

ACADEMIC PLANNING GUIDE

2024-2025

Class of 2026 and Beyond



FRIENDSWOOD HIGH SCHOOL

ACADEMIC PLANNING GUIDE

2024 - 2025

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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. 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-teams counseling-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 Criteria: Reading and Math

- Meet the college-ready criteria on either the TSI/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 need to be discussed with the counselor, the student, and his/her parents prior to making the change.

<u>Subject Area</u>	<u>Foundation Plus Endorsement Plan</u> <u>(26 credits)</u> <u>*see pages 8-9 for more information</u>	<u>Foundation Only Plan</u> <u>(22 credits)</u> <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 1 Geometry Algebra 2 Additional credit of math <i>*must take math 3 out of 4 years at FHS</i>	3 credits <ul style="list-style-type: none"> Algebra 1 Geometry Additional credit of math
Science	4 credits <ul style="list-style-type: none"> Biology IPC or Chemistry 2 additional credits of science <i>*some endorsement areas have specific science requirements</i>	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 <i>*some endorsement areas have specific social studies requirements</i>	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 10-12. Students may qualify for a Distinguished Achievement Cord at graduation by earning 3 of the 5 different Performance Acknowledgements. ****

TEXAS HIGH SCHOOL DIPLOMA – Friendswood Independent School District

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FOUNDATION – 22 CREDITS

- **4 English Language Arts credits** – Three credits must be ELA I, II, III and an additional English course
- **3 Mathematics credits** – Two credits must be Algebra I, Geometry, and then an additional Math course
- **3 Science credits** – One credit must be Biology, one from either Integrated Physics and Chemistry or Chemistry; and an additional Science course
- **3 Social Studies credits** – Two credits must be US History, Government/Economics and either World Geography or World History
- **2 Foreign Language credits** of the same language
- **1 Fine Arts; 1 Physical Education; 4 Electives; and local requirements of ½ Professional Communications & ½ Health**

Plus 4 additional credits to obtain an Endorsement for a total of 26 credits

5 ENDORSEMENT OPTIONS

SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS AND COMPUTER SCIENCE

(STEM)

Required Courses:
Foundation courses,
Additional Math
(minimum Algebra II),
Chemistry, Physics, and one
Endorsement option*

BUSINESS & INDUSTRY

Agriculture Science,
Arts Audio/Video Technology
& Communications,
Business & Finance,
Hospitality & Tourism,
Marketing, and
English

Required courses:
Foundation courses,
Additional Math
(minimum Algebra II),
an additional Science, and
one Endorsement option*

PUBLIC SERVICES

Health Sciences,
Education & Training,
Law, Public Safety,
Correction & Security

Required courses:
Foundation courses,
Additional Math
(minimum Algebra II),
an additional Science, and
one Endorsement option*

ARTS & HUMANITIES

Social Studies,
Languages other than
English and
Fine Arts

Required courses:
Foundation courses,
Additional Math
(minimum Algebra II),
an additional Science, and
one Endorsement option*

MULTI-DISCIPLINARY STUDIES

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

Required courses:
Foundation courses,
Additional Math
(minimum Algebra II),
an additional Science, and
one Endorsement option*

DISTINGUISHED LEVEL OF ACHIEVEMENT

A student may earn a Distinguished Level of Achievement by successfully completing the curriculum requirements for the Foundation High School Program and the curriculum requirements for at least one endorsement, including four credits in Science and four credits in Mathematics to include Algebra II

PERFORMANCE ACKNOWLEDGEMENT

A student may earn a Performance Acknowledgement for outstanding performance in Dual Credit courses, in bilingualism and bi-literacy, on a College Board AP test, on the PSAT, the ACT-Plan, the SAT or the ACT. A student may also earn a Performance Acknowledgement for earning a nationally or internationally recognized business or industry certification or license.

TEXAS HIGH SCHOOL GRADUATION ENDORSEMENT REQUIREMENTS

ENDORSEMENTS	CURRICULUM REQUIREMENTS (Plan Options)
<p>Science, Technology, Engineering & Mathematics (STEM)</p> <p>Science Technology Engineering Mathematics Computer Science</p> <p><i>Required Courses: Foundation courses, Additional Math (minimum Algebra II), Chemistry, Physics, and one Endorsement option from the list on the right</i></p>	<p>Students must complete Algebra II, Chemistry, Physics, and <u>ONE</u> of the following options for the STEM Endorsement:</p> <ol style="list-style-type: none"> 1. A coherent sequence of four or more credits in Career and Technical Education (CTE) that consists of at least two courses in the same career cluster, including at least one being an advanced CTE course. The final course must be selected from CTE STEM courses; or 2. A coherent sequence of four credits in Computer Science; or 3. Three credits in Mathematics by successfully completing Algebra II and two additional Mathematics courses for which Algebra II is a prerequisite; or 4. Four credits in Science by successfully completing Chemistry, Physics and two additional Science courses. 5. In addition to Algebra II, Chemistry, and Physics completing a coherent sequence of 3 additional credits from no more than 2 of the options (1 – 4) listed above. <p>Students must complete <u>ONE</u> of the following options for the Business & Industry Endorsement:</p> <ol style="list-style-type: none"> 1. A coherent sequence of courses for four or more credits in CTE that consists of at least two courses, at least one being advanced, in the same career cluster from the choices listed below: <ol style="list-style-type: none"> a. Agriculture, Food & Natural Resources; or b. Arts, Audio/Video Technology, and Communications; or c. Business and Finance; or d. Hospitality and Tourism; or e. Marketing 2. Four English elective credits to include three levels in one of the following areas: <ol style="list-style-type: none"> a. Advanced Broadcast Journalism; or b. Advanced Journalism Newspaper; or c. Debate; or d. Advanced Journalism Yearbook
<p>Business & Industry</p> <p>Agriculture Science Arts, Audio/Video Technology & Communications Business & Finance Hospitality and Tourism Marketing 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 align="center">Public Services</p> <p align="center">Health Sciences Education & Training Law, Public Safety and Correction & Security</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>1. A coherent sequence of courses for four or more credits in CTE that consists of at least two courses in the same career cluster, and at least one being an advanced CTE course, from the choices listed below:</p> <ul style="list-style-type: none"> a. Education & Training; or b. Health Science; or c. Law, Public Safety and Correction & Security
<p align="center">Arts & Humanities</p> <p align="center">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 align="center">Multidisciplinary Studies</p> <p align="center">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

- (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 March 28th, 2024. 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 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 at anytime, 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.

Texas Virtual School Network

Friendswood ISD joined TxVSN, after the 80th Texas Legislative Session, Senate Bill 1788 established a state virtual school network to provide online courses for Texas students. The inaugural course catalog offered courses for grades 9-12 which were reviewed to ensure 100% alignment with the Texas Essential Knowledge and Skills as well as the National Standards of Quality for Online Courses. All high school courses are taught by a Texas-certified instructor in the course subject area and grade level, as well as completing a TxVSN approved professional development on effective online instruction. If interested in TxVSN see your counselor, and visit <http://www.texasvirtuelschool.org> for additional information and frequently asked questions.

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 United States Government
AP Calculus BC		AP United States History
AP Statistics		AP World History

Dual Credit

FHS partners with College of The Mainland (COM) to provide dual credit opportunities. These courses are all taught at Friendswood HS. Some courses are taught by FHS teachers during school hours, and other courses are taught before and after school by COM professors. 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. 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. Meet established admissions requirements at the Junior College.
3. Take the TSI 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 taught 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.

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 by _____ 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. For Workforce Dual Credit courses, your counselor 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 recommended for Junior and Senior students only.

College of Mainland

Barbering
Cosmetology
Welding

San Jacinto College

Automotive Technology
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	MAP Physics	Debate I
AP US History	Computer Science II (Weighted)	Debate II
AP World History	Computer Science III (Weighted)	Debate III
AP Biology	PLTW - WEIGHTED COURSES	
AP Chemistry	Introduction to Engineering Design (Weighted)	
AP Environmental Science	Engineering Science (Weighted)	
AP Physics 1	Civil Engineering & Architecture (Weighted)	
AP Physics 2	Aerospace Engineering (Weighted)	
AP 2D Art and Design	Engineering Design & Development (Weighted)	
AP 3D Art and Design	Digital Electronics (Weighted)	
AP Drawing	Principles of Biomedical Science (Weighted)	
AP Music Theory	Human Body Systems (Weighted)	
AP Computer Science A	Medical Interventions (Weighted)	
AP Computer Science Principles	Biomedical Innovation (Weighted)	
	Cybersecurity	

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 “C” or higher in 1301 to enroll in 1302
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 “C” or higher in 1301 to enroll in 1302
Dual Credit College British Literature (2322 British Literature I & 2323 British Literature II)	1455A 1455B				X	1	Meet TSI requirements, “C” or higher in 1301 & 1302, “C” or higher in 2322 to enroll in 2323
English as a Second Language (ESL) Academic Support	0040	X	X	X	X		
English for Speakers of Other Languages (ESOL)	1115	X	X	X	X	1	

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, "C" or higher in 1301 to enroll in 1302

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., research, and science 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 (ACT administered on or after February 15, 2023): 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, research, and science 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, "C" or higher in 1301 to enroll in 1302

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, "C" or higher in 2322 to enroll in 2323

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: ?

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 & Tryout
Debate II (Counts as AP course for grade points earned)	7215			X	X	1	Debate I & Tryout
Debate III (Counts as AP course for grade points earned)	7218				X	1	Debate I-II & Tryout

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 will be expected 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 introductory courses will be provided with opportunities to extend their knowledge and expand their skills in more advanced study. Independent Study in Speech provides opportunities for advanced students to plan, organize, produce, perform, and evaluate a project that enables them to develop advanced skills in communication, critical thinking, and problem solving.

7210 DEBATE I

Grade: 10 - 12

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

Prerequisite: Application and Tryout

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

Grade: 11 - 12

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

Prerequisite: Debate I & Tryout

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

7218 DEBATE III

Grade: 12

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

Prerequisite: Debate I-II & Tryout

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
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/B			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
AP US Government	2435				X	.5	Recommended: AP English III, and AP US History
Economics	2425			X	X	.5	US History 11th Needs Counselor Approval
AP Economics (Macro)	2430				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

2435 AP UNITED STATES GOVERNMENT (R)

Grade: 12

Credit: .5

Prerequisite: None

Recommended: AP English III and AP US History

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.

2430 AP ECONOMICS (MACRO) (R)

Grade: 12

Credit: .5

Prerequisite: None

Recommended: AP US History and AP English III

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
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
Economics w/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
Dual Credit College Government 2305 (Federal)
AP Government
AP Economics

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	Algebra, Geometry, Algebra II or PreCalculus(Recommended)
AP Physics 1	4550			X	X	1	Biology, Chemistry; completed or concurrently enrolled in PreCal and Teacher Recommendation
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
AP Physics 2	4730				X	1	Physics; completed or concurrently enrolled in PreCal and Teacher Recommendation
AP Environmental Science	4130			X	X	1	3 units Science (completed Biology & Chemistry) & 3 units Math (one of each may be taken concurrently)

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	3 units of Science (including Biology and Chemistry) Recommended: 1 course from Culinary Arts Program of Study
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 I (Zero-hour course that counts as AP course for grade points earned)	0030 ISM I		X			1	Biology, Concurrent enrollment in MAP Chemistry
Independent Study/ Mentorship (Counts as AP course for grade points earned)	0030 ISM I 0035 ISM II 0038 ISM III			X	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. Projects are assigned throughout the course; Science Fair participation is optional and/or may substitute for some of these activities. MAP Biology learners may participate in Science Fair with concurrent enrollment in Project-Based Research (PBR)* 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.

* (See Project-Based Research)

4210 INTEGRATED PHYSICS AND CHEMISTRY (IPC) (R)

Grade: 10

Credit: 1

Prerequisite: None

In Integrated Physics and Chemistry, learners conduct field and 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, motion, waves, energy transformations, properties of matter, changes in matter, and solution chemistry. 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 characteristics of matter; 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. If you plan to take AP Chemistry, MAP Chemistry is recommended over Chemistry. You may not take this course if you have already passed Conceptual Chemistry.

4320 MAP CHEMISTRY (R)

Grade: 10-11

Credit: 1

Prerequisite: Biology (MAP Recommended); Concurrent enrollment in MAP Geometry or Algebra II 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 than the regular Chemistry course offers. Projects are assigned throughout the course; Science Fair participation is optional and/or may substitute for some of these activities. MAP Chemistry learners may participate in Science Fair with concurrent enrollment in Independent Student/Mentorship (ISM)*. You may not take this course if you have already passed Conceptual Chemistry. Due to the difference in the curriculums, learners will not be permitted to transfer between Conceptual Chemistry and MAP Chemistry during the year.

* (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.

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

Grade: 11 - 12

Credit: 1

Pre-Requisites: Algebra, Geometry, Algebra II or Precalculus (recommended)

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. Students will explore concepts in small groups, develop ideas, and explain and apply them.

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 (R)

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

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: 3 units of Science (including Biology and Chemistry)

Recommended: 1 course from Culinary Arts Program of Study

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.

4130 AP ENVIRONMENTAL SCIENCE (R)

4140 FORENSIC SCIENCE

Grade: 12

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 of 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)

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 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, UT On Ramps Physics I, 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, UT On Ramps Physics I,
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
Advanced Algebra	3300		X	X	X	1	Algebra II, and a qualifying score
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 earned at the junior high.

MATHEMATICS

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

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.

3300 ADVANCED ALGEBRA (R)

Grade: 11 - 12

Credit: 1

Prerequisite: 11th Grade: Algebra II and Teacher Recommendation

12th Grade: Algebra II and a qualifying score on any of these standardized test:

SAT > 530

PSAT > 510

TSIA2 > 950

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 algebraic concepts, techniques and applications with a focus on linear, quadratic, exponential, logarithmic, polynomial and trigonometric functions. This course is designed to help students be successful in credit-bearing college math courses.

