Growth: 22%

Biological Technicians

Median Wage: \$45,787
Annual Openings: 879
10-Year Growth: 14%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:
<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Health Science Career Cluster

Statewide Program of Study: **Biomedical Science**

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
5430 Principles of Health Science* 13020200 (1 credit)	Prerequisites: None Grades: 9-12	
5410W Principles of Biomedical Science (PLTW - PBS) N1302092 (1 credit)	Prerequisites: None Grades: 9-12	

Level 2

Course	Prerequisites Corequisites	Career Clusters
5425W Human Body Systems (PLTW - HBS) 13020600 (1 credit)	Prerequisites: Biology Corequisites: Chemistry Recommended Prerequisites: One course from Biomedical or Health Science Grades: 10-12	

Level 3

Course	Prerequisites Corequisites	Career Clusters
5415W Medical Interventions (PLTW - MI) 13020800 (1 credit)	Prerequisites: Biology, Chemistry, and either PBS or HBS Grades: 11-12	

Level 4

Course	Prerequisites Corequisites	Career Clusters
5440W Biomedical Innovation (PLTW) N1302095 (1 credit)	Prerequisites: PBS or HBS, and Medical Interventions Grades: 12	

Continued on next page

* Indicates course is included in more than one program of study.

For additional information on the Health Science career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Health Science Career Cluster

Statewide Program of Study: **Biomedical Science**

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
5008 Career and Technical Education Project-Based Capstone* First Time Taken: 12701101 (1 credit)	Prerequisites: None Grades: 11-12	
5435 Practicum in Health Science* - CCMA First Time Taken: 13020500 (2 credits)	Prerequisites: Health Science Theory and Biology Grades: 12	
5434 A/B Dual Credit Practicum in Health Science* - EMT Second Time Taken: 13020510 (2 credits)	Prerequisites: Health Science Theory and Biology Grades: 12	
5085 Practicum in Science, Technology, Engineering, and Mathematics* First Time Taken: 13037400 (2 credits)	Prerequisites: Algebra I and Geometry Corequisites: None Recommended Prerequisites: 1 Engineering course Level 3 or higher Grade: 12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

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Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

Statewide Program of Study: **Diagnostic and Therapeutic Services**

The Diagnostic and Therapeutic Services program of study focuses on occupational and educational opportunities associated with diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study includes exploration of patient treatment and rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Principles of Health Science
Level 2	<ul style="list-style-type: none"> Medical Terminology - FJH Pharmacy I Human Body Systems (PLTW HBS)
Level 3	<ul style="list-style-type: none"> Emergency Medical Technician–Basic Health Science Theory Medical Interventions (PLTW MI)
Level 4	<ul style="list-style-type: none"> Pharmacology Practicum in Health Science Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

AP or IB	AP Biology	AP Chemistry
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Dual Credit	Dual credit Emergency Medical Technician
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Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in Health Occupation Students of America (HOSA) or SkillsUSA Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event

Aligned Industry-Based Certifications

<ul style="list-style-type: none"> Certified Cardiographic Technician Certified Clinical Medical Assistant Certified Dental Assistant Certified EKG Technician Certified Nurse Aide (CNA) Certified Occupational Therapy Assistant ECG Technician Emergency Medical Technician–Basic Limited Medical Radiologic Technologist Medical Assistant 	<ul style="list-style-type: none"> Medical Laboratory Assistant Medical Laboratory Technician Nationally Registered Certified EKG Technician Patient Care Technician Pharmacy Technician Phlebotomy Technician Registered Dental Assistant X-Ray Certification Emergency Medical Responder Certified Respiratory Therapist
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Successful completion of the Diagnostic and Therapeutic Services program of study will fulfill requirements of the Public Services endorsement or the STEM endorsement if the math and science requirements are met.



Example Postsecondary Opportunities

Apprenticeships

- Medical Assistant

Associate Degrees

- Emergency Medical Technology
- Radiologic Technology/Science

Bachelor's Degrees

- Emergency Medical Technology
- Medical Insurance Coding

Master's, Doctoral, and Professional Degrees

- Medicine
- Occupational Therapy

Additional Stackable IBCs/License

- Registered Diagnostic Medical Sonographer



Example Aligned Occupations

Medical Assistants

Median Wage: \$36,834
Annual Openings: 11,638
10-Year Growth: 29%

Dental Hygienists

Median Wage: \$79,663
Annual Openings: 1,352
10-Year Growth: 32%

Physician Assistants

Median Wage: \$127,332
Annual Openings: 974
10-Year Growth: 41%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/6/2024.



For more information visit:
<https://www.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Health Science Career Cluster

Statewide Program of Study: **Diagnostic and Therapeutic Services**

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
	5430 Principles of Health Science* 13020200 (1 credit)	Prerequisites: None Grades: 9-12	
Level 2	Course	Prerequisites Corequisites	Career Clusters
	4835 Medical Terminology* 13020300 (1 credit)	Prerequisites: None Grades: 9-12	
	5439 Pharmacy I 13021020 (1 credit)	Prerequisites: Biology and Chemistry Corequisites: Pharmacology Recommended Prerequisites: Principles of Health Science Grade: 12	
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5425W Human Body Systems (PLTW - HBS) 13020600 (1 credit) Anatomy & Physiology	Prerequisites: Biology Corequisites: Chemistry Recommended Prerequisites: One course from Biomedical or Health Science Grades: 10-12	
	5405A/B Dual Credit Emergency Medical Technician-Basic N1303015 (2 credits)	Prerequisites: Biology and Principles of Law Corequisites: Human Body Systems (Students in the Health Science Career Cluster should take Practicum in Health Science – EMT) Grade: 12	
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5431 Health Science Theory* 13020400 (1 credit)	Prerequisites: Biology and at least one credit in a course from the Health Science career cluster Grades: 11-12	

Continued on next page

* Indicates course is included in more than one program of study.

For additional information on the Health Science career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Health Science Career Cluster

Statewide Program of Study: **Diagnostic and Therapeutic Services**

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
5415W Medical Interventions (PLTW - MI) 13020800 (1 credit) Pathophysiology	Prerequisites: Biology, Chemistry, and either PBS or HBS Grades: 11-12	
5432 Pharmacology* 13020950 (1 credit)	Prerequisites: Biology, Chemistry, and at least one credit in a Level 2 or higher course from the Health Science career cluster Corequisites: Pharmacy I Grade: 12	
5435 Practicum in Health Science* - CCMA First Time Taken: 13020500 (2 credits)	Prerequisites: Health Science Theory and Biology Grade: 12	
5434 A/B Dual Credit Practicum in Health Science* - EMT Second Time Taken: 13020510 (2 credits)	Prerequisites: Health Science Theory and Biology (Students in the Law and Public Service Career Cluster should take 5405 A/B Dual Credit EMT-Basic with HBS) Grade: 12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

* Includes more than one program of study.

For additional information on the Health Science career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Diagnostic and Therapeutic Services

Career & Technical Education Electives

Courses in this cluster will count toward the

Public Service Endorsement

HEALTH SCIENCE CAREER CLUSTER

PROJECT LEAD THE WAY (PLTW)

As a PLTW student, you have exclusive access to a variety of recognition opportunities including college credit, scholarships, preferred admissions at colleges and universities, internships, apprenticeships, and other avenues to highlight your unique skills. It is important for students to check with their prospective colleges/universities regarding the acceptance of credits.

pltw.org/experience-pltw/student-opportunities

Courses count toward Public Service or STEM Endorsement if math and science requirements are met.

5410W PRINCIPLES OF BIOMEDICAL SCIENCE, WEIGHTED COURSE (PLTW PBS)

Grade: 9 - 12

Credit: I

Prerequisite: None

In the Principles of Biomedical Science (PBS) course, students explore concepts of biology and medicine as they take on roles of different medical professionals to solve real-world problems. Over the course of the year, students are challenged in various scenarios including investigating a crime scene to solve a mystery, diagnosing and proposing treatment to patients in a family medical practice, tracking down and containing a medical outbreak at a local hospital, stabilizing a patient during an emergency, and collaborating with others to design solutions to local and global medical problems. From design and data analysis to outbreaks, clinical empathy, health promotion, and more, students explore the vast range of careers in biomedical sciences. They develop not just technical skills, but also in-demand, transportable skills that they need to thrive in life and career.

5425W HUMAN BODY SYSTEMS, WEIGHTED COURSE (PLTW HBS)

Grade: 10 - 12

Credit: I

Prerequisite: Biology & completed or concurrent enrollment in Chemistry;

Recommended: 1 course from Health Science/Biomedical Pathway

This course may count as a science credit -Anatomy and Physiology

In the Human Body Systems (HBS) course, students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. In this project-based course, students design experiments, investigate the structures and the functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal manikin, work through interesting real world cases, and often play the role of biomedical professionals to solve medical mysteries.

5415W MEDICAL INTERVENTIONS, WEIGHTED COURSE (PLTW MI)

Grade: 11 - 12

Credit: I

Prerequisite: Principles of Biomedical Science **or** Human Body Systems, Biology, Chemistry

This course may count as a science credit - Pathophysiology

Medical Interventions (MI) allows students to investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. A “How To” manual for maintaining overall health and homeostasis in the body, the course will explore how to prevent and fight infection, how to screen and evaluate the code in our DNA, how to prevent, diagnose, and treat cancer, and how to prevail when the organs of the body begin to fail. Through these scenarios students will be exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices and diagnostics.

5440W BIOMEDICAL INNOVATION, WEIGHTED COURSE (PLTW BI)

Grade: 12

Credit: 1

Prerequisite: Principles of Biomedical Science **or** Human Body Systems and Medical Intervention

In this capstone course, students apply their knowledge and skills to answer questions or solve problems related to the biomedical sciences. Students design innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. They have the opportunity to work on an independent project and may work with a mentor or advisor from a university, hospital, physician's office, or industry. Throughout the course, students are expected to present their work to an adult audience that may include representatives from the local business and healthcare community.