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.

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.

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

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.

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
French Seminar	6111				X	1	Recommended: Grade of 85 or better in AP French IV The French Seminar credit will be transcribed as a Pass/Fail credit.
German I	6001	X	X	X	X	1	This is an Online course taught through TXVSN
MAP German II	6012	X	X	X	X	1	Recommended: Grade of 90 or better in German I or 8th grade German I; This is an Online course taught through TXVSN
MAP German III	6013	X	X	X		1	Recommended: Grade of 85 or better in MAP German II; This is an Online course taught through TXSVN
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 The French Seminar credit will be transcribed as a Pass/Fail credit.

WORLD LANGUAGE CONTINUED

COURSE NAME	COURSE NUMBER	GRADE PLACEMENT				UNIT CREDIT	PREREQUISITE
		9	10	11	12		
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	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	Recommended: Grade of 90 or better in MAP Spanish II
AP Spanish IV	6209			X	X	1	Recommended: Grade of 90 or better in MAP Spanish III
AP Spanish Literature	6212				X	1	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 may count as a world language credit	0505	X	X	X	X	1	Geometry
AP Computer Science A This course will count as a math & 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.

6111 FRENCH SEMINAR

Grade: 12

Credit: 1

Prerequisite: None

Recommended: Grade of 85 or better in AP French IV

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

This French class for seniors will be combined with AP French IV. The purpose of this class is to further build fluency and continue thematic exposure to French culture through authentic materials. Students will be given the opportunity to take the AP exam by the end of this class.

6001 GERMAN I (R)

Grade: 9 - 12

Credit: 1

Prerequisite: None

***This is an Online course taught through Texas Virtual School**

This course introduces learners to the German language and its culture. It also develops listening, reading, speaking, and writing skills, as well as cross-cultural understanding. Correct pronunciation is cultivated through audio & video media and teacher modeling. Learners will learn about social customs, geography and German history through projects and textbook driven materials. 80% mastery recommended to ensure success at the next level.

6012 MAP GERMAN II (R)

Grade: 9 - 12

Credit: 1

Prerequisite: None

Recommended: Grade of 90 or better in German I or 8th grade German I

***This is an Online course taught through Texas Virtual School**

This course is a course for the intellectually motivated student wishing for a college preparatory course. This course reinforces the skills previously learned in German 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.

6013 MAP GERMAN III (R)

Grade: 10 - 12

Credit: 1

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

***This is an Online course taught through Texas Virtual School**

This course is an advanced-intermediate course for learners preparing for the AP exam and wishing for a college preparatory atmosphere. 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 class will be nearly in the target language.

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

Recommended: 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

Recommended: 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

Recommended: Grade of 90 or better in MAP Spanish III

AP Spanish IV teaches the learners to express themselves coherently and resourcefully. Learners are given multiple opportunities each year to practice each skill set tested on 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 much as possible. 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

Recommended: 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 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

See Page 180 for Course Description

0535 COMPUTER SCIENCE III

See Page 181 for Course Description

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.

Revised 04/18

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

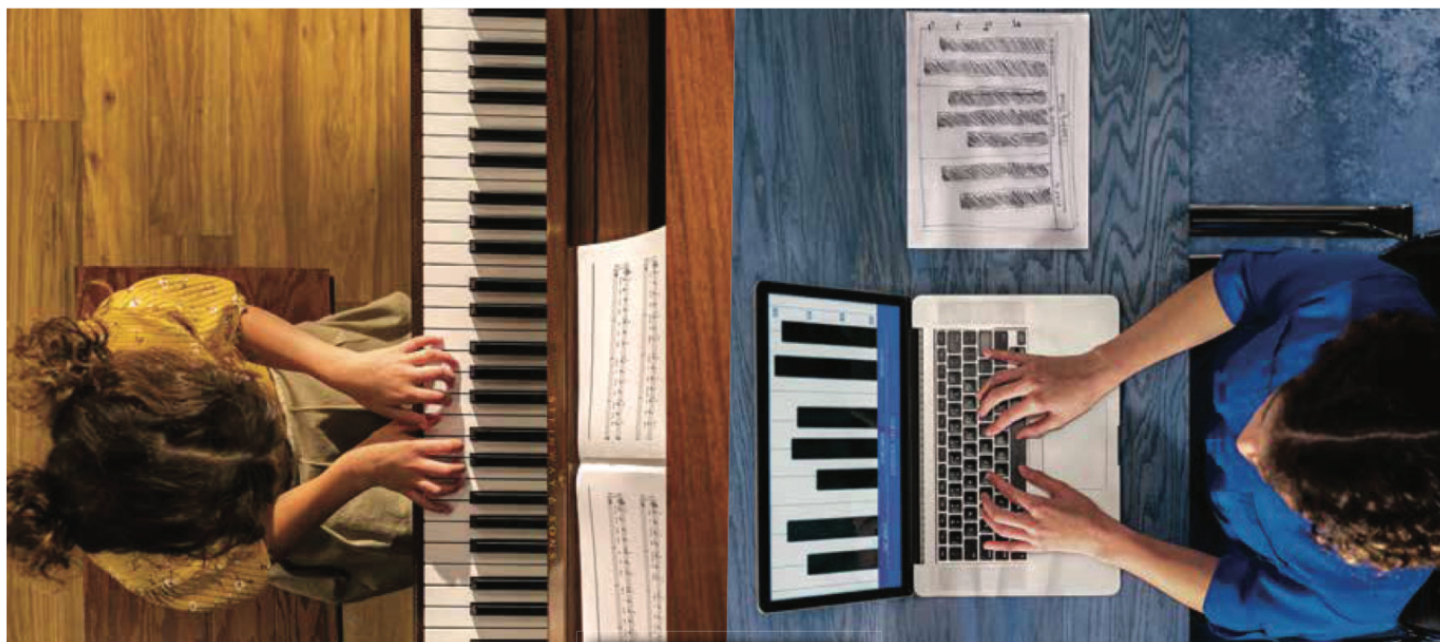
Credit: 1

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
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
Concert Band III	7020*	X	X	X	X	1	Audition and Teacher Recommendation
Jazz Band	7060*	X	X	X	X	1	Audition/ or Teacher Recommendation
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	Performance Based Assessment; Drill Training
Dance Wellness	9075*		X	X	X	1	Performance Based Assessment: Athletics
Advanced Dance	9017*		X	X	X	1	Dance, Audition, & Instructor Approval
Theatre Arts I	7401	X	X	X	X	1	None
Theater 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 Level I	7480	X	X	X	X	1	None
Musical Theatre Level II	7481	X	X	X	X	1	Musical Theatre Level I
Technical Theatre I	7440	X	X	X	X	1	Recommended: Theater Arts I
Technical Theatre II Technical Theatre III Technical Theatre IV	7450 7460 7470		X	X	X	1	Tech Theatre I, Audition & Instructor Approval
Theatre Production III Theatre Production IV	7362 7364		X	X	X	1	Audition Only
Floral Design	5175		X	X	X	1	None
Ceramics	7505		X	X	X	1	Art I
Professional Communications	7220	X	X	X	X	0.5	None

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

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

Musical Theatre, Level II 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.

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 physical 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 physical 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 physical 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. Everyone in Wind Ensemble is part of the 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. Everyone in Concert Band I is part of the 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. Everyone in Concert Band II is part of the marching band. (Waives .5 PE Credit if there is participation in marching band)

70201 9 CONCERT BAND III
70202 10 CONCERT BAND III

70203 11 CONCERT BAND III
70204 12 CONCERT BAND III

Grade: 9 - 12

Credit: 1

Prerequisite: Audition and teacher recommendation

The Concert Band III is the fifth 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 is audition only. Everyone in Concert Band III is part of the 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. Everyone in Symphonic Band is part of the 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/or teacher recommendation

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.

73353 11 VARSITY MIXED CHOIR A

73354 12 VARSITY MIXED CHOIR A

Grade: 11 - 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 ultimate 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 together 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 will give learners an opportunity to learn and practice basic dance movement and technique in a variety of genres. Technical exercises will be used consistently, and learners will choreograph dances as well. Mandatory performances will 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

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. Stretching, 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. Performance opportunities include home JV football games, Wranglerette Pre-Game Dinner, Fall Demonstration and Spring Show.

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

Grade: 10 - 12
Credit: 1
Prerequisite: Performance Based Assessment; Drill Training

The Wranglerette Drill Team is composed of 10th, 11th, and 12th grade girls. It functions as a precision dance group, performing at football and basketball half times, pep rallies, contests, spring show and as a school spirit booster. Girls are chosen for the drill team by the director and a panel of judges on the basis of 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: Performance Based Assessment: Athletics

Dance Wellness will target student athletes seeking more range of motion, flexibility, injury prevention, balance and coordination, and more training that will benefit their athletic bodies for a longer and healthier career. Students will participate in learning Ballet, Yoga, Pilates, and Modern Dance. Mandatory performances will 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 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.

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, Theatre 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 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.

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

Grades: 10 - 12

Credit: 1

Prerequisite: Musical Theatre I

Musical Theatre, Level II 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.

7362 THEATRE PRODUCTION III
7364 THEATRE PRODUCTION IV

Grade: 11 - 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 theater 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	300	X	X	X	X	0.5	None
SAT Review (Counts as local credit)	0149		X	X	X	0.5	Geometry and Algebra II
AD ISM I (Academic Decathlon) (Counts as AP course for grade points earned)	0055		X	X	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
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 a 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)	100	X				1	Concurrent enrollment in MAP Biology
Independent Study/ Mentorship I (Zero-hour course that counts as AP course for grade points earned)	0030 ISM I		X			1	Biology, Concurrent enrollment in MAP Chemistry
Independent Study/ Mentorship (Zero-hour course that counts as AP course for grade points earned)	0030 ISM I 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

The PALS program is a peer-helping initiative that involves training chosen high school students to serve as peer facilitators within their own campus and potentially in feeder middle and elementary schools. Participants will undergo training in various helping skills, empowering them to support fellow learners in cultivating a more positive school experience. Enrolling in this course signifies a commitment to fulfilling all curricular, co-curricular, and extra-curricular requirements. This course provides a unique opportunity to make a meaningful impact on your school community. As a senior peer helper, you will not only enhance your own personal and professional skills but also contribute to the well-being and success of your fellow students. Get ready for a rewarding experience that will stay with you well beyond your high school years.

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

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.

CAREER AND TECHNICAL EDUCATION



Cultivating Lifelong Learners for Tomorrow's Workforce

- FRIENDSWOOD ISD CAREER AND TECHNICAL EDUCATION MISSION STATEMENT

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

FRIENDSWOOD HIGH SCHOOL



AGRIBUSINESS

ANIMAL SCIENCE

**ENVIRONMENTAL
AND NATURAL
RESOURCES**

PLANT SCIENCE

Agriculture, Food, and Natural Resources Career Cluster

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

Agribusiness Statewide Program of Study



The Agribusiness program of study explores the occupations and educational opportunities associated with the business of farming and agriculturally related business that supplies farm inputs, such as machinery and seeds. This program of study may also include exploration into the marketing of farm products, the purchase of farm products either for further processing or resale and grading or classifying unprocessed food or other agricultural products.

Secondary Courses for High School Credit

Level 1

- Principles of Agriculture, Food, and Natural Resources

Level 2

- Professional Communications

Level 3

- Agribusiness Management and Marketing

Level 4

- Practicum in Agriculture, Food, and Natural Resources
- Career Preparation I/Extended

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none">Tour a farm machinery products companyParticipate in Texas FFA	<ul style="list-style-type: none">Intern with a farm machinery products companyWork on a farm or ranch

Industry-Based Certifications

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

- Microsoft Office Specialist Excel*
- *IBC sunseting 8/31/24



Postsecondary Opportunities

Associates Degrees

- Agricultural Business and Management, General
- Banking and Financial Support Services
- Advertising
- Marketing/ Marketing Management, General

Bachelor's Degrees

- Agricultural Business and Management, General
- Finance, General
- Financial Mathematics
- Marketing/ Marketing Management, General

Master's, Doctoral, and Professional Degrees

- Agricultural Business and Management, General
- Finance, General
- Financial Mathematics
- Marketing/ Marketing Management, General

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Farmers, Ranchers, and Other Agricultural Managers	\$59,134	405	9%
Farm and Ranch Loan Officers	\$45,594	268	25%
Buyers and Purchasing Agents, Farm Products	\$46,488	268	20%

Successful completion of the Agribusiness program of study will fulfill requirements of the Business and Industry Endorsement. Revised – August 2022

Agribusiness

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5100 Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
7220 Professional Communications	13009900 (.5 credit)	None	9-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5101 Agribusiness Management and Marketing	13000900 (1 credit)	Recommended: Principles of Ag or Principles of Business	10-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5130 Practicum in Agriculture, Food, and Natural Resources	13002510 (2 credits)	Agribusiness, Management, and Marketing	11-12
5090/ 5091 Career Preparation I/Extend	12701300 (2 credits) 12701305 (3 credits)	None	11-12
5092/5093 Career Preparation II/Extend	12701400 (2 credits) 12701405 (3 credits)	Career Prep I	12

Agriculture, Food, and Natural Resources Career Cluster

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

Animal Science Statewide Program of Study



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

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/Lab
- Veterinary Medical Applications/Lab

Level 4

- Advanced Animal Science
- Practicum in Agriculture, Food, and Natural Resources
- Project-Based Research
- ISM - Scientific Research and Design

Postsecondary Opportunities

Associates Degrees

- Food Science and Technology
- Veterinary Studies
- Biotechnology Laboratory Technician
- Biology Technician

Bachelor's Degrees

- Animal Sciences
- Agriculture
- Biology
- Zoology/ Animal Biology

Master's, Doctoral, and Professional Degrees

- Genetics
- Veterinary Medicine
- Biological and Physical Sciences
- Biological and Biomedical Sciences