0030 ISM - SCIENTIFIC RESEARCH AND DESIGN

Grade: 11-12

Credit: 1

Prerequisite: Biology, IPC, Chemistry, or Physics

This Scientific Research and Design course known as ISM allows academically advanced junior, and senior learners an opportunity to conduct career and science research investigations through an independent study mentorship. Students conduct empirical research under the guidance of a teacher facilitator and mentor. The ISM class allows learners to work with experts in various fields, acquiring practical knowledge and hands-on experience. It also presents learners an opportunity to accept the type of responsibility that is usually only given to college learners and business professionals. These components are integrated with the career and technical education emphasis of helping students gain entry-level employment in high-skill, high-wage jobs and/or continue their education. Learners must be self-motivated and have transportation to visit off-campus mentors.

5085 PRACTICUM IN STEM

Grade: 12

Credit: 2

Prerequisite: Algebra I and Geometry

Recommended: At least one course from the Biomedical Science

Practicum in STEM is designed to give students supervised hands-on, real world practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations in Science, Technology, Engineering or Math appropriate to the nature and level of experience. This practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Science, Technology, Engineering, and Mathematics (STEM) Career Cluster.

5430 PRINCIPLES OF HEALTH SCIENCE

Grades: 9 - 12

Credit: 1

Prerequisite: None

This course will satisfy the .5 credit of Health, which is required for graduation.

This course provides an introduction to the therapeutic, diagnostic, health informatics, support services and biotechnology research and development systems of the Healthcare Industry. Learners will be given the opportunity for advancement of knowledge and skills related to a variety of health careers. Learners will have hands-on experiences to develop skills in the health field. This course includes the study of medical terminology, ethics, legal issues, anatomy & physiology, disease processes, critical attributes of patient relationships, and management of patient care.

This course is recommended for anyone interested in a healthcare career.

5431 HEALTH SCIENCE THEORY

Grades: 11 - 12

Credit: 1

Prerequisite: Biology and at least one credit from the Health Science Career Cluster

This course is designed to provide for the development of advanced knowledge and skills related to a wide variety of health careers in the classroom setting. Learners will experience all aspects of patient care in the FHS simulation lab.

Possible certification offered: Certified Patient Care Technician.

Fees may apply

5435 PRACTICUM IN HEALTH SCIENCE - CCMA

Grade: 12

Credit: 2

Prerequisite: Biology, & Health Science Theory

This course is designed as an occupationally specific course to provide knowledge and skills toward certification and/or license in an allied health career. Learners develop advanced clinical skills necessary for employment in the healthcare industry or continued education in health careers.

Possible certification offered will be Certified Medical Assistant Certification (CCMA) Upon successfully earning the CCMA certification, students will be awarded two college credits from the American College of Education.

Fees may apply

5434A/5434B DUAL CREDIT COLLEGE PRACTICUM IN HEALTH SCIENCE - EMT (WEIGHTED COLLEGE CREDIT)

Grade Placement: 12

Credit: 2

Prerequisites: Health Science Theory and Biology; Qualifying TSI Score

This course is designed as an occupationally specific course to provide knowledge and skills toward certification and/or license in an allied health career. Learners develop advanced clinical skills necessary for employment in the healthcare industry or continued education in health careers. Includes 96 hours of clinical time in Emergency rooms, Operating rooms, and/or Ambulance ride-alongs.

Possible certification offered will be Emergency Medical Technician (EMT).

College of the Mainland equivalent courses: EMSP-1501 and EMSP-1260

Learners will be responsible for registration with College of the Mainland and any additional book fees.

Fees may apply.

5405A/5405B DUAL CREDIT COLLEGE EMERGENCY MEDICAL TECHNICIAN-BASIC (WEIGHTED COLLEGE CREDIT) - for students in Law and Public Service Career Cluster with Human Body Services

5439 PHARMACY I

Grades: 12

Credit: 1

Prerequisite: Biology, Chemistry

Co-requisite - Pharmacology

The Pharmacy I course is designed to build upon the knowledge and skills taught in Health Science courses for students interested in a career in the pharmaceutical field (such as a pharmacy technician or pharmacist). Instruction includes pharmacokinetics, pharmacy law, medication safety, the dispensing process, and inventory. At the end of this course students may sit for the Pharmacy Technician Certification Exam.

Fees may apply.

5432 PHARMACOLOGY

Grades: 12

Credit: 1

Prerequisite: Biology, Chemistry and at least one credit in Level 2 or higher course from the Health Science Career Cluster

Co-requisite - Pharmacy I

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. Students will have to opportunity to intern at a local Pharmacy.

Fees may apply.

5008 CTE PROJECT BASED CAPSTONE

Grade: 11-12

Credit: 1

Prerequisite: None

Project-Based Research is a course for students to research a real-world problem. Students are matched with a mentor from the business or professional community to develop an original project on a topic related to career interests. Students use scientific methods of investigation to conduct in-depth research, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

5090/5091 CAREER PREPARATION I/EXTENDED CARRER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course

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.

5092/5093 CAREER PREPARATION II / EXTENDED CAREER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course.

Career Preparation II provides an opportunity 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.



**HOSPITALITY
AND TOURISM**

..... **CULINARY ARTS**



Hospitality and Tourism Career Cluster

The Hospitality and Tourism career cluster focuses on the management, marketing, and operations of restaurants, lodging, attractions, recreation events, and travel-related services. This career cluster includes occupations ranging from reservation and transportation ticket agent to event planner and general manager.

Statewide Program of Study: Culinary Arts

The Culinary Arts program of study focuses on occupational and educational opportunities associated with the planning, directing, or coordinating activities of a food and beverage organization or department. This program of study includes opportunities involved in directing and participating in the preparation of food.



Secondary Courses for High School Credit

Level 1 • Introduction to Culinary Arts

Level 2 • Culinary Arts
• Mustang INCubatoredu - Entrepreneurship I

Level 3

Level 4 • Food Science
• Practicum in Culinary Arts I and II
• Practicum in Hospitality Services
• Career Preparation for Programs of Study
• Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

AP or IB	AP Chemistry
Dual Credit	Dual credit Culinary Arts at FHS through College of the Mainland?

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Shadow a director of a non-profit that produces and delivers food for communities in need Intern at a catering company and learn about food production for large-scale events Work part-time in a restaurant as a line cook or chef
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in FCCLA Participate in SkillsUSA Participate in American Culinary Association or the Texas Restaurant Association

Aligned Industry-Based Certifications

- Certified Fundamentals Cook
- Certified Fundamentals Pastry Cook
- Certified Hospitality and Tourism Management Professional
- Commercial Foods
- Culinary Meat Selection and Cookery Certification
- Food Protection Manager Certification
- Food Safety and Science Certification
- ManageFirst Professional
- Pre-Professional Certification in Culinary Arts
- Pre-Professional Certification in Food Science Fundamentals
- ServSafe Manager



Successful completion of the Culinary Arts program of study will fulfill requirements of the Business and Industry endorsement.



Example Postsecondary Opportunities

Associate Degrees

- Culinary Arts
- Baking and Pastry Arts

Bachelor's Degrees

- Hotel/Motel Administration/Management
- Culinary Science

Master's, Doctoral, and Professional Degrees

- Organizational Leadership
- Foodservice Systems Administration/Management

Additional Stackable IBCs/License

- Food Manager License



Example Aligned Occupations

Bakers

Median Wage: \$29,466
Annual Openings: 2,942
10-Year Growth: 26%

Chefs and Head Cooks

Median Wage: \$44,761
Annual Openings: 950
10-Year Growth: 37%

General and Operations Managers

Median Wage: \$83,220
Annual Openings: 25,450
10-Year Growth: 23%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:

<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Hospitality and Tourism Career Cluster

Statewide Program of Study: Culinary Arts

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
5338 Introduction to Culinary Arts* 13022550 (1 credit)	Prerequisites: None Grades: 9-12	

Level 2

Course	Prerequisites Corequisites	Career Clusters
5340 Culinary Arts 13022600 (2 credits)	Prerequisites: Introduction to Culinary Arts Grades: 10-12	
5040 Mustang INCubatoredu - Entrepreneurship I* 13011101 (1 credit)	Recommended Prerequisites: Principles of Business, Marketing, and Finance Grades: 11-12	

Level 3

Course	Prerequisites Corequisites	Career Clusters
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Level 4

Course	Prerequisites Corequisites	Career Clusters
5335 Food Science 13023000 (1 credit)	Prerequisites: Biology, Chemistry, and at least one credit in a Level 2 or higher course from the Hospitality and Tourism career cluster Grades: 11-12	
5350 Practicum in Culinary Arts I First Time Taken: 13022700 (2 credits)	Prerequisites: Culinary Arts Grades: 11-12	

Continued on next page

* Indicates course is included in more than one program of study.

For additional information on the Hospitality and Tourism career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Hospitality and Tourism Career Cluster

Statewide Program of Study: Culinary Arts

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
5353 Practicum in Culinary Arts II Second Time Taken: 13022710 (2 credits)	Prerequisites: Practicum in Culinary Arts I Grade: 12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

* Indicates course is included in more than one program of study.

For additional information on the Hospitality and Tourism career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Career & Technical Education Electives

Courses in this cluster will count toward the

Business & Industry Endorsement

HOSPITALITY AND TOURISM CAREER CLUSTER

5338 INTRODUCTION TO CULINARY ARTS

Grades: 9 - 12

Credit: 1

Prerequisite: None

This laboratory course will provide insight into the operations of a well-run restaurant. Students will be exposed to food production skills, as well as various levels of industry management and hospitality skills. Students will learn to make informed and correct nutritional food choices. The course will emphasize the principles of planning, organizing, staffing and controlling the management of a variety of food service operations.

5340 CULINARY ARTS

Grade: 10 - 12

Credit: 2

Prerequisite: Introduction to Culinary Arts

This laboratory course begins with the fundamentals and principles of the art of cooking and the science of baking which includes management and production skills and techniques. Learners can pursue a national sanitation certification and will learn concepts and skills to prepare them for the culinary arts industry.

5350 PRACTICUM IN CULINARY ARTS I

Grade: 11 - 12

Credit: 2

Prerequisite: Culinary Arts

This course is an extension of techniques learned in Culinary Arts 1. This course combines classroom instruction with job-specific skills related to the food service industry. Students will be exposed to advanced culinary arts techniques and restaurant management experiences.