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Texas FFA

Work-Based Learning Activities

- Compete in an Agri-Science Fair 4H
- Volunteer at a local farm or with a veterinarian
- Participate in an FFA supervised agriculture experience

Industry-Based Certifications

- Agricultural Biotechnology
- Certified Veterinary Assistant, Level 1
- Elanco Fundamentals of Animal Science Certification
- Elanco Veterinary Medical Applications Certification
- Equine Management & Evaluation Certification
- Feedyard Technician in Cattle Care and Handling
- Licensed Veterinary Technician
- Production Agriculture - Job Ready
- Small Animal Science and Technology



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Animal Breeders	\$39,139	28	9%
Animal Scientists	\$57,533	22	12%
Medical Scientists	\$63,898	435	27%
Veterinarians	\$93,496	294	24%
Zoologists and Wildlife Biologists	\$67,309	45	32%

Successful completion of the Animal Science program of study will fulfill requirements of a Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Animal Science

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5100 Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5190 Small Animal Management	13000400 (0.5 credit)	Recommended: Principles of Ag	9-12
5135 Equine Science	13000500 (0.5 credit)	Recommended: Principles of Ag	9-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5185 Livestock Production	13000300 (1 credit)	Recommended: Principles of Ag	10-12
5105 Veterinary Medical Applications	13000600 (1 credit)	Small Animal Mang, Equine Science, and Livestock Prod	11-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5155 Advanced Animal Science	13000700 (1 credit)	Biology and Chemistry or IPC; Algebra I and Geometry; and Small Animal, Equine Sci, or Livestock Prod Recommended: Vet Med Apps	11-12
5150 Practicum in Agriculture, Food, and Natural Resources – Certified Vet Assistant	13002500 (2 credits)	Vet Med Applications Course #5105	12
5130 Practicum in Agriculture, Food, and Natural Resources	130025010(2 credits)	At least one course in Animal Science	11-12
5008 Project-Based Research	12701500 (1 credit)	None	11-12
0030 ISM - Scientific Research and Design	13037200 (1 credit)	Biology, Chemistry, IPC, or Physics	11-12

Agriculture, Food, and Natural Resources Career Cluster

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

Environmental and Natural Resources Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Agriculture, Food, and Natural Resources

Level 2

- Wildlife, Fisheries, and Ecology Management/Lab

Level 3

- Project-Based Research

Level 4

- Practicum in Agriculture, Food, and Natural Resources
- ISM - Scientific Research and Design

Postsecondary Opportunities

Associates Degrees

- Environmental Science
- Environmental Studies
- Wildlife, Fish, and Woodlands Science and Management
- Environmental Engineering Technology/ Environmental Technology

Bachelor's Degrees

- Environmental Science
- Environmental/ Environmental Health Engineering
- Wildlife, Fish, and Woodlands Science and Management
- Natural Resources Law Enforcement and Protective Services

Master's, Doctoral, and Professional Degree

- Environmental Science
- Environmental/ Environmental Health Engineering
- Wildlife, Fish, and Woodlands Science and Management
- Fishing and Fisheries Science and Management

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Attend summer leadership events
- Participate in Texas FFA

Work-Based Learning Activities

- Intern at a waste treatment plant
- Participate in an FFA supervised agriculture experience

Industry-Based Certifications

- Natural Resources Systems
- Water Operators, Class D

- Wastewater Collections*

*IBC sunseting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Environmental Engineering Technicians	\$53,352	101	32%
Environmental Engineers	\$86,757	288	25%
Environmental Science and Protection Technicians, Including Health	\$40,268	508	17%
Environmental Scientists and Specialists, Including Health	\$77,896	644	24%
Zoologists and Wildlife Biologists	\$67,309	45	32%

Successful completion of the Environmental and Natural Resources program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Environmental and Natural Resources

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5100 Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5165 Wildlife, Fisheries, and Ecology Management	13001500 (1 credit)	Recommended: Principles of Ag	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5008 Project-Based Research	12701500 (1 credit)	None	11-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5130 Practicum in Agriculture, Food, and Natural Resources	13002510 (2 credits)	Wildlife, Fisheries, and Ecology Management	11-12
0300 ISM - Scientific Research and Design	13037200 (1 credit)	Biology, Chemistry, Integrated Physics, and Chemistry (IPC), or Physics	11-12

Agriculture, Food, and Natural Resources Career Cluster

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

Plant Science Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Agriculture, Food, and Natural Resources

Level 2

- Floral Design/Lab
- Horticultural Science/Lab

Level 3

- Advanced Plant and Soil Science
- Advanced Floral Design

Level 4

- Practicum in Agriculture, Food, and Natural Resources
- Project-Based Research
- ISM - Scientific Research and Design

Postsecondary Opportunities

Associates Degrees

- Applied Horticulture/ Horticulture Operations, General
- Ornamental Horticulture
- Agricultural Business and Management, General
- Turf and Turfgrass Management

Bachelor's Degrees

- Applied Horticulture/ Horticulture Operations, General
- Agronomy and Crop Science
- Agricultural Business and Management, General
- Turf and Turfgrass Management

Master's, Doctoral, and Professional Degrees

- Applied Horticulture/ Horticulture Operations, General
- Agronomy and Crop Science
- Agricultural Business and Management, General
- Farm/Farm and Ranch Management

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none">• Participate in Texas FFA	<ul style="list-style-type: none">• Work at a florist or landscaper business• Participate in an FFA supervised agriculture experience

Industry-Based Certifications

- Agricultural Biotechnology
- BASF Plant Science Certification
- Commercial/Non-Commercial 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 Florist's Association Knowledge Based Floral Certification
- Texas State Florist's Association Level I Floral Certification
- Texas State Florist's Association Level II Floral Certification



Aligned Occupations

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

Successful completion of the Plant Science program of study will fulfill requirements of a Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Plant Science

Course information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5100 Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5175 Floral Design	13001800 (1 credit)	None	10-12
5195 Horticultural Science	13002000 (1 credit)	Recommended: Principles of Ag	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5160 Advanced Plant and Soil Science	13002100 (1 credit)	One course from Plant Science and Biology, Chemistry, IPC or Physics	11-12
5180 Advanced Floral Design	N1300270 (1 credit)	Floral Design and Benz Principles of Floral Design Certification	11-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5130 Practicum in Agriculture, Food, and Natural Resources	13002510 (2 credits)	One course from Plant Science or if a Practicum for Floral Design must complete Advanced Floral	11-12
5008 Project-Based Research	12701500 (1 credit)	None	11-12
0300 ISM - Scientific Research and Design	13037200 (1 credit)	Biology, Chemistry, IPC, or Physics	11-12

Career & Technical Education Electives

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

AGRICULTURE, FOOD AND NATURAL RESOURCES 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: Principles of Agriculture, Food & Natural Resources and Biology

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 and 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.

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 PROJECT BASED RESEARCH

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 CAREER PREPARATION I

Grade: 11-12

Credit: 2

Prerequisite: None

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.

5091 CAREER PREPARATION I / EXTENDED CAREER PREPARATION

Grade: 11-12

Credit: 3

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

Extended Career Preparation provides a 3 credit 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.

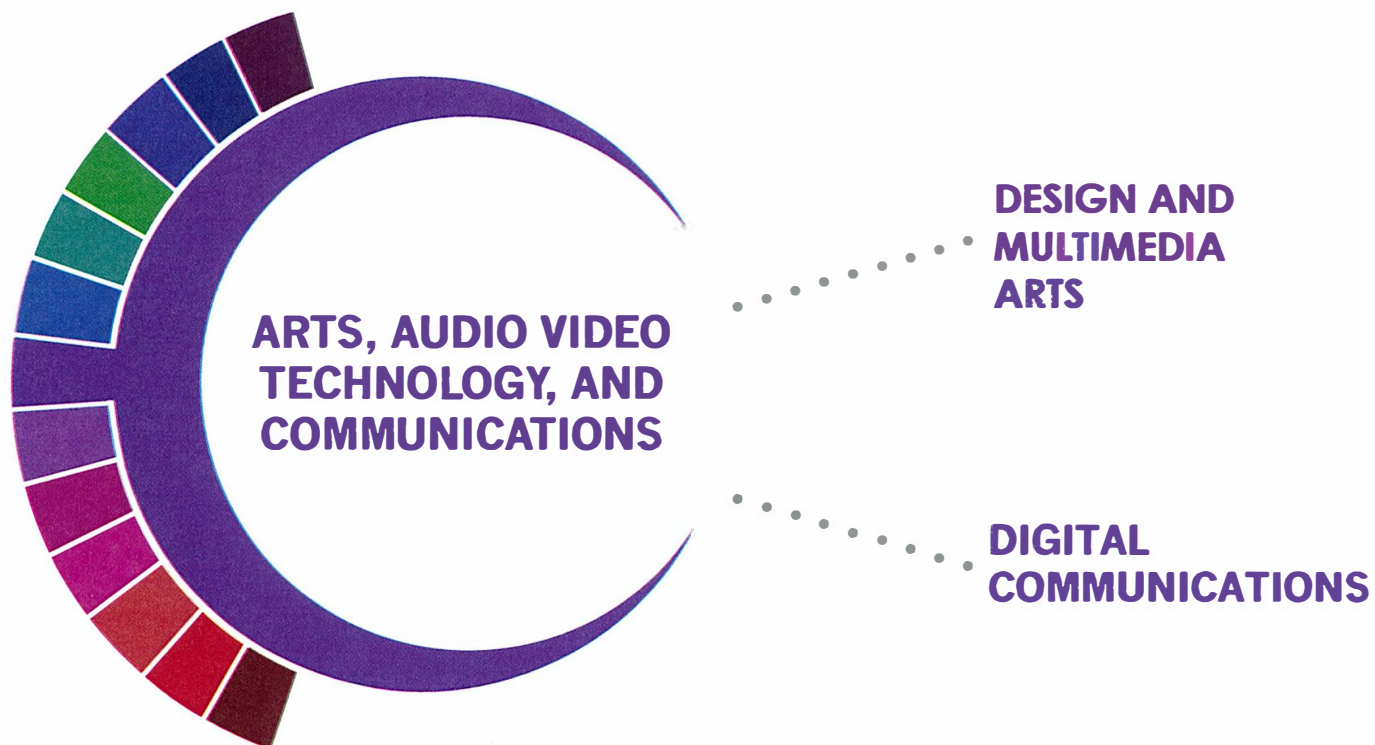
0030 ISM – SCIENTIFIC RESEARCH AND DESIGN

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.



Arts, Audio/Video Technology, and Communications Career Cluster

The Arts, A/V Technology and Communications (AAVTC) Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in the AAVTC career cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication.

Graphic Design & Multimedia Arts Statewide Program of Study



The Graphic Design and Multimedia Arts program of study explores the occupations and educational opportunities associated with designing or creating graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. This program of study may also include exploration into designing clothing and accessories, and creating special effects, animation, or other visual images using film, video, computers, or other electronic tools and media, for use in computer games, movies, music videos, and commercials.

Secondary Courses for High School Credit

Level 1

- Film Appreciation: Principles of Arts, A/V Technology, and Communications - FJH and FHS
- Digital Media - FJH only

Level 2

- Graphic Design and Illustration I
- Commercial Photography I

Level 3

- Graphic Design and Illustration II
- Commercial Photography II

Level 4

- Practicum in Graphic Design and Illustration
- Career Preparation I/Extended

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none">• Join a website development or coding club• Participate in SkillsUSA or TSA	<ul style="list-style-type: none">• Intern with a multimedia or animation studio• Obtain a certificate or certification in graphic design

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
- Certified Professional Photographer
- Graphic Production Technology - Job Ready

- Adobe Certified Professional Animate*

*IBC Sunsetting 8/31/24

Postsecondary Opportunities

Associates Degrees

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

Bachelor's Degrees

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

Master's, Doctoral, and Professional Degrees

- Animation, Interactive Technology, Video Graphics and Special Effects
- Graphic Design
- Intermedia/Multimedia

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Graphic Designers	\$44,824	1,433	15%
Multimedia Artists and Animators	\$67,392	186	21%

Graphic Design & Multimedia Arts

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
7105 Film Appreciation: Principles of Arts, A/V Technology, & Communications	13008200 (1 credit)	None	9-12

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
7165 Graphic Design and Illustration I	13008800 (1 credit)	Recommended: Film Appreciation	9-12
7616 Commercial Photography I	13009100 (1 credit)	Journalism I	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
7170 Graphic Design and Illustration II	13008900 (1 credit)	Graphic Design and Illustration I	10-12
7617 Commercial Photography II	13009200 (1 credit)	Commercial Photography I	11-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
7180 Practicum in Graphic Design and Illustration	13009000 (2 credits)	Graphic Design and Illustration II	11-12
5090/ 5091 Career Preparation I/Extend	12701300 (2 credits) 12701305 (3 credits)	None	11-12
5092/5093 Career Preparation II/Extend	12701400 (2 credits) 12701405 (3 credits)	Career Prep I	12

Arts, Audio/Video Technology, and Communications Career Cluster

The Arts, A/V Technology and Communications (AAVTC) Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in the AAVTC career cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication.

Digital Communications Statewide Program of Study



The Digital Communications program of study explores the occupations and educational opportunities associated with the production of audio and visual media formats for various purposes, such as TV broadcasts, advertising, video production, or motion pictures. This program of study may also include exploration into operating machines and equipment to record sound and images, such as microphones, sound speakers, video screens, projectors, video monitors, sound and mixing boards, and related electronic equipment.