5353 PRACTICUM IN CULINARY ARTS II

Grade: 12

Credit: 2

Prerequisite: Practicum in Culinary Arts I

This course is an extension of the techniques learned in Practicum in Culinary Arts I. This course provides occupationally specific opportunities for students to participate in learning with actual business and industry. The goal of this course is to prepare students with a variety of skills in a fast-changing workplace.

5335 FOOD SCIENCE

Grade: 11 - 12

Credit: 1

Prerequisite: Biology, Chemistry, and at least one credit in Level 2 or higher course from the Hospitality and Tourism Career Cluster

This course may count as a science credit

Food Science is the study of the nature of foods, the causes of deterioration, the principles underlying food processing, and the improvement of foods for the consuming public. Topics of study include: principles of food safety and microbiology, chemical properties of food, functions of enzymes, how leavening agents are used in baking, purposes of additives in foods, physiology of digestion, metabolism and how food provides energy, and basic nutrients and their specific properties related to food science such as carbohydrates, fats, protein, vitamins and minerals, and water.

5040 MUSTANG BUSINESS INCUBATOR-ENTREPRENEURSHIP I

Grades: 11 - 12

Credit: 1

Prerequisite: None

Recommended: Principles of Business Marketing & Finance

This course is designed to get students excited about becoming true entrepreneurs by giving them the opportunity to create and fully develop their own product and/or service. Real-world entrepreneurs and business experts will serve as coaches and mentors guiding student teams through the process of ideation, market research, and business plan development. Over the course of the year, student teams will learn about marketing, accounting, human resources, how to run experiments on their Business Model Canvas, customer segmentation, pricing, web development, as well as the legal aspects of starting a business. They will have access to a network of professionals to further develop their skills (teamwork, problem solving, presentation, communication) for college and career readiness.

5090/5091 CAREER PREPARATION I/EXTENDED CARRER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course

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.

5092/5093 CAREER PREPARATION II / EXTENDED CAREER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course.

Career Preparation II provides an opportunity 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.



COSMETOLOGY AND PERSONAL CARE SERVICES



Human Services Career Cluster

The Human Services career cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs, such as counseling and mental health services, family and community services, personal care services, and consumer services. This career cluster includes occupations ranging from community health workers to cosmetologists and nutritionists.

Regional Program of Study: Cosmetology and Personal Care Services

Approved in ESC Regions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, & 20

**The list of approved ESC regions is updated every school year. Be sure to check the CTE regional program of study website for updates.*

The Cosmetology and Personal Care Services regional program of study focuses on occupational and educational opportunities associated with providing beauty and personal care services. This program of study includes managing personal care facilities and coordinating or supervising personal service workers.

Secondary Courses for High School Credit



Level 1

Level 2

- Level 3
- Cosmetology I + Cosmetology I Lab
 - Barbering I

- Level 4
- Cosmetology II + Cosmetology II Lab
 - Barbering II

Aligned Advanced Academic Courses

Dual Credit Dual credit Cosmetology through College of the Mainland

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Work part-time in a salon, spa, or barbershop
- Participate in an apprenticeship at a salon to become an apprentice stylist

Expanded Learning Opportunities

- Tour a salon, spa, or barbershop
- Participate in SkillsUSA

Aligned Industry-Based Certifications

- Barber Operator License
- Cosmetology Manicurist License
- Cosmetology Esthetician License
- Cosmetology Operator License



Example Postsecondary Opportunities

Apprenticeships

- Apprentice Stylist

Associate Degrees

- Cosmetology Operator
- Esthetics and Skin Care

Additional Stackable IBCs/License

- Class A Barber
- Eyelash Extension Specialist
- Hair Weaving Specialist



Example Aligned Occupations

Hairdressers, Hairstylists, and Cosmetologists

Median Wage: \$27,286
Annual Openings: 8,014
10-Year Growth: 25%

Skincare Specialists

Median Wage: \$35,112
Annual Openings: 778
10-Year Growth: 38%

First-Line Supervisors of Personal Service Workers

Median Wage: \$36,795
Annual Openings: 2,253
10-Year Growth: 29%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/6/2024.



For more information visit:

<https://tea.texas.gov/academics/career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>







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



Human Services Career Cluster

Regional Program of Study: Cosmetology and Personal Care Services

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
Level 2	Course	Prerequisites Corequisites	Career Clusters
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5562A/B Cosmetology I + Cosmetology I Lab 13025210 (3 credits)	Prerequisites: None Grade: 11-12	
	5564A/B Barbering I N1302534 (3 credits)	Prerequisites: None Grade: 11-12	
Level 4	Course	Prerequisites Corequisites	Career Clusters
	5563A/B Cosmetology II + Cosmetology II Lab 13025310 (3 credits)	Prerequisites: Cosmetology I Grade: 12	
	5565A/B Barbering II N1302535 (3 credits)	Prerequisites: Barbering I Grade: 12	

* Indicates course is included in more than one program of study.

For additional information on the Human Services career cluster,
contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>

Career & Technical Education Electives

Courses in this cluster will count toward the

Public Service Endorsement

HUMAN SERVICES CAREER CLUSTER

5562 WORKFORCE DUAL CREDIT COSMETOLOGY I/EXTENDED

Grade Placement: 11-12

Credits: 3

In Cosmetology I, students coordinate integration of academic, career, and technical knowledge and skills in this laboratory instructional sequence course designed to provide job-specific training for employment in cosmetology careers. Instruction includes sterilization and sanitation procedures, hair care, nail care, and skin care and meets the Texas Department of Licensing and Regulation (TDLR) requirements for licensure upon passing the state examination. Analysis of career opportunities, license requirements, knowledge and skills expectations, and development of workplace skills are included. The extended time provides students additional lab time to develop proficient and mastery level cosmetology skills and techniques as required by Texas Department of Licensing and Regulation licensing standards. Students will be expected to demonstrate mastery in conducting the skills and techniques learned in Cosmetology I with little to no guidance. This course is offered at the College of the Mainland campus. Please meet with your counselor to enroll in this course.

5563 A/B WORKFORCE DUAL CREDIT COSMETOLOGY II/EXTENDED

Grade Placement: 11–12

Credit: 3

Prerequisite: Cosmetology I

In Cosmetology II, students will demonstrate proficiency in academic, technical, and practical knowledge and skills. The content is designed to provide the occupational skills required for licensure. Instruction includes advanced training in professional standards/employability skills; Texas Department of Licensing and Regulation (TDLR) rules and regulations; use of tools, equipment, technologies, and materials; and practical skills. The extended time provides students additional lab time to develop proficient and mastery level cosmetology skills and techniques as required by Texas Department of Licensing and Regulation licensing standards. Students are expected to develop proficient and mastery level work samples and to expand their work experiences. This course is offered at the College of the Mainland campus. Please meet with your counselor to enroll in this course.

5564 WORKFORCE DUAL CREDIT BARBERING I

Grade Placement: 11-12

Credit: 3

Prerequisite: None.

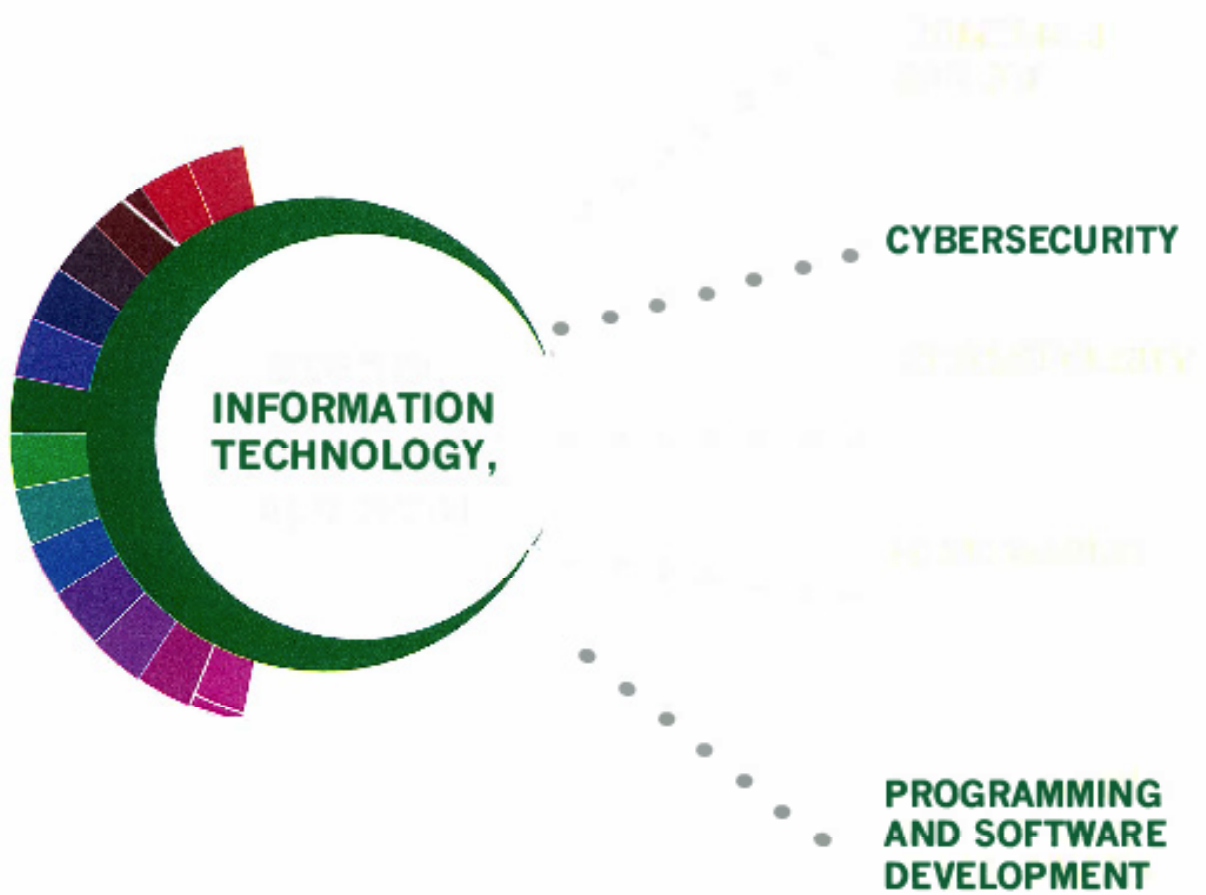
Barbering is an extended course of study that enables students to become licensed barbers through Texas Department of Licensing and Regulation (TDLR). Barbering is one program of study that allows students to earn an industry certificate that launches them into a professional career immediately, yet also specifies rigorous core curricula that prepares the student to be successful in a post-secondary learning environment. This course is offered at the College of the Mainland campus. Please meet with your counselor to enroll in this course.