Secondary Courses for High School Credit

Level 1

- Film Appreciation: Principles of Arts, Audio/Video Technology, and Communications – FJH and FHS
- Professional Communications
- Digital Communications in the 21st Century – FJH only

Level 2

- Audio/Video Production I
- Digital Audio Technology I

Level 3

- Audio/Video Production II
- Digital Audio Technology II

Level 4

- Practicum of Audio/Video Production I and II
- Practicum in Digital Audio Technology
- Career Preparation I/Extended

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none">• Shadow a production team• Participate in SkillsUSA or TSA	<ul style="list-style-type: none">• Intern at a local television station or video production company• Work with a local company on a project

Industry-Based Certifications

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



Postsecondary Opportunities

Associates Degrees

- Recording Arts Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television Broadcasting Technology/Technician
- Music Technology

Bachelor's Degrees

- Recording Arts Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television
- Agricultural Communication/Journalism

Master's, Doctoral, and Professional Degrees

- Communications Technology/Technician
- Cinematography and Film/Video Production
- Radio and Television
- Agricultural Communication/Journalism

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Sound Engineering Technicians	\$39,562	79	27%
Camera Operators, Television, Video, and Motion Picture	\$50,024	129	9%
Audio and Video Equipment Technicians	\$40,581	757	29%
Film and Video Editors	\$47,382	118	23%

Digital Communications

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
7105 Film Appreciation - Principles of Arts, A/V Technology, and Communications	13008200 (1 credit)	None	9-12
7220 Professional Communication	13009900 (.5 credit)	None	9-12

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
7108 Audio/Video Production I	13008500 (1 credit)	None	9-12
7185 Digital Audio Technology I	13009950 (1 credit)	None	9-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
7100 Audio/Video Production II/Lab (MCS I)	13008610 (2 credits)	Audio/Video Production I	10-12
7186 Digital Audio Technology II	13009960 (1 credit)	Digital Audio Technology I	10-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
7125 Practicum in Audio/Video Production I (MCS II)	13008700 (2 credits)	Audio/Video Production II	11-12
7150 Practicum in Audio/Video Production II (MCS III)	13008710 (2 credits)	Practicum in AV Prod I	12
7156 Practicum in Digital Audio Technology	N1300996 (2 credits)	Digital Audio Technology II	11-12
5090/ 5091 Career Preparation I/Extend	12701300 (2 credits) 12701305 (3 credits)	None	11-12
5092/5093 Career Preparation II/Extend	12701400 (2 credits) 12701405 (3 credits)	Career Prep I	12

Career & Technical Education Electives

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

ARTS, AUDIO/VIDEO TECHNOLOGY AND COMMUNICATION CLUSTER

DIGITAL COMMUNICATIONS

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.

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.

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.

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 and attempt SBE/OSHA Internship opportunities with the City of Friendswood industry level certification.

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.

GRAPHIC DESIGN AND INTERACTIVE MEDIA

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 the AV Production I and II and Practicum in AV Production I and II.

7165 GRAPHIC DESIGN I

Grade: 9 - 12

Credit: 1

Prerequisite: None

Recommended: Film Appreciation

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.

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 CAREER PREPARATION I

Grade: 11-12

Credit: 2

Prerequisite: None

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.

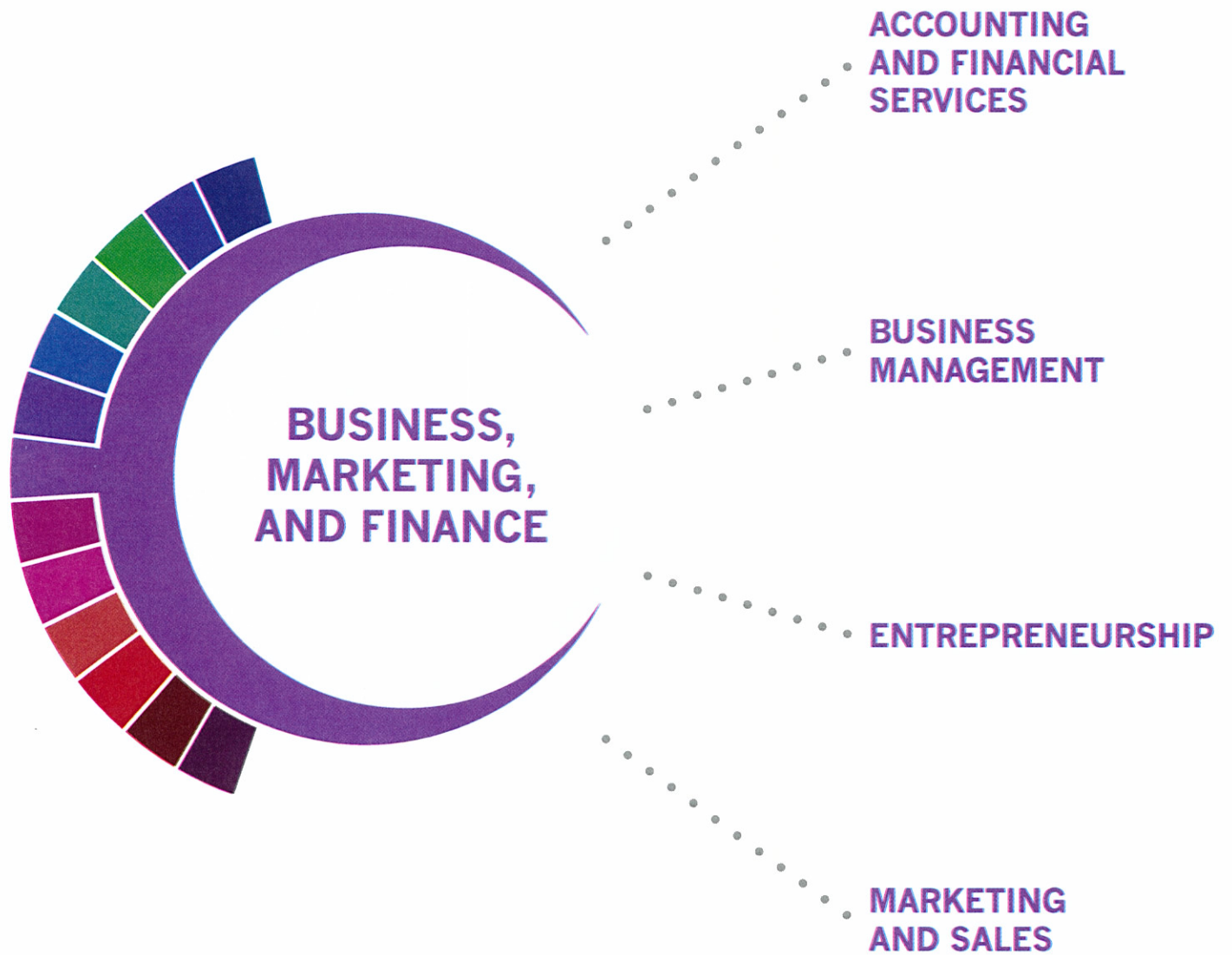
5091 CAREER PREPARATION I / EXTENDED CAREER PREPARATION

Grade: 11-12

Credit: 3

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

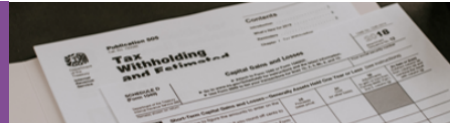
Extended Career Preparation provides a 3 credit opportunity for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career 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.

Accounting and Financial Services Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Business, Marketing, and Finance

Level 2

- Accounting I
- Money Matters

Level 3

- Accounting II

Level 4

- Stock Market
- Business Intern: Practicum in Business Management
- Career Preparation I and II

Postsecondary Opportunities

Associates Degrees

- Real Estate
- Financial, General
- Financial Planning and Services
- Certified Income Specialist

Bachelor's Degrees

- Accounting
- Financial, General
- Financial Planning and Services
- Certified Income Specialist

Master's, Doctoral, and Professional Degrees

- Financial Accounting
- Business Administration
- Financial Planning

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Business Professionals of America, Future Business Leaders of America, or DECA

Work-Based Learning Activities

- Intern with a local accounting firm
- Earn Microsoft Office certifications

Industry-Based Certifications

- Accounting - Basic
- Accounting Foundations
- Intuit QuickBooks Certified User
- MB-920: Microsoft Dynamics 365 Fundamentals Finance and Operations Apps
- Microsoft Office Specialist: Microsoft Access Expert (Access and Access 2019) Microsoft Office Specialist: Microsoft Excel Expert (Excel and 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

- Microsoft Office Specialist-Excel*

*IBC sunseting 8/31/24

Aligned Occupations

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

Accounting and Financial Services

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5000 Principles of Business, Marketing, and Finance	13011200 (1 credit)	None	9-11

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5020 Money Matters	13016200 (1 credit)	Recommended: Principles of Business	10-12
5050 Accounting I	13016600 (1 credit)	Principles of Business	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5053 Accounting II	13016700 (1 credit)	Accounting I	11-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5070 Stock Market	13016400 (1 credit)	Principles of Business and Money Matters	11-12
5010 Business Intern: Practicum in Business Management	13012200 (2 credits)	Principles of Business and 1 course in Business, Marketing, or Finance	11-12
5090/5091 Career Preparation I/Extended	12701300 (2 credits) 12701305 (3 credits)	None	11-12
5092/5093 Career Preparation II/Extended	12701400 (2 credits) 12701405 (3 credits)	Career Prep I	12

Business, Marketing, and Finance Career Cluster

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

Business Management Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Business, Marketing, and Finance

Level 2

- Money Matters

Level 3

- Business Law

Level 4

- Business Intern: Practicum in Business Management
- Career Preparation I and II

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Business Professional of America, Future Business Leaders of America, or DECA

Work-Based Learning Activities

- Intern with a local business or chamber of commerce

Industry-Based Certifications

- Administrative Assisting
- Certified Associate in Project Management (CAPM)
- Entrepreneurship and Small Business
- MB-920: Microsoft Dynamics 365 Fundamentals Finance and Operations Apps
- Microsoft Office Specialist 2016 Master
- Microsoft Office Specialist: Microsoft Access Expert (Access and Access 2019)
- Microsoft Office Specialist: Microsoft Excel Expert (Excel and Excel 2019)
- Microsoft Office Specialist: Microsoft Word Expert (Word and Word 2019)
- Project Management Institute (PMI) Project Management Ready

- Microsoft Office Specialist-Excel*
- Microsoft Office Specialist-Word*

*IBC sunseting 8/31/24

Postsecondary Opportunities

Associates Degrees

- Business Administration
- Business/Commerce
- Public Administration
- Business Management

Bachelor's Degrees

- Business Administration
- Business/Commerce
- Public Administration
- Management Science

Master's, Doctoral, and Professional Degrees

- Business Administration
- Business Management
- Public Administration
- Management Science

Aligned Occupations

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

Successful completion of the Business Management program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Business Management Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5000 Principles of Business, Marketing, and Finance	13011200 (1 credit)	None	9-11

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5020 Money Matters	13016200 (1 credit)	Recommended: Principles of Business	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5067 Business Law	13011700 (1 credit)	Recommended: Principles of Business or Principles of Law	11-12

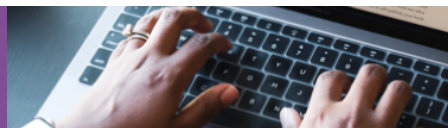
Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5010 Business Intern: Practicum in Business Management	13012200 (2 credits)	Principles of Business and 1 course in Business, Marketing, or Finance	11-12
5090/5091 Career Preparation I/Extended	12701300 (2 credits) 12701305 (3 credits)	None	11-12
5092/5093 Career Preparation II/Extended	12701400 (2 credits) 12701405 (3 credits)	Career Prep I	12

Business, Marketing, and Finance Career Cluster

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

Entrepreneurship Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Business, Marketing, and Finance

Level 2

- Money Matters

Level 3

- Mustang INCubator Entrepreneurship I

Level 4

- Business Intern: Practicum in Business Management
- Practicum in Marketing I and II
- Mustang ACCElerator Entrepreneurship II
- Project-Based Research
- Career Preparation I and II

Postsecondary Opportunities

Associates Degrees

- Business Administration and Management
- Business/Commerce
- Public Administration
- Business Management

Bachelor's Degrees

- Business Administration and Management
- Business/Commerce
- Public Administration
- Management Science

Master's, Doctoral, and Professional Degrees

- Business Administration and Management
- Business/Commerce
- Public Administration
- Management Science

Work-Based Learning and Expanded-Learning Opportunities

Exploration Activities

- Participate in Business Professionals of America, Future Leaders of America, or DECA

Work-Based Learning Activities

- Intern with a local management consulting firm

Industry-Based Certifications

- Entrepreneurship and Small Business
- Facebook Digital Marketing Associate Certification



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
General and Operations Managers	\$107,640	18,679	20%
Management Analysts	\$87,651	4,706	32%
Managers, All Others	\$113,110	1,794	26%

Successful completion of the Entrepreneurship program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Entrepreneurship Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5000 Principles of Business, Marketing, and Finance	13011200 (1 credit)	None	9-11

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5020 Money Matters	13016200 (1 credit)	Recommended: Principles of Business	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5040 Mustang INCubator Entrepreneurship I	13034400 (1 credit)	Recommended: Principles of Business	11-12

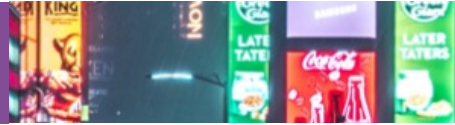
Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5010 Business Intern: Practicum in Business Management	13012200 (2 credits) 13012205 (3 credits) 13012210 (2 credits) 13012215 (3 credits)	Principles of Business and 1 course in Business, Marketing, or Finance	11-12
5080 Mustang ACCEerator Entrepreneurship II	N1303423 (1 credit)	Mustang INCubator	12
5510 Practicum in Marketing I/Extended	13034800 (2 credits) 13034805 (3 credits)	Principles of Business and 1 course in Business, Marketing, or Finance	11-12
5545 Practicum in Marketing II/extended	13034810 (2 credits) 13034815 (3 credits)	Practicum in Marketing I	12
5008 Project-Based Research	12701500 (1 credit)	None	12
5090/ 5091Career Preparation I/Extend	12701300 (2 credits) 12701305 (3 credits)	None	11-12
5092/5093 Career Preparation II/Extend	12701400 (2 credits) 12701405 (3 credits)	Career Prep I	12

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.

Marketing & Sales Statewide Program of Study



The Marketing and Sales program of study teaches CTE learners how to collect information to determine potential sales of a product or service and/or create a marketing campaign to market or distribute goods and services. Through this program of study, students will learn the skills necessary to understand and apply data on customer demographics, preferences, needs, and buying habits.

Secondary Courses for High School Credit

Level 1

- Principles of Business, Marketing, and Finance

Level 2

- Sports and Entertainment Marketing

Level 3

- Social Media Marketing
- Fundamentals of Real Estate
- The Stable – (Mustang Store) - Retail Management

Level 4

- Practicum in Marketing I and II
- Career Preparation I and II

Postsecondary Opportunities

Associates Degrees

- Marketing/ Marketing Management, General
- Consumer Merchandising/ Retailing Management
- International Marketing
- Business

Bachelor's Degrees

- Marketing/ Marketing Management, General
- Business Administration
- Applied Economics
- Marketing Research

Master's, Doctoral, and Professional Degrees

- Marketing
- Business Administration
- Applied Economics
- Advertising

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Business Professionals of America, Future Business Leaders of America, or DECA

Work-Based Learning Activities

- Intern with a local marketing firm
- Shadow a real estate agent
- Operate a school store on campus

Industry-Based Certifications

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

- Google Analytics Individual Qualification*
*IBC sunseting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Marketing Research Analysts and Marketing Specialists	\$70,346	4,664	40%
Insurance Sales Agent	\$43,181	5,886	30%
First-Line Supervisors of Retail Sales Workers	\$72,550	2,826	15%
Wholesale and Retail Buyers	\$51,106	1,229	19%

Successful completion of the Marketing and Sales program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Marketing & Sales Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5000 Principles of Business, Marketing, and Finance	13011200 (1 credit)	None	9-11

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5465 Sports and Entertainment Marketing	13034600 (.5 credit)	Recommended: Principles of Business	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5480 Social Media Marketing	13034650 (.5 credit)	Recommended: Principles of Business	10-12
5486 Fundamentals of Real Estate	N1301120 Jr and Sr Year (1 credit per year)	Recommended: Principles of Business Fees Apply	11 and 12
5003 The Stable – (Mustang Store) - Retail Management	N1303420 (1 credit)	Principles of Business or Graphic Design Recommended: Accounting I or Social Media Marketing	10-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5510 Practicum in Marketing I	13034800 (2 credits)	Principles of Business and 1 course in Business, Marketing, or Finance	11-12
5545 Practicum in Marketing II	13034805 (3 credits) 13034810 (2 credits) 13034815 (3 credits)	Practicum in Marketing I	12
5090/ 5091 Career Preparation I/Extend	12701300 (2 credits) 12701305 (3 credits)	None	11-12
5092/5093 Career Preparation II/Extend	12701400 (2 credits) 12701405 (3 credits)	Career Prep I	12

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.

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.

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.

5485/5486 FUNDAMENTALS OF REAL ESTATE

Grade Placement: 11 (5486) and 12 (5485)

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

Recommended: Accounting I or Graphic Design 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

Grade: 12

Credit: 1

Prerequisite: Mustang Business INCubator

ACCElerator fosters startup development to transition the business founded in INCubator 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 PROJECT BASED RESEARCH

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 CAREER PREPARATION I

Grade: 11-12

Credit: 2

Prerequisite: None

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.

5091 CAREER PREPARATION I / EXTENDED CAREER PREPARATION

Grade: 11-12

Credit: 3

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

Extended Career Preparation provides a 3 credit 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.

5092 CAREER PREPARATION II

Grade: 12

Credit: 2

Prerequisite: Career Preparation I

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

5093 CAREER PREPARATION II / EXTENDED CAREER PREPARATION

Grade: 12

Credit: 3

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

Extended Career Preparation provides a 3 credit 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 and other food/beverage services, lodging, attractions, recreation events, and travel-related services. Students acquire knowledge and skills focusing on communication, time management, and customer service that meet industry standards. Students will explore the history of the hospitality and tourism industry and examine characteristics needed for success.

Culinary Arts Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Introduction to Culinary Arts

Level 2

- Culinary Arts

Level 3

Level 4

- Food Science
- Practicum in Culinary Arts I
- Practicum in Culinary Arts II
- Career Preparation I and II

Postsecondary Opportunities

Associates Degrees

- Hotel and Restaurant Management
- Restaurant Culinary and Catering Management
- Hospitality Administration/ Management, General
- Culinary Arts/ Chef Training

Bachelor's Degrees

- Hotel and Restaurant Management
- Food Service Systems Administration/ Management
- Hospitality Administration/ Management, General
- Culinary Science and Food Service Management

Master's, Doctoral, and Professional Degrees

- Hotel and Restaurant Management
- Food Service Systems Administration/ Management
- Hospitality Administration/ Management, General
- Business Administration Management, General

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Family, Career, and Community Leaders of America, SkillsUSA, American Culinary Federation, or the Texas Restaurant Association

Work-Based Learning Activities

- Plan a catering event or work for a catering company
- Participate in a cooking course
- Work in a restaurant

Industry-Based Certifications

- Certified Fundamentals Cook
- Certified Fundamentals Pastry Cook
- Certified Hospitality & Tourism Management Professional
- Commercial Foods
- Culinary Meat Selection & Cookery Certification
- Food Protection Manager Certification
- Food Safety & Science Certification
- ManageFirst Professional
- Pre-Professional Certification in Culinary Arts
- Pre-Professional Certification in Food Science Fundamentals
- ServSafe Manager



Aligned Occupations

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

Successful completion of the Culinary Arts program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Culinary Arts

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5338 Introduction to Culinary Arts	13022550 (1 credit)	None	9-12

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5340 Culinary Arts	13022600 (2 credits)	Intro to Culinary Arts	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5335 Food Science	13023000 (1 credit)	3 units of Science, including Chemistry and Biology Recommended: 1 course from Culinary Arts	11-12
5350 Practicum in Culinary Arts I	13022700 (2 credits)	Culinary Arts	11-12
5353 Practicum in Culinary Arts II	13022710 (2 credits)	Practicum in Culinary Arts I	12
5090/ 5091Career Preparation I /Extended	12701300 (2 credits) 12701305 (3 credits)	None	11-12
5092/5093 Career Preparation II /Extended	12701400 (2 credits) 12701405 (3 credits)	Career Prep I	12

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: 3 science courses including Biology and Chemistry

Recommended: 1 course from the Culinary Arts Program of Study

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.

5090 CAREER PREPARATION I

Grade: 11-12

Credit: 2

Prerequisite: None

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.

5091 CAREER PREPARATION I / EXTENDED CAREER PREPARATION

Grade: 11-12

Credit: 3

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

Extended Career Preparation provides a 3 credit 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**



**TEACHING
AND TRAINING**

Education and Training Career Cluster

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

Teaching and Training Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Education and Training

Level 2

- Child Development

Level 3

- Ready Set Teach I - Instructional Practices

Level 4

- Ready Set Teach II - Practicum in Education and Training
- Project Based Research
- Career Preparation I and II

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in the Texas Association of Future Educators or Family, Career, and Community Leaders of America

Work-Based Learning Activities

- Teach a community education class
- Intern as a teaching assistant or tutor
- Serve as a camp counselor

Industry-Based Certifications

- Educational Aide I

Postsecondary Opportunities

Associates Degrees

- Teacher Education
- Education, General (or specific subject area)
- Special Education
- Health and Physical Education/Fitness

Bachelor's Degrees

- Bilingual and Multilingual Education
- Education, General (or specific subject area)
- Special Education
- Health and Physical Education/Fitness

Master's, Doctoral, and Professional Degrees

- Instruction and Learning
- Educational Leadership and Administration, General
- Special Education
- Social and Philosophical Foundations of Education



Aligned Occupations

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

Successful completion of the Teaching and Training program of study will fulfill requirements of the Public Service endorsement. Revised – August 2022

Teaching and Training Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5360 Principles of Education and Training	13014200 (1 credit)	None	9-11

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5370 Child Development	13024700 (1 credit)	Recommended: Principles of Education	9-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5380 Ready Set Teach I - Instructional Practices	13014400 (2 credits)	Principles of Ed or Child Development	11-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5385 Ready Set Teach II - Practicum in Education and Training 5386 A/B Dual Credit Ready Set Teach II	13014500 (2 credits)	RST I - Instructional Practices	12
5008 Project Based Research	12701500 (1 credit)	None	11-12
5090/ 5091 Career Preparation I/Extend	12701300 (2 credits) 12701305 (3 credits)	None	11-12
5092/5093 Career Preparation II/Extend	12701400 (2 credits) 12701405 (3 credits)	Career Prep I	12

Career & Technical Education Electives

Courses in this cluster will count toward the

Public Service Endorsement

EDUCATION AND TRAINING CLUSTER

5360 PRINCIPLES OF EDUCATION AND TRAINING

Grades: 9 - 11

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: Instructional Practices in Education and Training I (Ready, Set Teach I)

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 PROJECT BASED RESEARCH

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 CAREER PREPARATION I

Grade: 11-12

Credit: 2

Prerequisite: None

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.

5091 CAREER PREPARATION I / EXTENDED CAREER PREPARATION

Grade: 11-12

Credit: 3

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

Extended Career Preparation provides a 3 credit 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.



BIOMEDICAL
SCIENCE

HEALTHCARE
DIAGNOSTICS

HEALTHCARE
THERAPEUTICS

Science, Technology, Engineering, and Mathematics Career Cluster

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

Biomedical Science Statewide Program of Study



The Biomedical Science program of study focuses on the study of biology and medicine in order to introduce CTE learners to the knowledge and skills necessary to be successful in the healthcare field, such as researching and diagnosing diseases, pre-existing conditions, or other determinants of health. Students may also practice patient care and communication.

Secondary Courses for High School Credit

Level 1

- Principles of Biomedical Science (PLTW)

Level 2

- Human Body Systems (PLTW)

Level 3

- Medical Interventions (PLTW)

Level 4

- Biomedical Innovation (PLTW)
- Practicum in Science, Technology
- Scientific Research and Design

Postsecondary Opportunities

Associates Degrees

- Histologic Technician
- Clinical Laboratory Science/Medical Technology/Technologist

Bachelor's Degrees

- Biomedical Engineers
- Clinical Laboratory Science/Medical Technology/Technologist

Master's, Doctoral, and Professional Degrees

- Genetic Counseling
- Medical Scientists
- Epidemiology

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none">Join Health Occupations Students of America	<ul style="list-style-type: none">Intern at a labShadow a healthcare or medical professional

Industry-Based Certifications

- Biotechnician Assistant Credentialing Exam (BACE)
- Medical Laboratory Assistant
- Medical Laboratory Technician



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Medical and Laboratory Technicians	\$37,981	1,159	28%
Biological Technicians	\$42,931	452	17%
Forensic Science Technicians	\$48,152	171	35%
Chemical Technicians	\$49,733	672	10%
Medical and Clinical Laboratory Technologists	\$58,760	1,166	35%

Successful completion of the Biomedical program of study will fulfill requirements of the Public Service or STEM endorsement if the math and science requirements are met. Revised – August 2022

Biomedical Science Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5410W Principles of Biomedical Science (PLTW)	N1302092 (1 credit)	None	9-11

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5425W Human Body Systems (PLTW)	N1302093 (1 credit)	Biology and Completed/Concurrent Chemistry Recommended: One course from Biomedical or Health Science	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5415W Medical Interventions (PLTW)	N1302094 (1 credit)	Biology, Chemistry, and Principles of Biomed or Human Body Systems	11-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5440W Biomedical Innovation (PLTW)	N1302095 (1 credit)	Principles of Biomed or Human Body Systems and Medical Interventions	11-12
0030 ISM - Scientific Research and Design	13037200 (1 credit)	Biology, Chemistry, IPC, or Physics	11-12
5085 Practicum in Science, Technology, Engineering, and Math	13037400 (2 credits)	Algebra I and Geometry Recommended: 1 course from Biomedical Science	12

Health Science Career Cluster

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

Healthcare Diagnostics Statewide Program of Study



The Healthcare Diagnostics program of study introduces students to occupations and education opportunities related to performing complex medical laboratory tests for the diagnosis, treatment, and prevention of disease. This program of study may also include exploration into the opportunities associated with blood laboratories as well as radiologic technology and ultrasound technology.