5565 WORKFORCE DUAL CREDIT BARBERING II

Grade Placement: 11-12

Credit: 3 Prerequisite: Barbering I.

Barbering II is an extended course of study that enables students to become licensed barbers through Texas Department of Licensing and Regulation (TDLR). Barbering is one program of study that allows students to earn an industry certificate that launches them into a professional career immediately, yet also specifies rigorous core curricula that prepares the student to be successful in a post-secondary learning environment. This course is offered at the College of the Mainland campus. Please meet with your counselor to enroll in this course.





Information Technology Career Cluster

The Information Technology (IT) career cluster focuses on the design, development, support, and management of hardware, software, multimedia, and systems integration services. This career cluster includes occupations ranging from Software Developer and Programmer to Cybersecurity Specialists and Network Analysts.

Statewide Program of Study: Cybersecurity

The Cybersecurity program of study focuses on occupational and educational opportunities associated with planning, implementing, upgrading, or monitoring security measures for the protection of computer networks and information. This program of study includes responding to computer security breaches and viruses and administering network security measures.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Fundamentals of Computer Science - FJH
Level 2	<ul style="list-style-type: none"> Computer Science I AP Computer Science Principles
Level 3	<ul style="list-style-type: none"> AP Computer Science A AP Career Kickstart Cybersecurity 1: Networking Fundamentals AP Pilot Career Kickstart Cybersecurity 2: Cybersecurity Fundamentals
Level 4	<ul style="list-style-type: none"> Independent Study in Evolving/Emerging Technologies Career and Technical Education Project-Based Capstone Practicum in Science, Technology, Engineering, and Mathematics Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

AP or IB	AP Computer Science Principles AP Computer Science A
Dual Credit	No Dual Credit options currently.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

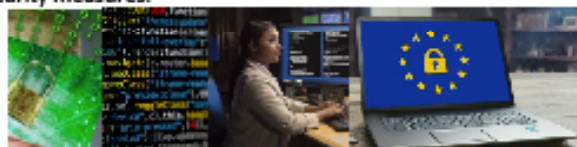
Work-Based Learning Activities	<ul style="list-style-type: none"> Intern at a local bank, hospital, or government office to develop skills in implementing security measures Interview with an information security analyst to learn how they plan for, monitor, and upgrade security measures at their organization
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in a Hackathon Participate in TSA or SkillsUSA

Aligned Industry-Based Certifications

<ul style="list-style-type: none"> Cisco 300-490 RSTECN Supporting Cisco Routing and Switching Network Devices Cisco 200-201 CCROPs - Understanding Cisco Cybersecurity Operations Fundamentals Cisco CCNA (200-301) Implementing and Administering Cisco Solutions CodeHS Cybersecurity Level 1 Certification CompTIA A+ Certification CompTIA IT Fundamentals+ CompTIA Network+ CompTIA Security+ Computer Networking Fundamentals - Job Ready 	<ul style="list-style-type: none"> Cybersecurity Fundamentals Cybersecurity Fundamentals: An ISACA Certificate Information Technology Specialist: Networking Information Technology Specialist: Java Information Technology Specialist: JavaScript Microsoft 365 Fundamentals Microsoft Security, Compliance, and Identity Fundamentals Oracle Certified Associate Java SE 8 Programmer Cloud Essentials+ CompTIA Linux+ CompTIA Servers
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Successful completion of the Cybersecurity program of study will fulfill requirements of the Business and Industry endorsement or the STEM endorsement if the math and science requirements are met.



Examples Postsecondary Opportunities

Associate Degrees

- Computer and Information Systems Security
- Computer Programming

Bachelor's Degrees

- Computer Science
- Computer Software Engineering

Master's, Doctoral, and Professional Degrees

- Computer and Information Systems Security/Auditing/Information Assurance
- Computer Software Engineering

Additional Stackable IBCs/License

- Certified Ethical Hacker (CEH)



Example Aligned Occupations

Computer User Support Specialists

Median Wage: \$51,411
Annual Openings: 5,757
10-Year Growth: 21%

Software Developers

Median Wage: \$111,705
Annual Openings: 15,324
10-Year Growth: 36%

Information Security Analysts

Median Wage: \$110,268
Annual Openings: 1,719
10-Year Growth: 49%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:

<https://tea.texas.gov/academics/online-career-and-military>
<https://tea.texas.gov/academics/online-career-and-military>
<https://tea.texas.gov/academics/online-career-and-military>



Information Technology Career Cluster



Statewide Program of Study: Cybersecurity

Course Information





Level 1

Course	Prerequisites Corequisites	Career Clusters
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Level 2

Course	Prerequisites Corequisites	Career Clusters
0500 Computer Science I* 03580200 (1 credit)	Prerequisites: Algebra I Grades: 9-12	
0505 AP Computer Science Principles* A3580300 (1 credit)	Prerequisites: Algebra I Corequisites: for 9 th graders MAP Geometry or Algebra II Grades: 9-12	

Level 3

Course	Prerequisites Corequisites	Career Clusters
5203 Digital Forensics 03580360 (1 credit)	Prerequisites: Computer Science I and Geometry Recommended Prerequisites: Computer Science II Grades: 11-12	
0510 AP Computer Science A* A3580110 (1 math credit) A3580120 (1 LOTE credit)	Prerequisites: Computer Science II Grades: 11-12	
5208 AP Career Kickstart Cybersecurity 1: Networking Fundamentals (1 credit)	Prerequisites: AP Computer Science Principles Grades: 10-12	
5209 PILOT AP Career Kickstart Cybersecurity 2: Networking Fundamentals (1 credit)	Prerequisites: AP Computer Science Principles, AP Career Kickstart Cybersecurity 1: Networking Fundamentals Grades: 11-12	

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* Indicates course is included in more than one program of study.

For additional information on the **Information Technology** career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Information Technology Career Cluster

Statewide Program of Study: Cybersecurity

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
0610 Independent Study in Evolving/Emerging Technologies* First Time Taken: 03581500 (1 credit)	Prerequisites: AP Computer Science A Grades: 11-12	
5008 Career and Technical Education Project-Based Capstone* First Time Taken: 12701101 (1 credit)	Prerequisites: None Grades: 11-12	
5085 Practicum in Science, Technology, Engineering, and Mathematics* First Time Taken: 13037400 (2 credits)	Prerequisites: Algebra I and Geometry Recommended Prerequisites: 1 Computer Science course Level 3 or higher Grade: 12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

* Indicates course is included in more than one program of study.

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Information Technology Career Cluster

The Information Technology (IT) career cluster focuses on the design, development, support, and management of hardware, software, multimedia, and systems integration services. This career cluster includes occupations ranging from Software Developer and Programmer to Cybersecurity Specialists and Network Analysts.

Statewide Program of Study: Programming and Software Development

The Programming and Software Development program of study focuses on occupational and educational opportunities associated with researching, designing, developing, testing, and 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 includes creating, modifying, and testing the codes, forms, and script that allow computer applications to run.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Fundamentals of Computer Science – FJH
Level 2	<ul style="list-style-type: none"> Computer Science I AP Computer Science Principles Mustang INCubatoredu - Entrepreneurship I
Level 3	<ul style="list-style-type: none"> Computer Science II AP Computer Science A
Level 4	<ul style="list-style-type: none"> Computer Science III Independent Study in Evolving/Emerging Technologies Career and Technical Education Project-Based Capstone Practicum in Science, Technology, Engineering, and Mathematics Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

AP or IB	AP Calculus AB AP Statistics
Dual Credit	No Dual Credit offerings currently.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Intern at a local IT company to develop skills in programming and coding Shadow a software developer to learn how they create and improve software to support efficient processes at their company
Expanded Learning Opportunities	<ul style="list-style-type: none"> Program and create a game Participate in SkillsUSA or TSA

Aligned Industry-Based Certifications

<ul style="list-style-type: none"> Apple App Development with Swift C++ Certified Associate Programmer Certified Entry-Level Python Programmer (PCEP) Certified Professional Programmer Certified User: Programmer CodeHS Python Level 1 Certification CompTIA IT Fundamentals+ CompTIA Linux+ 	<ul style="list-style-type: none"> Information Technology Specialist: Java Information Technology Specialist: JavaScript Microsoft Azure AI Fundamentals Microsoft Azure Data Fundamentals Oracle Certified Associate Java SE 8 Programmer Oracle Database SQL Certified Associate CompTIA A+ Certification CompTIA Server+
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Successful completion of the Programming and Software Development program of study will fulfill requirements of the Business and Industry endorsement or the STEM endorsement if the math and science requirements are met.