Secondary Courses for High School Credit

Level 1

- Principles of Health Science

Level 2

- Medical Terminology – FJH and FHS

Level 3

- Health Science Theory

Level 4

- Human Body Systems - Anatomy and Physiology
- Medical Interventions - Pathophysiology
- Practicum in Health Science – CCMA
- Practicum in Health Science – EMT (Dual Credit)

Postsecondary Opportunities

Associates Degrees

- Nuclear Medical Technology/Technologist
- Magnetic Resonance Imaging (MRI) Technology/Technician

Bachelor's Degrees

- Nuclear Medical Technology/Technologist
- Medical Radiologic Technology/Science Radiation Therapist

Master's, Doctoral, and Professional Degrees

- Radiologist
- Radiologic Technology/Science Radiographer

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Health Occupation Students of America

Work-Based Learning Activities

- Perform clinical rotations at a community wellness center, hospital, assisted living, nursing home

Industry-Based Certifications

- Certified Cardiographic Technician
- Certified Clinical Medical Assistant
- Certified EKG Technician
- ECG Technician
- Limited Medical Radiologic Technologist
- Medical Assistant
- Medical Laboratory Assistant
- Medical Laboratory Technician
- Nationally Registered Certified EKG Technician
- Phlebotomy Technician
- Registered Diagnostic Medical Sonographer - Abdomen*
- Registered Diagnostic Medical Sonographer - Obstetrics and Gynecology*
- Registered Technologist - Cardiac-Interventional Radiography*
- Registered Technologist - Computed Tomography*
- Registered Technologist - Magnetic Resonance Imaging*
- Registered Technologist - Mammography*
- Registered Technologist - Nuclear Medicine Technology*
- Registered Technologist - Radiography*
- Registered Technologist - Sonography*
- Registered Technologist - Vascular Sonography*
- Registered Technologist - Vascular-Interventional Radiography*
- Registered Vascular Technology*

*IBC sunseting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Diagnostic Medical Sonographers	\$69,909	495	35%
Phlebotomist	\$30,597	1,442	36%
Nuclear Medicine Technologists	\$75,962	91	13%
Radiologic Technologists	\$55,494	1,196	21%
Magnetic Resonance Imaging Technologists	\$68,661	217	21%

Successful completion of the Healthcare Diagnostics program of study will fulfill requirements of the Public Service or STEM endorsement if the math and science requirements are met. Revised – August 2022

Healthcare Diagnostics

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5430 Principles of Health Science	13020200 (1 credit)	None	9-12

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
4845 Medical Terminology	13020300 (1 credit)	None	9-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5431 Health Science Theory	13020400 (1 credit)	Biology	10-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5425W Human Body Systems - Anatomy and Physiology	13020600 (1 credit)	Biology and completed/concurrent Chemistry Recommended: One course from Biomedical or Health Science	10-12
5415W Medical Interventions - Pathophysiology	13020800 (1 credit)	Biology and Chemistry; Principles of Biomed or Human Body Systems	11-12
5435 Practicum in Health Science - CCMA 5434 A/B Practicum in Health Science – EMT (Dual Credit)	13020500 (2 credits) 13020510 (2 credits)	Health Science Theory and Biology	12

Health Science Career Cluster

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

Healthcare Therapeutic Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Health Science

Level 2

- Medical Terminology – FJH and FHS

Level 3

- Human Body Systems - Anatomy and Physiology
- Health Science Theory

Level 4

- Medical Interventions - Pathophysiology
- Pharmacy I
- Pharmacology
- Practicum in Health Science – CCMA
- Practicum in Health Science – EMT (Dual Credit)

Postsecondary Opportunities

Associates Degrees

- Dental Hygienist
- Medical/Clinical Assistant

Bachelor's Degrees

- Dental Hygienist

Master's, Doctoral, and Professional Degrees

- Dentist
- Physician Assistant
- Family and General Practitioners
- Pharmacist

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in SkillsUSA or Health Occupation Students of America

Work-Based Learning Activities

- Volunteer at a community wellness center, hospital, assisted living, or nursing home

Industry-Based Certifications

- Certified Clinical Medical Assistant
- Certified Dental Assistant
- Certified EKG Technician
- Certified Nurse Aide (CNA)
- Certified Occupational Therapy Assistant
- Certified Patient Care Technician (CPCT)
- ECG Technician
- Medical Assistant
- Medical Laboratory Assistant
- Nationally Registered Certified EKG Technician
- Patient Care Technician
- Pharmacy Technician
- Phlebotomy Technician
- Registered Dental Assistant X-Ray Certification

- Certified Ophthalmic Technician*
- Certified Surgical Technologist*
- Licensed Dental Hygienist*
- Orthopedic Technologist*

*IBC sunseting 8/31/24



Aligned Occupations

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

Successful completion of the Healthcare Therapeutic program of study will fulfill requirements of a Public Service endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Healthcare Therapeutic Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
4845 Principles of Health Science	13020200 (1 credit)	None	9-12

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5430 Medical Terminology	13020300 (1 credit)	None	9-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5425W Human Body Systems - Anatomy and Physiology	13020600 (1 credit)	One credit in Biology, completed/concurrent Chemistry Recommended: 1 course from Biomedical or Health Science	10-12
5431 Health Science Theory	13020400 (1 credit)	Biology	10-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5415W Medical Interventions - Pathophysiology	13020800 (1 credit)	Biology and Chemistry; Principles of Biomed or Human Body Systems	11-12
5439 Pharmacy I	N1302127 (1 credit)	Biology and Chemistry, Coreq: Pharmacology	12
5432 Pharmacology	13020950 (1 credit)	Biology and Chemistry, Coreq: Pharmacy I	12
5435 Practicum in Health Science – CCMA	13020500 (2 credits)	Health Science Theory and Biology	12
5434 Practicum in Health Science – EMT Dual Credit	13020510 (2 credits)		

Career & Technical Education Electives

Courses in this cluster will count toward the

Public Service Endorsement

HEALTH SCIENCE CAREER CLUSTER

BIOMEDICAL SCIENCE

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

Grade: 9 - 11

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

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

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: I

Prerequisite: Principles of Biomedical Science **or** Human Body Systems and Medical Intervention

This course may count as a science credit

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

Grade: 11-12

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

HEALTHCARE DIAGNOSTICS AND THERAPEUTICS

4845 MEDICAL TERMINOLOGY

Grades: 9 - 12

Credit: 1

Prerequisite: None

A course designed to develop a working knowledge of the language of medicine. Learners acquire word-building skills by learning prefixes, suffixes, roots, combining forms, and singular and plural forms, plus medical abbreviations and acronyms. This course allows learners to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology and patho- physiology. By relating terms to body systems, learners identify proper use of words in a medical environment. Knowledge of medical terminology enhances the student's ability to successfully secure employment or pursue advanced education in health care.

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.

5425W HUMAN BODY SYSTEMS, WEIGHTED COURSE

Grade: 10 - 12

Credit: 1

Prerequisite: Biology & completed or concurrent enrollment in Chemistry

Recommended: 1 course from Health Science/Biomedical Pathway

This course may count as a science credit

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 and Principles of Biomedical Science or Human Body Systems

This course may count as a science credit

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.

5431 HEALTH SCIENCE THEORY

Grades: 11 - 12

Credit: 1

Prerequisite: Biology

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.

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

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.



**LAW
ENFORCEMENT**

**LEGAL
STUDIES**

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. Students will examine the roles and responsibilities of police, courts, corrections, private security, and fire and emergency services.

Law Enforcement Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Principles of Law, Public Safety, Corrections, and Security

Level 2

- Criminal Justice - Law Enforcement I

Level 3

- Criminal Investigation

Level 4

- Forensic Science
- Practicum in Law, Public Safety Corrections, and Security

Postsecondary Opportunities

Associates Degrees

- Criminal Justice/Safety Studies/Law
- Enforcement Administration
- Criminal Justice/Police Science
- Corrections
- Criminalistics and Criminal Science

Bachelor's Degrees

- Criminal Justice/Safety Studies/Law
- Enforcement Administration
- Criminal Justice/Police Science
- Juvenile Corrections
- Cyber/Computer Forensics and Counterterrorism

Master's, Doctoral, and Professional Degrees

- Criminal Justice/Safety Studies/Law
- Enforcement Administration
- Natural Resources
- Law Enforcement and Protective Services

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Join the Texas Public Service Association or local criminal justice clubs

Work-Based Learning Activities

- Attend court hearings and other legal procedures

Industry-Based Certifications

- Non-Commissioned Security Officer Level II



Aligned Occupations

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

Successful completion of the Law and Public Service program of study will fulfill requirements of the Public Service endorsement. Revised – August 2022

Law Enforcement Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5700 Principles of Law, Public Safety, Corrections, and Security	13029200 (1 credit)	None	9-11

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5705 Criminal Justice - Law Enforcement I	13029300 (1 credit)	Recommended: Principles of Law	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5745 Criminal Investigation	13029550 (1 credit)	Recommended: Principles of Law	10-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5740 Practicum in Law, Public Safety, Corrections, and Security	13030100 (2 credits)	Recommended: Principles of Law and 2 other law classes	11-12
4140 Forensic Science	13029500 (1 credit)	Biology and Chemistry and IPC, Tech Princ, or Physics Recommended: Alg II and 1 law course	12

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. Students will examine the roles and responsibilities of police, courts, corrections, private security, and fire and emergency services.

Legal Studies Statewide Program of Study



The Legal Studies program of study introduces CTE learners to the occupations and educational opportunities related to representing clients in criminal and civil litigation and other legal proceedings, as well as assisting lawyers and preparing legal documents. This program of study explores possible specializations in a single area of law.

Secondary Courses for High School Credit

Level 1

- Principles of Law, Public Safety, Corrections, and Security

Level 2

- Court Systems and Practices

Level 3

- Business Law

Level 4

- Practicum in Law, Public Safety, Corrections, and Security
- Project-Based Research
- Career Preparation I and II

Postsecondary Opportunities

Associates Degrees

- Legal Assistant/Paralegal

Bachelor's Degrees

- Legal Assistant/Paralegal

Master's, Doctoral, and Professional Degrees

- Law
- Intellectual Property Law
- Advanced Legal Research/Studies General
- International Law and Legal Studies

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Attend court hearings and other legal procedures
- Join the Texas Public Service Association

Work-Based Learning Activities

- Intern with a local attorney
- Script and conduct a mock trial



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Lawyers	\$126,131	2,801	19%
Paralegal and Legal Assistants	\$50,544	2,837	19%

Successful completion of the Legal Studies program of study will fulfill requirements of the Public Service endorsement.

Revised – August 2022

Legal Studies

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5700 Principles of Law, Public Safety, Corrections, and Security	13029200 (1 credit)	None	9-11

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5715 Court Systems and Practices	13029600 (1 credit)	Recommended: Principles of Law	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5067 Business Law	13011700 (1 credit)	Recommended: Principles of Law or Principles of Business	11-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5740 Practicum in Law, Public Safety, Corrections, and Security	13030100 (2 credits)	Recommended: Principles of Law and 2 other law classes	11-12
5008 Project-Based Research	12701500 (1 credit)	None	11-12
5090/ 5091 Career Preparation I/Extend	12701300 (2 credits) 12701305 (3 credits)	None	11-12
5092/5093 Career Preparation II/Extend	12701400 (2 credits) 12701405 (3 credits)	Career Prep I	12

Career & Technical Education Electives

Courses in this cluster will count toward the

Public Service Endorsement

LAW AND PUBLIC SERVICE

5700 PRINCIPLES OF LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

Grades: 9 - 11

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 CRIMINAL JUSTICE - LAW ENFORCEMENT

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 war-rants, 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 PROJECT BASED RESEARCH

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 CAREER PREPARATION I

Grade: 11-12

Credit: 2

Prerequisite: None

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.

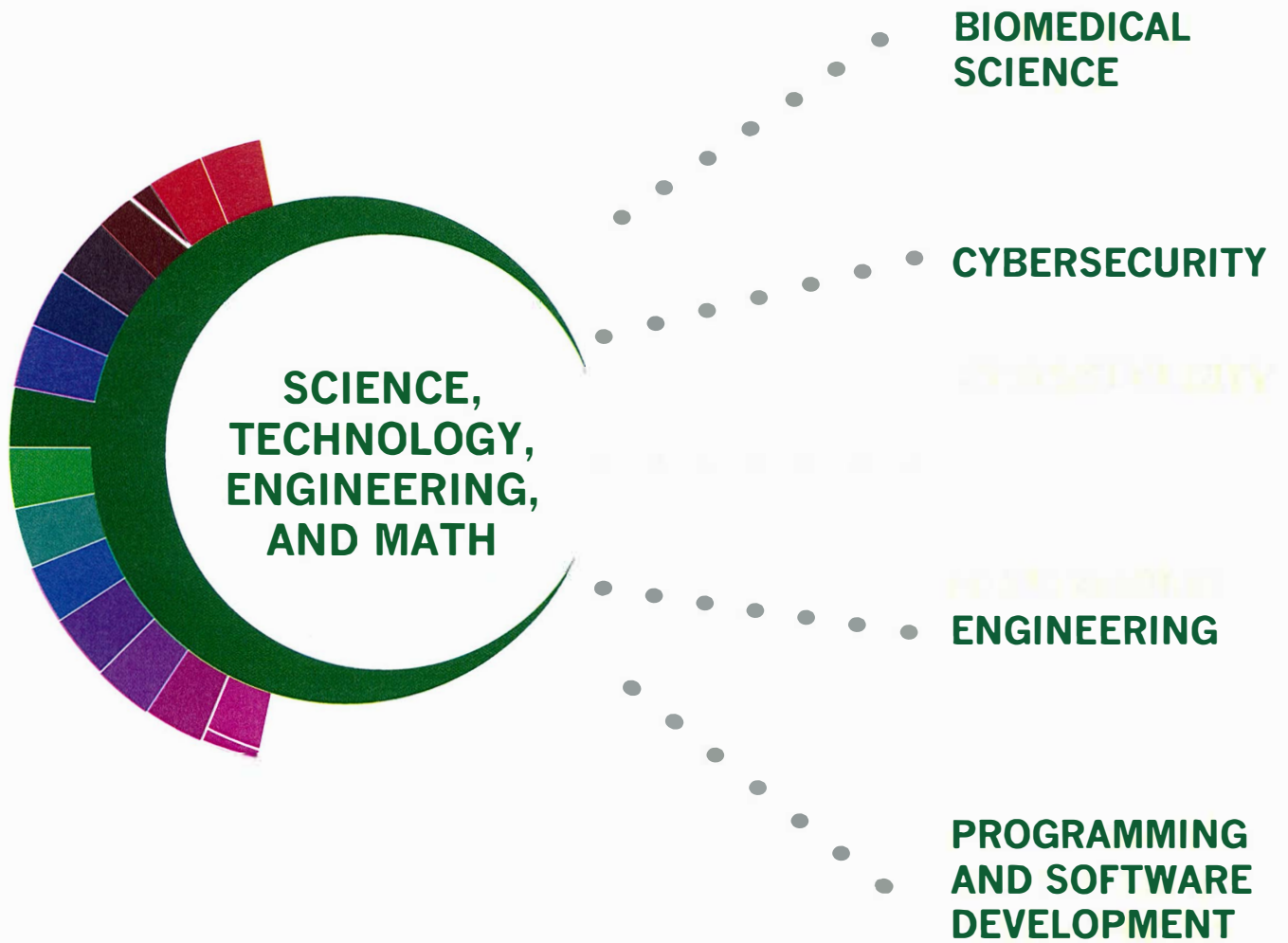
5091 CAREER PREPARATION I / EXTENDED CAREER PREPARATION

Grade: 11-12

Credit: 3

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

Extended Career Preparation provides a 3 credit 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.