Example Postsecondary Opportunities

- Apprenticeships**
 - Computer Programmer Apprenticeship
- Associate Degrees**
 - Computer Programming
 - Web Page, Digital/Multimedia and Information Resources Design
- Bachelor's Degrees**
 - Data Science
 - Computer Engineering
- Master's, Doctoral, and Professional Degrees**
 - Management Science
 - Computer Software Engineering
- Additional Stackable IBCs/License**
 - AWS Certified Developer Associate



Example Aligned Occupations

Computer User Support Specialists

Median Wage: \$51,411
Annual Openings: 5,757
10-Year Growth: 21%

Software Developers

Median Wage: \$111,705
Annual Openings: 15,324
10-Year Growth: 36%

Computer Programmers

Median Wage: \$87,997
Annual Openings: 1,176
10-Year Growth: 4%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:
<https://tea.texas.gov/academics/college-career-and-military-programming-and-technical-education/programs-of-study/additional-resources>



Information Technology Career Cluster

Statewide Program of Study: Programming and Software Development

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
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Level 2

Course	Prerequisites Corequisites	Career Clusters
0500 Computer Science I* 03580200 (1 credit)	Prerequisites: Algebra I Grades: 9-12	
0505 AP Computer Science Principles* A3580300 (1 credit)	Prerequisites: Algebra I Corequisites: for 9 th graders – MAP Geometry or Algebra II Grades: 9-12	
5040 Mustang INCubatoredu - Entrepreneurship I* 13011101 (1 credit)	Recommended Prerequisites: Principles of Business, Marketing, and Finance Grades: 11-12	

Level 3

Course	Prerequisites Corequisites	Career Clusters
0530W Computer Science II 03580300 (1 credit)	Prerequisites: Geometry and Computer Science I or AP Computer Science Principles Grades: 10-12	
0510 AP Computer Science A* A3580110 (1 math credit) A3580120 (1 LOTE credit)	Prerequisites: Computer Science II Grades: 11-12	

Continued on next page

* Indicates course is included in more than one program of study.

For additional information on the Information Technology career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Information Technology Career Cluster

Statewide Program of Study: Programming and Software Development

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
0535 Computer Science III 03580350 (1 credit)	Prerequisites: AP Computer Science A, Grades: 11-12	
0610 Independent Study in Evolving/Emerging Technologies* First Time Taken: 03581500 (1 credit)	Prerequisites: AP Computer Science A Grades: 11-12	
5085 Practicum in Science, Technology, Engineering, and Mathematics* First Time Taken: 13037400 (2 credits)	Prerequisites: Algebra I and Geometry Corequisites: None Recommended Prerequisites: 1 Computer Science course Level 3 or higher Grade: 12	
5008 Career and Technical Education Project-Based Capstone* First Time Taken: 12701101 (1 credit)	Prerequisites: None Grades: 11-12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

* Indicates course is included in more than one program of study.

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Career & Technical Education Electives

Courses in this cluster will count toward the

STEM Endorsement

INFORMATION TECHNOLOGY CAREER CLUSTER

0500 COMPUTER SCIENCE I

Grade: 9 - 12

Credit: 1

Prerequisite: Algebra I

This course may count as a world language credit. *Not all colleges accept Computer Science as a world language credit.*

Computer Science I is designed to introduce students to coding through an exploration of engaging content. The Carnegie Mellon University (CMU) Academy curriculum is used throughout the year. The programs that the students write start off with programming simple cartoon characters, landscapes and other various items using geometric concepts. Afterwards, they dive into functions and understand how useful they can be in coding. Step by step the class begins to add more coding features to their programs, even adding animation to their characters. Students will team up to create an animated game using their knowledge of coding concepts that they had practiced in their mini programs. CMU has built their own graphics library into the Python programming language into their curriculum making it easier to learn how to code.

0505 AP COMPUTER SCIENCE PRINCIPLES

Grade: 9 - 12

Credit: 1

Prerequisite: Algebra I; Freshman may enroll in this course if they are concurrently enrolled in MAP Geometry or Algebra II

This course may count as a world language credit. *Not all colleges accept Computer Science as a world language credit.*

CS II and the AP CS classes are not necessary to enroll in this course. It is a survey of computer science and not a programming course like AP CS. The course will teach technological skills of the 21st century.

This course will help learners problem solve, analyze data, be creative thinkers and collaborate while learning new computer skills. This course is taught with two concurrent computer science strands: creativity and principles. The creativity theme topics are: Computing as a creative activity, processing of data creates knowledge, abstraction, levels of abstraction, managing complexity, computational thinking and programming and debugging. The Principles theme topics are: Data and information, algorithms, basic ideas behind technologies including computers, networks, search engines, and multimedia. Topics also include social uses and abuses of information, and the foundations of privacy.

0530 COMPUTER SCIENCE II, WEIGHTED COURSE

Grade: 10 - 12

Credit: 1

Prerequisite: CSI or AP Computer Science Principles, and Geometry

This course may count as a world language credit. *Not all colleges accept Computer Science as a world language credit.*

The goal of this course is to teach students the Python programming language by creating simple games. Python is a language with a simple syntax, and has a powerful set of libraries. It is an interpreted language, with a rich programming environment, including a robust debugger and profiler. While it is easy for beginners to learn, it is widely used in many scientific areas for data exploration. This course is an introduction to the Python programming language for students without prior programming experience. We cover data types, control flow, object-oriented programming, and graphical user interface-driven applications. The examples and problems used in this course are drawn from diverse areas such as text processing, simple graphics creation and image manipulation, genomics and arcade game development. Instead of written finals for the semesters, there will be collaborative projects that the students will manage and create an application with documentation that they will be presenting on the final day.

Due to the emphasis on object-oriented programming, students who take this course will be prepared to take the AP Computer Science course the following year.

5040 MUSTANG BUSINESS INCUBATOR-ENTREPRENEURSHIP I

Grades: 11 - 12

Credit: 1

Prerequisite: None

Recommended: Principles of Business Marketing & Finance

This course is designed to get students excited about becoming true entrepreneurs by giving them the opportunity to create and fully develop their own product and/or service. Real-world entrepreneurs and business experts will serve as coaches and mentors guiding student teams through the process of ideation, market research, and business plan development. Over the course of the year, student teams will learn about marketing, accounting, human resources, how to run experiments on their Business Model Canvas, customer segmentation, pricing, web development, as well as the legal aspects of starting a business. They will have access to a network of professionals to further develop their skills (teamwork, problem solving, presentation, communication) for college and career readiness.

5085 PRACTICUM IN STEM

Grade: 12

Credit: 2

Prerequisite: Algebra I and Geometry

Recommended: At least one Computer Science course Level 3 or higher.

Practicum in STEM is designed to give students supervised hands-on, real world practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations in Science, Technology, Engineering or Math appropriate to the nature and level of experience. This practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Science, Technology, Engineering, and Mathematics (STEM) Career Cluster

0510 AP COMPUTER SCIENCE A

Grade: 11 - 12

Credit: 1

Prerequisite: Computer Science II

This course will count as a math and world language credit. *Not all colleges accept Computer Science as a world language credit.* The math credit will be transcribed as an earned grade with AP weight. The World Language credit will be transcribed as a Pass/Fail credit

AP Computer Science stresses object-oriented programming methodology (OOP) with an emphasis on problem solving and algorithmic development. This course is meant to be the equivalent of a first semester college course in computer science. It goes beyond merely learning to use applications like word processing, spreadsheets, and Internet browsers. Learners with an interest related to engineering, business, the computer professions, bioinformatics, genetics, physics, chemistry, pre-med or math should take this course. This course uses the Java language and focuses on the basic principles needed to design and build applications. At the end of the course, learners will have the choice to take the AP Computer Science test. If a student passes the test, college credit for a semester of computer science may be awarded to the student. Learners will be expected to participate by solving problems, implementing those solutions on the computer, and then testing the problems using reasonable data to ensure accuracy. The problems solved will come from a variety of disciplines including mathematics, physics, chemistry, biology, economics, business and engineering. Students should consider their prior mathematical experiences when considering this course. There will be a strong emphasis on logical reasoning in addition to the use of mathematical concepts from Algebra, Geometry and Statistics. Students are encouraged to compete in local programming contests to improve their programming skills as well UIL competitions.

0535 COMPUTER SCIENCE III, WEIGHTED COURSE

Grade: 11-12

Credit: 1

Prerequisite: AP Computer Science A

This course may count as a world language credit. *Not all colleges accept Computer Science as a world language credit.*

This course is a continuation of AP Computer Science delving into advanced topics within Java. A great emphasis is placed on the organization of information through the implementation of data structures: two-dimensional arrays, array lists, linked lists, stacks, queues, trees, sets, maps, and hash tables. The discussion of algorithmic analysis using Big-O notation is a key concept of promoting efficiency in programs. Dynamic programming is introduced as well as other algorithmic programming techniques. Students learn to analyze large projects of interacting classes. Learners will become familiar with the interaction of hardware and software components and the ethical and social implications of computing.

0610 INDEPENDENT STUDY IN EVOLVING/EMERGING TECHNOLOGIES IN COMPUTER SCIENCE

0612 INDEPENDENT STUDY IN EVOLVING/EMERGING TECHNOLOGIES IN COMPUTER SCIENCE II

Grade: 11 - 12

Credit: 1

Prerequisite: 0610 - AP Computer Science A, 0612 - IS in E/E Tech in CS I

Through the study of evolving/emerging computer science technologies, students will study and research a topic of their choosing within the field of computer science. Students will learn to make informed decisions, develop and produce original work that exemplifies the standards identified by the computer science discipline. Students will gather information of their project by identifying task requirements, using search strategies, and using technology to access, analyze, and evaluate the acquired information. By using technology as a tool that supports 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. After completion of their research, students will then present their work to their peer group as well as community members.

5008 CTE PROJECT BASED CAPSTONE

Grade: 11-12

Credit: 1

Prerequisite: None

Project-Based Research is a course for students to research a real-world problem. Students are matched with a mentor from the business or professional community to develop an original project on a topic related to career interests. Students use scientific methods of investigation to conduct in-depth research, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

5090/5091 CAREER PREPARATION I/EXTENDED CARRER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course

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.

5092/5093 CAREER PREPARATION II / EXTENDED CAREER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course.

Career Preparation II provides an opportunity 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.

5208 AP Career Kickstart Cybersecurity 1: Networking Fundamentals

Grade: 10 - 12

Credit: 1

Prerequisite: AP Computer Science Principles

The first course in the Cybersecurity Pathway, Cybersecurity 1: Networking Fundamentals is a full-year high school course that covers the fundamentals of networking. It is equivalent to a college-level Introduction to Networking course. The course interweaves essential networking concepts with relevant, hands-on problem-solving activities to maximize students' understanding of network hardware and configuration, the use of protocols to enable reliable and accurate transmission of data between different hosts around the world, and relevant security practices that secure the transmission of data both within and between computer networks. CK Networking Fundamentals is designed to help students develop understanding and skills that will contribute to their ability to pass widely recognized professional cybersecurity certifications such as CompTIA Network+, Cisco Certified Network Associate (CCNA), and Cisco Certified Support Technician (CCST): Networking.