Science, Technology, Engineering, and Mathematics Career Cluster

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

Biomedical Science Statewide Program of Study



The Biomedical Science program of study focuses on the study of biology and medicine in order to introduce CTE learners to the knowledge and skills necessary to be successful in the healthcare field, such as researching and diagnosing diseases, pre-existing conditions, or other determinants of health. Students may also practice patient care and communication.

Secondary Courses for High School Credit

Level 1

- Principles of Biomedical Science (PLTW)

Level 2

- Human Body Systems (PLTW)

Level 3

- Medical Interventions (PLTW)

Level 4

- Biomedical Innovation (PLTW)
- Practicum in Science, Technology
- Scientific Research and Design

Postsecondary Opportunities

Associates Degrees

- Histologic Technician
- Clinical Laboratory Science/Medical Technology/Technologist

Bachelor's Degrees

- Biomedical Engineers
- Clinical Laboratory Science/Medical Technology/Technologist

Master's, Doctoral, and Professional Degrees

- Genetic Counseling
- Medical Scientists
- Epidemiology

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none">Join Health Occupations Students of America	<ul style="list-style-type: none">Intern at a labShadow a healthcare or medical professional

Industry-Based Certifications

- Biotechnician Assistant Credentialing Exam (BACE)
- Medical Laboratory Assistant
- Medical Laboratory Technician



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Medical and Laboratory Technicians	\$37,981	1,159	28%
Biological Technicians	\$42,931	452	17%
Forensic Science Technicians	\$48,152	171	35%
Chemical Technicians	\$49,733	672	10%
Medical and Clinical Laboratory Technologists	\$58,760	1,166	35%

Successful completion of the Biomedical program of study will fulfill requirements of the Public Service or STEM endorsement if the math and science requirements are met. Revised – August 2022

Biomedical Science Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5410W Principles of Biomedical Science (PLTW)	N1302092 (1 credit)	None	9-11

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5425W Human Body Systems (PLTW)	N1302093 (1 credit)	Biology and Completed/Concurrent Chemistry Recommended: One course from Biomedical or Health Science	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5415W Medical Interventions (PLTW)	N1302094 (1 credit)	Biology, Chemistry, and Principles of Biomed or Human Body Systems	11-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5440W Biomedical Innovation (PLTW)	N1302095 (1 credit)	Principles of Biomed or Human Body Systems and Medical Interventions	11-12
0030 ISM - Scientific Research and Design	13037200 (1 credit)	Biology, Chemistry, IPC, or Physics	11-12
5085 Practicum in Science, Technology, Engineering, and Math	13037400 (2 credits)	Algebra I and Geometry Recommended: 1 course from Biomedical Science	12

Science, Technology, Engineering, and Mathematics Career Cluster

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

Cybersecurity Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Fundamentals of Computer Science (Coding A - FJH)

Level 2

- Computer Science I
- AP Computer Science Principles

Level 3

- AP Computer Science A-Math/LOTE
- Digital Forensics

Level 4

- PLTW Cybersecurity
- Practicum in STEM
- Independent Study in Evolving/Emerging Technologies

Postsecondary Opportunities

Associates Degrees

- System Networking, and LAN/WAN Management
- Information Technology
- Computer and Information Sciences, General
- Computer Science

Bachelor's Degrees

- Computer Systems Networking and Telecommunications
- Computer Systems Networking and Telecommunications
- Computer and Information Sciences, General
- Computer Science

Master's, Doctoral, and Professional Degrees

- Computer Systems Analysis/Analyst
- Information Technology
- Computer Information Sciences, General
- Computer Science

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Join TSA
- Job shadow a computer system analyst or information security analyst

Work-Based Learning Activities

- Obtain a cybersecurity IBC

Industry-Based Certifications

- Cisco 200-201 CBROPS - Understanding Cisco Cybersecurity Operations Fundamentals
- CompTIA A+ Certification
- CompTIA Network+
- CompTIA Security+
- Cybersecurity Fundamentals
- CyberSecurity Fundamentals: An ISACA Certificate
- Oracle Certified Associate Java SE 8 Programmer

- Associate of (ISC)*
*IBC sunseting 8/31/24



Aligned Occupations

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

Successful completion of the Agribusiness program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Cybersecurity Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
0500 Computer Science I	03580200 (1 credit)	Algebra I	9-12
0505 AP Computer Science Principles	A3580300 (1 credit)	Algebra I 9 th Graders – enrolled in MAP Geometry or Algebra II concurrently	9-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
0510 AP Computer Science A-Math/LOTE	A3580110 (1 credit)	Computer Science II	11-12
5203 Digital Forensics	03580360 (1 credit)	PREQ: Geometry and Computer Science I Recommended: CS II	11-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5204W PLTW Cybersecurity	03580850 (1 credit)	Computer Science II or AP Computer Science Principles	10-12
5085 Practicum in STEM	13037400 (2 credits)	Algebra I and Geometry Recommended: One course from Computer Science	12
0610 Independent Study in Evolving/Emerging Technologies I	03581500 (1 credit)	AP Computer Science A	11-12
0612 Independent Study in Evolving/Emerging Technologies II	03581500 (1 credit)	ISM in EE Tech I	12

Science, Technology, Engineering, and Mathematics Career Cluster

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

Engineering Statewide Program of Study



The Engineering program of study focuses on the design, development, and use of engines, machines, and structures. CTE learners will learn how to apply science, mathematical methods, and empirical evidence to the innovation, design, construction, operation, and maintenance of different manufacturing systems.

Secondary Courses for High School Credit

Level 1

- Introduction to Engineering Design (PLTW)

Level 2

- Robotics I
- Engineering Science

Level 3

- SystemsGo Rocketry - Engineering Design and Presentation I
- Aerospace Engineering (PLTW)
- Digital Electronics
- Civil Engineering and Architecture (PLTW)

Level 4

- Engineering and Design and Development (PLTW)
- Practicum in STEM
- ISM - Scientific Research and Design

Postsecondary Opportunities

Associates Degrees

- Electrical and Electronics Engineering
- Drafting and Design Technology/ Technician, General
- Engineering Technology

Bachelor's Degrees

- Electrical and Electronics Engineering
- CAD/CADD Drafting and/or Design Technology/ Technician
- Bioengineering and Biomedical Engineering
- Construction Engineering Technology/ Technician

Master's, Doctoral, and Professional Degrees

- Electrical and Electronics Engineering
- Mechanical Engineering
- Bioengineering and Biomedical Engineering

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Skills USA competitions

Work-Based Learning Activities

- Intern at an engineering firm
- Shadow a machinist

Industry-Based Certifications

- 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-103 Certified Industry 4.0 Associate - Robot System Operations
- Engineering Technology Foundations
- Lean Six Sigma Green Belt Certification
- Pre-Engineering/Engineering Technology - Job Ready

- Certified SOLIDWORKS Associate*
*IBC sunseting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Aerospace Engineers	\$110,843	481	9%
Industrial Engineers	\$97,074	1,263	10%
Mechanical Engineers	\$91,107	1,535	11%
Chemical Engineers	\$112,819	474	9%
Electrical Engineers	\$98,405	1,137	105

Successful completion of the Engineering program of study will fulfill requirements of the Business and Industry or STEM endorsement if the math and science requirements are met. Revised – August 2022

Engineering Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5270W Introduction to Engineering Design (PLTW - IED)	N1303742 (1 credit)	None	9-12

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5272 Robotics I	13037000 (1 credit)	None	9-12
4900W Engineering Science (PLTW - ES)	13037500 (1 credit)	IED, Algebra I, and Biology. Recommended: Geometry; and IPC, Chemistry or Physics	10-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5280W Civil Engineering & Architecture (PLTW- CEA)	N1303747 (1 credit)	Algebra I and IED	10-12
5271 SystemsGo Rocketry - Engineering Design and Presentation I	13036500 (1 credit)	IED Coreq: Algebra II	10-12
5290W Aerospace Engineering (PLTW - AE)	N1303745 (1 credit)	Geometry, IED, and CEA or ES	11-12
3605W Digital Electronics (PLTW - DE)	13037600 (1 credit)	Geometry, IED, and CEA or ES	11-12

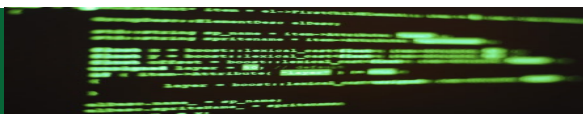
Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	Grade
5295W Engineering Design and Development (PLTW - EDD)	N1303749 (1 credit)	IED, ES, and 1 additional PLTW	11-12
5085 Practicum in Science, Technology, Engineering, and Mathematics	13037400 (2 credits)	Algebra I and Geometry Recommended: 1 course from Engineering	12
0030 ISM - Scientific Research & Design	13037200 (1 credit)	Biology, Chemistry and IPC or Physics	11-12

Science, Technology, Engineering, and Mathematics Career Cluster

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

Programming and Software Development Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

- Fundamentals of Computer Science – (Coding A – FJH)

Level 2

- AP Computer Science Principles
- Computer Science I

Level 3

- AP Computer Science A, Math/LOTE
- Computer Science II

Level 4

- Computer Science III
- Practicum in Science, Technology, Engineering, and Mathematics
- Independent Study in Evolving/Emerging Technologies I and II

Postsecondary Opportunities

Associates Degrees

- Computer Programming/Programmer General
- Computer Software Engineer
- Computer Science
- Certified Software Analyst

Bachelor's Degrees

- Management Information Systems, General
- Computer Software Engineer
- Computer Science
- Information Science/ Studies

Master's, Doctoral, and Professional Degrees

- Computer Software Engineer
- Computer Science
- Information Science/ Studies

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Join TSA
- Participate in a coding club at school

Work-Based Learning Activities

- Obtain a programming IBC

Industry-Based Certifications

- C++ Certified Associate Programmer
- Certified Entry-Level Python Programmer (PCEP)
- Certified Professional Programmer
- CompTIA Linux+
- Oracle Certified Associate Java SE 8 Programmer
- Oracle Database SQL Certified Associate



Aligned Occupations

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

Programming and Software Development

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
0500 Computer Science I	03580200 (1 credit)	Algebra I	9-12
0505 AP Computer Science Principles	A3580300 (1 credit)	Algebra I 9 th Graders – enrolled in MAP Geometry or Algebra II concurrently	9-12

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
0530W Computer Science II	03580300 (1 credit)	Geometry, and Computer Science I or AP Computer Science Principles	10-12
0510 AP Computer Science A- Math/LOTE	A3580110 (1 credit)	Computer Science II	11-12

Level 4

Course Name	Service ID	PREREQUISITES	COREQUISITES
0535 Computer Science III	03580350 (1 credit)	AP Computer Science A	11-12
5085 Practicum in Science, Technology, Engineering, and Mathematics	13037400 (2 credits)	Algebra I and Geometry Recommended: One course from Computer Science	12
0610 Independent Study in Evolving/Emerging Technologies I	03581500 (1 credit)	AP Computer Science A	11-12
0612 Independent Study in Evolving/Emerging Technologies II	03581500 (1 credit)	ISM in EE Tech I	12

Career & Technical Education Electives

Courses in this cluster will count toward the

STEM Endorsement

ENGINEERING CAREER CLUSTER

BIOMEDICAL SCIENCE

Courses count toward Public Service or STEM Endorsement if math and science requirements are met.

5410W PRINCIPLES OF BIOMEDICAL SCIENCE, WEIGHTED COURSE

Grade: 9 - 11

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

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

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: I

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

This course may count as a science credit

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

Grade: 11-12

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 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

ENGINEERING

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

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.

5270W INTRODUCTION TO ENGINEERING DESIGN, WEIGHTED COURSE (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.

5280W CIVIL ENGINEERING AND ARCHITECTURE, WEIGHTED COURSE (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 (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 (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.

3605W DIGITAL ELECTRONICS, WEIGHTED COURSE (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 (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

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.

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 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

CYBERSECURITY AND PROGRAMMING & SOFTWARE DEVELOPMENT

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.

5204W PLTW CYBERSECURITY

Grade: 10 - 12

Credit: 1

Prerequisites: Computer Science II or AP Computer Science Principles

The course is designed to expose high school students to the ever-growing and far-reaching field of cybersecurity by providing students with inspiring and relevant learning experiences, during which they train and solve real-world problems as cybersecurity experts do. The course provides students with a broad exposure to the many aspects of digital and information security, while encouraging socially responsible choices and ethical behavior. It inspires algorithmic and computational thinking, especially “outside the box” especially “outside-the-box” thinking. Students explore the many educational and career paths available to cybersecurity experts, as well as other careers that comprise the field of information security.

There are Network Security Labs in the classroom where students explore operating systems and networks in isolation from any school or district network. Through the course’s Network Security Lab, students and teachers will have access to a completely isolated, secure, and legal environment for exploration and learning to gain hands on cybersecurity skills. As students interact with their teams in this simulated environment, they will discover how the skills they’re learning can help them solve real-world problems like cybersecurity experts do, while experiencing the relevancy of these skills. Students can choose to earn Comp TIA’s Security+ Certification at the end of the course.

203 DIGITAL FORENSICS

Grade 11-12

Credit: 1

Prerequisite: Computer Science I and Geometry

Recommended: Computer Science II

Digital Forensics will foster students’ creativity and innovation by presenting opportunities to investigate simulations and case studies of crimes, reconstructing computer security incidents, troubleshooting operational problems, and recovering from accidental system damage. Students will collaborate to develop forensic techniques to assist with computer security incident response. Students will learn methods to identify, collect, examine, and analyze data while preserving the integrity of the information and maintaining a strict chain of custody for data. Students will solve problems as they study the application of science to the law. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of computing and networking systems that transmit or store electronic data.