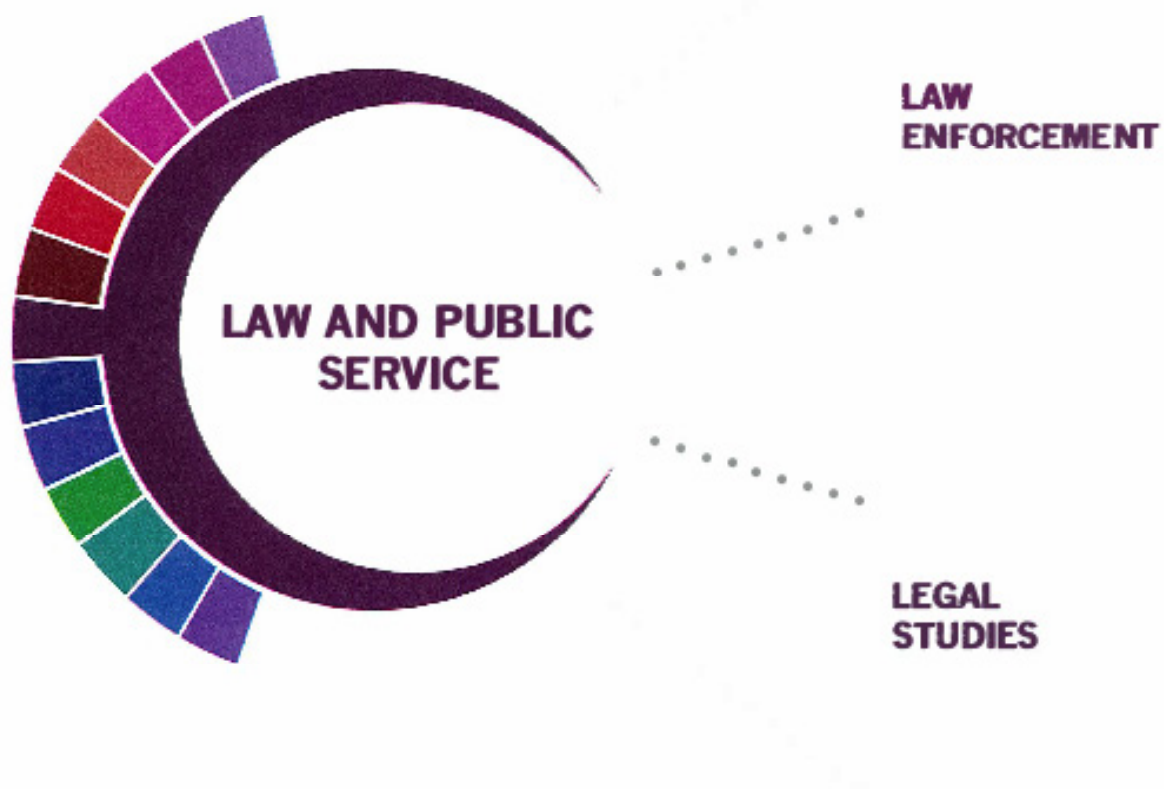
5209 PILOT AP Career Kickstart Cybersecurity 2: Cybersecurity Fundamentals

Grade: 11 - 12

Credit: 1

Prerequisite: AP Computer Science Principles, AP Career Cybersecurity 1: Networking Fundamentals

Cybersecurity Fundamentals is a full-year course covering foundational cybersecurity concepts and skills and is equivalent to a college-level Introduction to Cybersecurity course. Students will explore the current cyber threat landscape to understand the types of adversarial organizations face and the techniques adversaries use to compromise systems and data. Students will learn how vulnerabilities create risk and how organizations implement security controls to manage that risk. Topics in the course include physical, operational, application, and network security; security controls; cryptography; access control; attacks and detection; and response and recovery. Students will research emerging trends in cybersecurity and gain hands-on experience implementing security protocols. Career Kickstart Cybersecurity Fundamentals is designed to help students develop understanding and skills that will contribute to their ability to pass widely recognized professional cybersecurity certifications such as CompTIA Security+ and Cisco Certified Support Technician (CCST): Cybersecurity.





Law and Public Service Career Cluster

The Law and Public Service career cluster focuses on planning, managing, and providing legal services, public safety, protective services, and homeland security, including professional and technical support services. This career cluster includes occupations ranging from police officer and firefighter to political scientist and lawyer.

Statewide Program of Study: Law Enforcement

The Law Enforcement program of study focuses on occupational and educational opportunities associated with the development and enforcement of laws by various branches of law enforcement. This program of study includes the history, organization, and functions of local, state, and federal law enforcement. Students will understand the role of constitutional law at local, state, and federal levels; the U.S. legal system; criminal law; and law enforcement terminology and the classification and elements of crime.



Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Principles of Law, Public Safety, Corrections, and Security
Level 2	<ul style="list-style-type: none"> Law Enforcement I Criminal Investigation
Level 3	
Level 4	<ul style="list-style-type: none"> Forensic Science Practicum in Law, Public Safety, Corrections, and Security Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

Dual Credit	No Dual Credit offerings currently.
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Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Shadow a detective to learn about investigations and the role of detectives in law enforcement Intern in dispatch at a local law enforcement agency to learn about first responder roles and processes
Expanded Learning Opportunities	<ul style="list-style-type: none"> Visit a police department Participate in TSA or SkillsUSA

Aligned Industry-Based Certifications

- IAED Emergency Telecommunicator
- Non-Commissioned Security Officer Level II License



Example Postsecondary Opportunities

Apprenticeships

- Security Specialist

Associate Degrees

- Criminal Justice
- Law Enforcement

Bachelor's Degrees

- Forensic Science
- Criminal Justice

Master's, Doctoral, and Professional Degrees

- Criminal Justice
- Criminology and Criminal Justice

Additional Stackable IBCs/Licensures

- Jailer – Basic County Corrections
- Basic Telecommunicator



Example Aligned Occupations

Police and Sheriff's Patrol Officers

Median Wage: \$64,373
Annual Openings: 5,424
10-Year Growth: 13%

Detectives and Criminal Investigators

Median Wage: \$82,090
Annual Openings: 1,536
10-Year Growth: 8%

First-Line Supervisors of Police and Detectives

Median Wage: \$97,571
Annual Openings: 5,461
10-Year Growth: 12%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:
<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Successful completion of the Law and Public Service program of study will fulfill requirements of the Public Services endorsement.




Law and Public Service Career Cluster



Statewide Program of Study: Law Enforcement

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
5700 Principles of Law, Public Safety, Corrections, and Security* 13029200 (1 credit)	Prerequisites: None Grades: 9-12	


Level 2

Course	Prerequisites Corequisites	Career Clusters
5705 Law Enforcement I 13029300 (1 credit)	Recommended Prerequisites: Principles of Law, Public Safety, Corrections, and Security Grades: 10-12	
5745 Criminal Investigation 13029550 (1 credit)	Recommended Prerequisites: Principles of Law, Public Safety, Corrections, and Security Grades: 10-12	

Level 3

Course	Prerequisites Corequisites	Career Clusters
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Level 4

Course	Prerequisites Corequisites	Career Clusters
4140 Forensic Science* 13029500 (1 credit)	Prerequisites: Biology and Chemistry, IPC, Tech Principles or Physics Recommended Prerequisites: Algebra II and one course from the Law Career Cluster Grades: 12	

Continued on next page

* Indicates course is included in more than one program of study.

For additional information on the Law and Public Service career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Law and Public Service Career Cluster

Statewide Program of Study: Law Enforcement

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
5740 Practicum in Law, Public Safety, Corrections, and Security* First Time Taken: 13030100 (2 credits)	Recommended Prerequisites: Principles of Law and 2 additional classes from the Law Career Cluster Grades: 11-12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

* Indicates course is included in more than one program of study.

For additional information on the Law and Public Service career cluster, contact cte@tes.texas.gov or visit <https://tes.texas.gov/cte>



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Law and Public Service Career Cluster

The Law and Public Service career cluster focuses on planning, managing, and providing legal services, public safety, protective services, and homeland security, including professional and technical support services. This career cluster includes occupations ranging from police officer and firefighter to political scientist and lawyer.

Statewide Program of Study: Legal Studies

The Legal Studies program of study focuses on topics such as legal research, legal writing, rules of procedure, case management, law office technology, and legal ethics. Areas of the legal system studied include aspects of family law, criminal law, and contract law.

Secondary Courses for High School Credit



Level 1	<ul style="list-style-type: none"> Principles of Law, Public Safety, Corrections, and Security
Level 2	<ul style="list-style-type: none"> Business Law Court Systems and Practices
Level 3	
Level 4	<ul style="list-style-type: none"> Forensic Science Career and Technical Education Project-Based Capstone Practicum in Law, Public Safety, Corrections, and Security Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

Dual Credit	No Dual credit offerings currently.
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Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Shadow a clerk in a courthouse to learn about civil litigation Intern at a law firm, working alongside a paralegal to produce and organize legal documents Work part-time as an administrative assistant at a local non-profit that provides legal aid
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in Mock Trial Participate in TSA or SkillsUSA

Aligned Industry-Based Certifications

- General Management
- Administrative Assisting



Example Postsecondary Opportunities

Apprenticeships

- Law Apprenticeship

Associate Degrees

- Paralegal Studies
- Court Reporting and Captioning

Bachelor's Degrees

- Legal Research
- Legal Studies

Master's, Doctoral, and Professional Degrees

- Juris Doctorate
- International and Comparative Law

Additional Stackable IBCs/Licensures

- Paralegal



Example Aligned Occupations

Court Reporters

Median Wage: \$51,177
Annual Openings: 174
10-Year Growth: 11%

Paralegals and Legal Assistants

Median Wage: \$56,310
Annual Openings: 4,046
10-Year Growth: 23%

Lawyers

Median Wage: \$134,158
Annual Openings: 3,915
10-Year Growth: 19%



Successful completion of the Legal Studies program of study will fulfill requirements of the Public Services endorsement.

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:
<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Law and Public Service Career Cluster

Statewide Program of Study: Legal Studies

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
5700 Principles of Law, Public Safety, Corrections, and Security* 13029200 (1 credit)	Prerequisites: None Grades: 9-12	

Level 2

Course	Prerequisites Corequisites	Career Clusters
5067 Business Law* 13011700 (1 credit)	Recommended Prerequisites: Principles of Business or Principles of Law Grades: 11-12	
5715 Court Systems and Practices 13029600 (1 credit)	Recommended Prerequisites: Criminal Justice - Law Enforcement I Grades: 10-12	

Level 3

Course	Prerequisites Corequisites	Career Clusters
4140 Forensic Science* 13029500 (1 credit)	Prerequisites: Biology, Chemistry, IPC, Tech Principles or Physics Recommended Prerequisites: Algebra II and one course from the Law Career Cluster Grades: 12	
5008 Career and Technical Education Project-Based Capstone* First Time Taken: 12701101 (1 credit)	Prerequisites: None Grades: 11-12	

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* Indicates course is included in more than one program of study.

For additional information on the Law and Public Service career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Law and Public Service Career Cluster

Statewide Program of Study: Legal Studies

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
5740 Practicum in Law, Public Safety, Corrections, and Security* First Time Taken: 13030100 (2 credits)	Recommended Prerequisites: Principles of Law and 2 additional classes from the Law Career Cluster Grades: 11-12	
5090/5091 Career Preparation I for Programs of Study/Extended* First Time Taken: 12701121 (2 credits) 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grades: 11-12	
5092/5093 Career Preparation II for Programs of Study/Extended* Second Time Taken: 12701122 (2 credits) 12701142 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Grade: 12	

* Indicates course is included in more than one program of study.

For additional information on the Law and Public Service career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>.



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Career & Technical Education Electives

Courses in this cluster will count toward the

Public Service Endorsement

LAW AND PUBLIC SERVICE CAREER CLUSTER

5700 PRINCIPLES OF LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

Grades: 9 - 12

Credit: 1

Prerequisite: None

This course provides an overview of professionals in law enforcement, security, corrections and emergency management for students interested in careers or further study. Students will examine the roles and responsibilities of people throughout the criminal justice system, as well as emergency services such as fire fighting and emergency medical services. A highlight is a mock trial that incorporates all of the above fields studied in the course.

5705 LAW ENFORCEMENT I

Grades: 10 - 12

Credit: 1

Prerequisite: None

Recommended: Principles of Law, Public Safety, Corrections & Security

This course focuses on how the police function in American society. Topics include police skills and techniques, the use of force, criminal investigations, crime scene investigations, The Penal Code and Code of Criminal Procedure, the relationship between the police and civilians, and the role of the police in criminal trials, the prosecution of criminal cases, the criminal court system.

5745 CRIMINAL INVESTIGATION

Grades: 10 - 12

Credit: 1

Prerequisite: None

Recommended: Principles of Law, Public Safety, Corrections & Security

Student focus on the process and skills needed to conduct a thorough, lawful criminal investigation. Areas studied include crime scene search and analysis, witness interviewing, surveillance, special investigative techniques such as wiretaps, writing reports, search warrants, arrests, and appearance at trial. Hands on activities include collecting and comparing fingerprints; measuring, sketching, and photographing crime scenes; collecting DNA; and interviewing witnesses and suspects.

5715 COURT SYSTEMS AND PRACTICES

Grades: 10 - 12

Credit: 1

Prerequisites: None

Recommended: Principles of Law, Public Safety, Corrections & Security

This course is a close look at the career fields that support the U.S. legal system, including lawyers, judges, court reporters, administrative clerks, bail bondsmen, court security officers, evidence custodians, and others. We examine the Federal and Texas courts systems, and strive to understand the importance of the rule of law in a free society. Highlights include performing "The Trial of Socrates" and comparing it to a modern trial, and visiting a local county court house.

5067 BUSINESS LAW

Grades: 11 - 12

Credit: 1

Prerequisite: None

Recommended: Principles of Business, Marketing & Finance and/or Principles of Law, Public Safety, Corrections & Security

Students will examine the relationship between business and law. Areas of study include contracts, government regulations, human resources, personal injury and other law suits, financing a business, risk management, and other aspects of starting and operating a business that present legal challenges. Typically students choose a business they would like to start and identify how these legal challenges would apply.

5740 PRACTICUM IN LAW AND PUBLIC SAFETY

Grades: 11 - 12

Credit: 2

Prerequisites: None

Recommended: Principles of Law, Safety, Corrections & Security and 2 additional Law courses

Students gain real-world experience through paid or unpaid work based learning with law enforcement agencies, local courts, local government agencies, private companies, and attorneys.

4140 FORENSIC SCIENCE

Grade: 12

Credit: 1

Prerequisite: Biology, Chemistry and either IPC or Physics or Tech Principles

Recommended: Algebra II and 1 course from Law & Public Service

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

5008 CTE PROJECT BASED CAPSTONE

Grade: 11-12

Credit: 1

Prerequisite: None

Project-Based Research is a course for students to research a real-world problem. Students are matched with a mentor from the business or professional community to develop an original project on a topic related to career interests. Students use scientific methods of investigation to conduct in-depth research, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

5090/5091 CAREER PREPARATION I/EXTENDED CARRER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course

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.

5092/5093 CAREER PREPARATION II / EXTENDED CAREER PREPARATION FOR PROGRAMS OF STUDY

Grade: 11-12

Credit: 2 or 3

Prerequisite: At least one Level 2 or higher CTE course.

Career Preparation II provides an opportunity 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.



Local Implementation Considerations:

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

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



Manufacturing Career Cluster

The Manufacturing career cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and process engineering. This career cluster includes occupations ranging from welder and machinist to industrial engineering technician and semi-conductor processing technician.

Statewide Program of Study: **Welding**

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



Secondary Courses for High School Credit

Level 1

Level 2

Level 3 • Welding I

Level 4 • Welding II + Welding II Lab

Aligned Advanced Academic Courses

Dual Credit Dual credit Welding through College of the Mainland.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Job shadow a welder
- Intern for a local welding company

Expanded Learning Opportunities

- Tour a welding shop
- Participate in SkillsUSA or TSA
- Participate in a welding project that benefits the community

Aligned Industry-Based Certifications

- API 1104 Welding Pipelines and Related Facilities
- AWS Certified Welder
- AWS D1.1 Structural Steel
- AWS D9.1 Sheet Metal Welding
- AWS SENSE Level I: Entry Welder
- Industrial Technology Maintenance (ITM)
- Maintenance Welding
- NCCER Construction Technology Certification Level I
- NCCER Core
- NCCER Welding Level I
- Welding - Job Ready



Example Postsecondary Opportunities

Apprenticeships

- Welding

Associate Degrees

- Welding Technology
- Building/Construction Site Management
- Operations Management and Supervision

Bachelor's Degrees

- Welding Technology
- Construction Management
- Project Management
- Building/Construction Site Management

Master's, Doctoral, and Professional Degrees

- Engineering
- Engineering/Industrial Management
- Manufacturing Engineering
- Construction Engineering



Example Aligned Occupations

Welders, Cutters, Solderers, and Brazers

Median Wage: \$48,177
Annual Openings: 6,792
10-Year Growth: 23%

First-Line Supervisors of Production and Operating Workers

Median Wage: \$62,584
Annual Openings: 5,926
10-Year Growth: 17%

Industrial Production Managers

Median Wage: \$119,691
Annual Openings: 1,296
10-Year Growth: 19%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:

<https://www.texas.gov/education/online-career-and-military/online-career-and-technical-education/resources-of-students-and-parents>





Successful completion of the Welding program of study will fulfill requirements of the Business and Industry endorsement.



Manufacturing Career Cluster

Statewide Program of Study: Welding

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
Level 2	Course	Prerequisites Corequisites	Career Clusters
Level 3	Course	Prerequisites Corequisites	Career Clusters
	5755A/B Welding I 13032300 (2 credits)	Prerequisites: None Grade: 11	
Level 4	Course	Prerequisites Corequisites	Career Clusters
	5756A/B Welding II + Welding II Lab 13032400 (3 credits)	Prerequisites: Welding I Grade: 12	

* Indicates course is included in more than one program of study.

For additional information on the Manufacturing career cluster,
contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Career & Technical Education Electives

Courses in this cluster will count toward the

Business & Industry Endorsement

MANUFACTURING CAREER CLUSTER

5755 A/B WORKFORCE DUAL CREDIT WELDING I

Grade Placement: 11–12

Credit: 2

Prerequisite: None.

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

This course is offered at the College of the Mainland campus. Please meet with your counselor to enroll in this course.

5756 A/B WORKFORCE DUAL CREDIT WELDING II

Grade Placement: 12

Credit: 2

Prerequisite: Welding I.

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

This course is offered at the College of the Mainland campus. Please meet with your counselor to enroll in this course.



MARITIME





Transportation, Distribution, and Logistics Career Cluster

The Transportation, Distribution, and Logistics career cluster focuses on planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes transportation infrastructure planning and management, logistics services, and mobile equipment and facility maintenance. This career cluster includes occupations ranging from automotive mechanic, avionics technician, and automotive entrepreneur to pilots and logistics planning professionals.

Regional Program of Study: Maritime

Approved in ESC Regions 2, 4, and 5

*The list of approved ESC regions is updated every school year, be sure to check the CTE regional program of study website for updates. The Maritime regional program of study focuses on educational and occupational opportunities associated with the operation of water vessels. This program of study includes maintenance procedures and operation of maritime navigational aids, maritime traffic controls, and communications equipment to ensure conformance with federal safety regulations.