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.

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.

085 PRACTICUM IN STEM

Grade: 12

Credit: 2

Prerequisite: Algebra I and Geometry

Recommended: At least one course from Computer 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.



ENERGY

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REFINING AND
CHEMICAL
PROCESSES

Energy Career Cluster

The Energy Career Cluster prepares individuals for careers in the designing, planning, maintaining, generating, transmission, and distribution of traditional and alternative energy.

Refining and Chemical Processes Statewide Program of Study



The Refining and Chemical Processes program of study helps CTE learners discover how to monitor, adjust, and control different equipment housed in petrochemical plants and refineries. It introduces students to the computer technology and instrumentation used to operate a variety of equipment systems and industrial processes, helping students build the skills needed to operate these systems.

Secondary Courses for High School Credit

Level 1

Level 2

Level 3

- Math for PTECH
- Humanities for PTECH
- Introduction to Process Technology
- Speech for PTECH

Level 4

- Principles of Quality PTECH
- English for PTECH
- Technical Writing for PTECH
- Government for PTECH

Postsecondary Opportunities

Associates Degrees

- Process Technology
- Process Operating Technology
- Logistics, Material, and Supply Chain Management
- Petroleum Technology/ Technician

Bachelor's Degrees

- Business Administration and Management, General
- Business/Commerce, General
- Industrial Engineering
- Petroleum Engineering

Master's, Doctoral, and Professional Degrees

- Business Administration and Management, General
- Business/Commerce, General
- Industrial Engineering
- Petroleum Engineering

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Tour a power plant or refinery

Work-Based Learning Activities

- Attend student summer conferences

Industry-Based Certifications

- NCCER Instrumentation Level I

- ISA Certified Control Systems Technician*
- OSHA 30 Hour General*

*IBC Sunsetting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Gas Plant Operators	\$62,650	312	9%
Petroleum Pump System Operators, Refinery Operators, and Gaugers	\$71,488	1,181	9%
Power Plant Operators	\$71,635	309	9%

Successful completion of the Refining and Chemical Processes program of study will fulfill requirements of the Business and Industry endorsement or STEM endorsement if the math and science requirements are met.. Revised – August 2022

Refining and Chemical Processes

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5903 Math for PTEC	12701410 (.5 credit)	None	Fall Junior Year
5905 Humanities for PTEC	03221600 (.5 credit)	None	Fall Junior Year
5802 Introduction to Process Technology	13040502 (1 credit)	None	Spring Junior Year
5901 Speech for PTEC	03240900 (1 credit)	None	Spring Junior Year

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5807 Principles of Quality PTEC	13040504 (1 credit)	Intro to Process Technology	Fall Senior Year
5808 English for PTEC	03220400 (.5 credit)	None	Fall Senior Year
5809 Technical Writing for PTEC	03220400 (.5 credit)	English for PTECH	Spring Senior Year
5810 Government for PTEC	03330100 (.5 credit)	None	Spring Senior Year

5903A WORKFORCE DUAL CREDIT MATH FOR PROCESS TECHNOLOGY

Grade Placement: Fall Junior Year

Credit: 1

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.

5905A WORKFORCE DUAL CREDIT HUMANITIES FOR PROCESS TECHNOLOGY

Grade Placement: Fall Junior Year

Credit: 1

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.

5802B 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.

5807A 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.

5808A 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.

5809B 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.

5810B 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.



HUMAN SERVICES

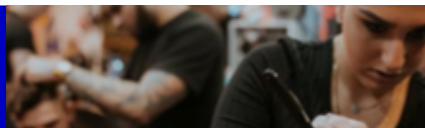
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**COSMETOLOGY
AND PERSONAL
CARE SERVICES**

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.

Cosmetology and Personal Care Services Regional Program of Study



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

Secondary Courses for High School Credit

Level 1

Level 2

Level 3

- Cosmetology I/Lab
- Practicum in Human Services I
- Barbering I

Level 4

- Cosmetology II/Lab
- Practicum in Human Services II
- Barbering II

Postsecondary Opportunities

Certificate/License

- Certified Aesthetic Laser Operator
- Cosmetologist
- Certified Spa Supervisor
- Nail Technician/Specialist and Manicurist

Associates Degrees

- Cosmetology/Cosmetologist, General
- Aesthetician/Esthetician and Skin Care Specialist
- Salon/Beauty Salon Management/Manager
- Cosmetology, Barber/Styling, and Nail Instructor

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

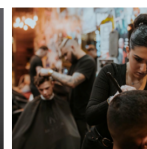
- Participate in TIVA or SkillsUSA

Work-Based Learning Activities

- Job shadow a cosmetologist
- Work part-time at a salon, spa, or barbershop

Industry-Based Certifications

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



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
First-Line Supervisors of Personal Service Workers	\$36,941	1,634	24%
Barbers	\$28,267	348	14%
Hairdressers, Hairstylists, and Cosmetologists	\$21,507	3,489	22%
Manicurists and Pedicurists	\$21,715	418	45%
Shampooers	\$18,720	139	24%
Skincare Specialists	\$26,437	637	22%

Successful completion of the Cosmetology and Personal Care Services regional program of study will fulfill requirements of the Public Service endorsement. Revised – August 2022

Cosmetology and Personal Care Services

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5562 Cosmetology I/Lab	13025210 (3 credits)	None	11-12
5560 Practicum in Human Services I	13025005 (2 credits)	None	11-12
Barbering I	N1302534 (3 credits)	None	11-12

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5563 Cosmetology II/Lab	13025310 (3 credits)	Cosmetology I	11-12
5561 Practicum in Human Services II	13025005 (2 credits)	Practicum in Human Services I	11-12
Barbering II	N1302535 (3 credits)	Barbering I	11-12

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 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.

5560 WORKFORCE DUAL CREDIT PRACTICUM IN HUMAN SERVICES/EXTENDED PRACTICUM IN HUMAN SERVICES (First Time Taken)

5561 WORKFORCE DUAL CREDIT PRACTICUM IN HUMAN SERVICES/EXTENDED PRACTICUM IN HUMAN SERVICES (Second Time Taken)

Grade Placement: 11-12

Credit: 3

Prerequisite: None

Extended Practicum in Human Services provides background knowledge and occupation- specific training that focuses on the development of Cosmetology and Personal Care Services. Content for Extended Practicum in Human Services is designed to meet the occupational preparation needs and interests of students and should be based upon the knowledge and skills selected from two or more courses in a coherent sequence in the human services cluster. 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.



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 completer 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 manufacturing/process engineering.

Welding Statewide Program of Study



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

Secondary Courses for High School Credit

Level 1

Level 2

Level 3

- Welding I

Level 4

- Welding II/Lab

Postsecondary Opportunities

Associates Degrees

- Certified Welder or Welder Inspector
- Machine Shop Technology/Assistant
- Operations Management and Supervision
- Occupational Safety and Health Technology/Technician

Bachelor's Degrees

- Welding Engineering Technology/Technician
- Biomedical Technology/Technician
- Operations Management and Supervision
- Environmental Health

Master's, Doctoral, and Professional Degrees

- Welding Engineering Technology/Technician
- Occupational Health and Industrial Hygiene
- Operations Management and Supervision
- Environmental Health

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate and compete in SkillsUSA
- Job shadow a machinist

Work-Based Learning Activities

- Work in a local business or industry apprenticeship
- Join the American Welding Society

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 1: Entry Welder
- Industrial Technology Maintenance (ITM) - Maintenance Welding
- NCCER Construction Technology Certification Level I
- NCCER Core
- NCCER Welding Level I
- Welding - Job Ready

- OSHA 30 Hour General*
*IBC sunseting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Welders, Cutters, Solderers, and Brazers	\$41,350	6,171	9%
Welding Soldering and Brazing Machine Setters, Operators and Tenders	\$40,040	280	9%

Successful completion of the Welding program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Welding

Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5755 Welding I A 5750 Welding I B	13032300 (2 credits)	None	11

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5757 Welding II/Lab A 5756 Welding II/Lab B	13032410 (3 credits)	Welding I	12

5755/5750 WORKFORCE DUAL CREDIT WELDING I A/B

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.

5757/5756 WORKFORCE DUAL CREDIT WELDING II A/B

TSDS PEIMS Code: 13032400 (WELD2)

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.



..... AUTOMOTIVE

..... MARITIME

Transportation, Distribution, and Logistics Career Cluster

The Transportation, Distribution, and Logistics Career Cluster focuses on careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

Automotive Statewide Program of Study



The Automotive program of study teaches CTE learners how to repair and refinish automobiles and service various types of vehicles. CTE learners may learn to collect payment for services or supplies and perform typical vehicle maintenance procedures such as lubrication, oil changes, installation of antifreeze, or replacement of accessories like wiper blades or tires.

Secondary Courses for High School Credit

Level 1

Level 2

Level 3

- Automotive Technology I

Level 4

- Automotive Technology II/Lab

Postsecondary Opportunities

Associates Degrees

- Autobody/ Collision and Repair Technology/ Technician
- Medium/Heavy Vehicle and Truck Technology/ Technician
- Mechanical Engineering/ Mechanical Technology/ Technician

Bachelor's Degrees

- Mechanical Engineering/ Mechanical Technology/ Technician

Master's, Doctoral, and Professional Degrees

- Mechanical Engineering

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Join SkillsUSA or the Automotive Service Association

Work-Based Learning Activities

- Work at a local automotive repair or body shop

Industry-Based Certifications

- ASE Entry Level Automobile Maintenance and Light Repair (MR)
- ASE Entry-Level Automobile Automatic Transmission/Transaxle (AT)
- ASE Entry-Level Automobile Brakes (BR)
- ASE Entry-Level Automobile Electronic/Electrical Systems (EE)
- ASE Entry-Level Automobile Engine Performance (EP)
- ASE Entry-Level Automobile Engine Repair (ER)
- ASE Entry-Level Automobile Heating and Air Conditioning (AC)
- ASE Entry-Level Automobile Manual Drive Train and Axles (MD)
- ASE Entry-Level Automobile Service Technology
- ASE Entry-Level Automobile Suspension and Steering (SS)
- ASE Entry-Level Collision Mechanical and Electrical Components (ME)
- ASE Entry-Level Collision Non-Structural Analysis and Damage Repair (SR)
- ASE Entry-Level Collision Painting and Refinishing (PR)
- ASE Entry-Level Collision Structural Analysis and Damage Repair
- Principles of Small Engine Technology Certification
- Small Engine Technology

- OSHA 30 Hour General*
- ASE Suspension and Steering*
- ASE Structural Analysis Damage Repair*
- ASE Painting & Refinishing*
- ASE Non-Structural Analysis Damage Repair*
- ASE Mech Elec Components*
- ASE Manual Drive Train Axles*
- ASE Maintenance Light Repair*
- ASE Heating, Ventilation, AC (HVAC)*
- ASE Auto Transmission*
- ASE Automobile Service Technology*
- ASE Brakes*
- ASE Electrical/Electronic Systems*
- ASE Engine Performance*
- ASE Engine Repair*

*IBC sunseting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Automotive Body and Related Repairers	\$40,144	1,456	25%
Automotive Service Technician and Mechanics	\$38,459	5,557	18%

Successful completion of the Automotive program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Automotive Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5902 A/B Automotive Technology I	13039600 (2 credits)	None	11

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5904 A/B Automotive Technology II/Lab	13039700 (2 credits) 13039710 (3 credits)	Automotive Technology I: Maintenance and Light Repair	12

Transportation, Distribution, and Logistics Career Cluster

The Transportation, Distribution, and Logistics Career Cluster focuses on careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

Maritime Regional Program of Study



The Maritime regional program of study introduces CTE learners to the occupations and education opportunities related to operating water vessels, maintenance procedures, 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

Level 4

- Maritime Science II

Postsecondary Opportunities

Associates Degrees

- Captains, Mates, and Pilots

Bachelor's Degrees

- Marine Transportation
- Transportation, Storage, and Distribution Management

Master's, Doctoral, and Professional Degrees

- Maritime Resources Management
- Maritime Administration and Logistics

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in SkillsUSA

Work-Based Learning Activities

- Participate in a maritime apprenticeship or internship
- Work part-time at a shipping company

Industry-Based Certifications

- OSHA 30 Hour General*

*IBC sunseting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Sailors and Marine Oilers	\$41,018	387	9%
Captains, Mates, and Pilots of Water Vessels	\$117,686	413	16%
Motorboat Operators	\$44,970	22	16%
Ship Engineers	\$76,752	87	15%

Successful completion of the Maritime program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Maritime Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
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Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	GRADE
5914 A/B Maritime Science I	N1304662 (1 credit)	None	11

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
5916 A/B Maritime Science II	N1304663 (1 credit)	Maritime Science I	12

5902A/B WORKFORCE DUAL CREDIT AUTOMOTIVE TECHNOLOGY I

Grade Placement: Junior Year

Credit: 2

Prerequisite: None

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

This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.

5904A/B WORKFORCE DUAL CREDIT AUTOMOTIVE TECHNOLOGY II/LAB

Grade Placement: Senior Year

Credit: 3

Prerequisite: None

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

This course is offered at the San Jacinto College Central campus. Please meet with your counselor to enroll in this course.

5902A/B WORKFORCE DUAL CREDIT MARITIME SCIENCE I

Grade Placement: Junior Year

Credit: 1

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. Students will build on the foundational knowledge acquired in the Principles of Maritime Science course. Maritime Science I 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.

5904A/B WORKFORCE DUAL CREDIT MARITIME SCIENCE II/LAB

Grade Placement: Senior Year

Credit: 1

Prerequisite: None

After successful completion of Maritime Science I, students may participate in the course, Maritime Science II. 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.

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.