Secondary Courses for High School Credit

Level 1

Level 2

- Level 3
- Maritime Science I
 - Maritime Science II

- Level 4
- Practicum in Distribution and Logistics + Extended Practicum in Distribution and Logistics

Aligned Advanced Academic Courses

Dual Credit

Dual credit Maritime through San Jacinto College
Maritime Technology Training Center

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Shadow at a maritime port to learn about maritime traffic control
- Participate in a pre-apprenticeship with a government agency (such as U.S. Coast Guard) working closely with ship engineers

Expanded Learning Opportunities

- Participate in SkillsUSA
- Tour various maritime vessels

Aligned Industry-Based Certifications

- Certified Logistics Technician (CLT)



Example Postsecondary Opportunities

Apprenticeships

- Maritime Apprenticeship Program (MAP)

Associate Degrees

- Logistics
- Transportation and Mobility Management

Bachelor's Degrees

- Logistics and Supply Chain Management
- Maritime Transportation

Master's, Doctoral, and Professional Degrees

- Logistics
- Transportation and Mobility Management

Additional Stackable IBCs/License

- Limited Tonnage Workboat Mate



Example Aligned Occupations

Sailors and Marine Oilers

Median Wage: \$69,299
Annual Openings: 329
10-Year Growth: 10%

Motorboat Operators

Median Wage: \$40,223
Annual Openings: 83
10-Year Growth: 14%

Captains, Mates, and Pilots of Water Vessels

Median Wage: \$102,803
Annual Openings: 293
10-Year Growth: 13%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/6/2024.



For more information visit:
<https://tea.texas.gov/academics/college-career-and-military-prap/career-and-technical-education/programs-of-study/additional-resources>



Transportation, Distribution, and Logistics Career Cluster

Regional Program of Study: Maritime

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
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Level 2

Course	Prerequisites Corequisites	Career Clusters
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Level 3

Course	Prerequisites Corequisites	Career Clusters
5914 Maritime Science I N1304662 (1 credit)	Prerequisites: None Grade: 11 - Fall	
5915 Maritime Science II N1304663 (1 credit)	Prerequisites: Maritime Science I Grade: 11 - Spring	

Level 4

Course	Prerequisites Corequisites	Career Clusters
5916 A/B Practicum in Distribution and Logistics + Extended Practicum in Distribution and Logistics* First Time Taken: 13040475 (3 credits)	Prerequisites: Maritime Science I and II Grade: 12	

* Indicates course is included in more than one program of study.

For additional information on the Transportation, Distribution, and Logistics career cluster,
contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Career & Technical Education Electives

Courses in this cluster will count toward the
Business & Industry Endorsement

TRANSPORTATION, DISTRIBUTION, AND LOGISTICS CAREER CLUSTER

5914 WORKFORCE DUAL CREDIT MARITIME SCIENCE I

5915 WORKFORCE DUAL CREDIT MARITIME SCIENCE II

Grade Placement: Junior Year

Credit: 1 for each course

Prerequisite: None

Maritime Science I provides training for entry-level employment and a basis for continuing education in deck and piloting careers and merchant mariner credentialing. Maritime Science II will instruct students in progressing aspects of vessel piloting and navigation, safety of life at sea, voyage planning, shipboard damage control and marine pollution. Specifically, students will understand safety expectations, laws, and environmental and human factors involved in the maritime industry. The course focuses on lab assignments and simulator experiences to reinforce critical-thinking and decision-making skills in navigation, ship handling, collision avoidance, and risk assessment and mitigation. Navigation instruction, including chart preparation, various distance, speed, and time relationships, positioning techniques, calculation of tides and currents, and voyage planning, and aids to navigation, will be explored. Students will learn basic shipboard damage control actions required in the event of shipboard casualties, search and rescue, advancements, collateral duties, and other personnel management issues.

This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.

5916 A/B WORKFORCE DUAL CREDIT PRACTICUM IN DISTRIBUTION AND LOGISTICS/EXTENDED

Grade Placement: Senior Year

Credit: 3

Prerequisite: Maritime Science I and II

After successful completion of Maritime Science I and II, students may participate in the Practicum course. Students will develop new skills such as advanced navigation coordination; collision avoidance; briefing the command; electronic navigation theory; basic, routine, and emergency ship handling procedures; external communications; and other relevant knowledge, skills, and techniques. Upon successful completion of this course, students will be able to plan and execute safe vessel navigation. Students will exhibit knowledge of all bridge navigation (TRANSAS, ECDIS, and Paper Charts) equipment and procedures. Using case studies and real world simulations, students will identify the contributing factors involved in maritime accidents.

This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.

Career and Technical Education
Annual Public Notification of Nondiscrimination

Friendswood ISD offers career and technical education programs in Agriculture, Food & Natural Resources; Arts, AV Technology & Communication; Business Marketing, & Finance; Education & Training; Hospitality & Tourism; Health Science; Law & Public Service; and STEM. Admission to these programs is based on student interest and completion of prerequisites. It is the policy of Friendswood ISD not to discriminate on the basis of race, color, national origin, sex or handicap in its vocational programs, services or activities and provides equal access to the Boy Scouts and other designated youth groups as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended. It is the policy of Friendswood ISD not to discriminate on the basis of race, color, national origin, sex, handicap, or age in its employment practices as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; the Age Discrimination Act of 1975, as amended; and Section 504 of the Rehabilitation Act of 1973, as amended. Friendswood ISD will take steps to assure that lack of English language skills will not be a barrier to admission and participation in all educational and vocational programs. For information about your rights or grievance procedures, contact the Title IX Coordinator, Lindsey Foley, at 281-482-1267 lfoley@fisdk12.net and/or the Section 504 Coordinator, Dahria Driskell, at 281-482-0687 ddriskell@fisdk12.net

"Career and Technical Education
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FORMULARIO DE MUESTRA"

"(Notificación Pública de No Discriminación en Programas de Educación Técnica Vocacional)" "Friendswood ISD ofrece programas de educación profesional y técnica en agricultura, alimentos y recursos naturales; Artes, Tecnología AV y Comunicación; marketing empresarial y finanzas; educación y formación; Hospitalidad y turismo; Ciencia de la salud; derecho y servicio público; y STEM. La admisión a estos programas se basa en el interés del estudiante y el cumplimiento de los requisitos previos." "Es norma de Friendswood ISD no discriminar en sus programas, servicios o actividades vocacionales y brinda igualdad de acceso a los Boy Scouts y otros grupos juveniles designados por motivos de raza, color, origen nacional, sexo o impedimento, tal como lo requieren el Título VI de la Ley de Derechos Civiles de 1964, según enmienda; Título IX de las Enmiendas en la Educación de 1972, y la Sección 504 de la Ley de Rehabilitación de 1973, según enmienda." "Es norma de Friendswood ISD no discriminar en sus procedimientos de empleo por motivos de raza, color, origen nacional, sexo, impedimento o edad, tal como lo requieren el Título VI de la Ley de Derechos Civiles de 1964, según enmienda; Título IX de las Enmiendas en la Educación, de 1972, la ley de Discriminación por Edad, de 1975, según enmienda; y la Sección 504 de la Ley de Rehabilitación de 1973, según enmienda." "Friendswood ISD tomará las medidas necesarias para asegurar que la falta de habilidad en el uso del inglés no sea un obstáculo para la admisión y participación en todos los programas educativos y vocacionales." "Para información sobre sus derechos o procedimientos de quejas, comuníquese con el Coordinador del Título IX Lindsey Foley, lfoley@fisdk12.net, 281-482-1267, y/o el Coordinador de la Sección 504, Dahria Driskell, ddriskell@fisdk12.net, 281-482-0687.

FRIENDSWOOD INDEPENDENT SCHOOL DISTRICT
302 LAUREL DR
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Acronym Definitions

ACT	American College Testing
AD ISM	Academic Decathlon Independent Study Mentorship
AP	Advanced Placement
AVP	Audio Video Production
CAN	Certified Nurses Aid Certification
CLEP	College Level Examination Program
COM	College of Mainland
CNC	Computer Numerical Control
CPR	Cardiopulmonary Resuscitation
CTC	Computer Technology Certification
DAEP	District Alternative Education Placement
DECA	Distributive Education Clubs of America
DNA	Deoxyribonucleic Acid
EHS	Early High School
ELA	English Language Arts
EOC	End of Course
ESS	Earth Space & Science
FAFSA	Free Application for Federal Student Aid
FHS	Friendswood High School
FISD	Friendswood Independent School District
GPA	Grade Point Average
GT	Gifted & Talented
HB5	House Bill 5
INC	Incomplete
IPC	Integrated Physics & Chemistry
ISM	Independent Study Mentorship
MACRO	Macroeconomics
MAP	Mustang Advanced Program
MCS	Mustang Cable System
MIT	Massachusetts Institute of Technology
MOS	Microsoft Office Certification
NCAA	National Collegiate Athletic Association
NHRP	National Hispanic Recognition Program
NMSQT	National Merit Scholarship Qualifying Test
PALS	Peer Assistance & Leadership
PLTW	Project Lead the Way
PRE AP	Pre Advanced Placement
PSAT	Preliminary Scholastic Assessment Test
SAT	Scholastic Assessment Test
SB	Senate Bill
SBOE	State Board of Education
STAAR	State of Texas Assessments of Academic Readiness
STEM	Science Technology Engineering Math

Acronyn Definitions Continued..

TAC	Texas Administrative Control
TAKS	Texas Assessment of Knowledge & Skills
TEA	Texas Education Agency
TEKS	Texas Essential Knowledge & Skills
TELPAS	Texas English Language Proficiency Assessment
THEA	Texas Higher Education Assessment
TMEA	Texas Music Educators Association
TSFA	Texas State Floral Association Certification
TSI	Texas State Initiative Assessment
TxVSN	Texas Virtual School Network
UIL	University Interscholastic League
USAD	United States Academic Decathlon

Assurances

The Friendswood Independent School District is an equal opportunity employer and offers equal education opportunity employer and offers education opportunities, as requested by Title IV of the Civil Rights of 1964, as amended; Title IX of the Education Amendment of 1972, the Age Discrimination Act of 1975, as amended, and Section 504 of the Rehabilitation Act of 1973, as amended. The Friendswood Independent School District does not discriminate on the basis of race, color, religion, sex, age, national origin, or handicapping condition in the employment, assignment and promotion of personnel nor in the admission of learners to any educational program or activity, except as may be authorized by law or regulations. Friendswood Independent School District will take steps to assure that lack of English language skills will not be a barrier to admission and participation in all educational and Career & Technical Education programs.

