

**Foundation High School Program + Endorsement
&
High School 4-Year Plan**



8th Grade Guidance Program 2023-2024



Student Name _____

**Foundation High School Program + Endorsement
&
High School 4-Year Plan
2023-2024**

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4-Year Plan Worksheets

XELLO access - Mycfisd.net/Additional Resources/Xello SSO Student Access



Access videos that showcase several of the CFISD Career & Technology Education (CTE) programs of study by accessing this link: https://www.youtube.com/results?search_query=cfisd+cte

Cypress-Fairbanks ISD Course Description Guides – www.cfisd.net

- *Academics*
 - *Curriculum & Course Descriptions*

TEA – Graduation Toolkit - <https://tea.texas.gov/communications/brochures.aspx>

Foundation High School Program + Endorsement

General Information

- This graduation plan provides choice, flexibility, and options!
- **Endorsements** help create a personalized learning plan in line with a student's career interests and goals. There are **5 Endorsement Areas** (see chart on p. 11-12 – *Cypress-Fairbanks ISD – The Endorsements*):
1-STEM 2-Business & Industry 3-Public Services 4-Arts & Humanities 5- Multidisciplinary Studies
- The Texas Education Agency (TEA) has designed **Programs of Study** for the Career & Technical Education (CTE) course areas in the STEM, Business & Industry, and Public Services endorsements.
 - These are course sequences that prepare students with the knowledge and skills necessary for success in their chosen career and lead to postsecondary education and training opportunities.
 - These sequences embed relevant, real world experiences and culminate in a postsecondary credential.
 - Programs of Study support the completion of an endorsement.
- Students and parents are required to select (*in writing*) an Endorsement area and create a 4-Year Plan.
- Opportunities to review and/or modify your plan will be available each year.
 - **Parent permission & counselor conference required for Endorsement changes.**
 - Schedule changes for the next school year must be made before the end of the current school year; schedules will **not** be adjusted during the school year. (See p. 4 – “Course Selection & Request for Changes”)
- Students may earn more than one endorsement.
- **Students must graduate with the Distinguished Level of Achievement in order to be eligible for top 10% automatic admission at any Texas public university and also to be considered for the TEXAS Grant.**
- **Completing a free application for federal student aid (FAFSA) is a graduation requirement.** FAFSA and/or TAFSA must be completed before a student can receive a high school diploma. A parent or legal guardian may provide written notice to opt out their child.

When considering which endorsement(s) is best for you/your student, ask:

- What are my/your personal interests and talents? Career aspirations/Post-secondary goals?
- What are the admission requirements for the College/University I/you wish to attend?
- **Remember...the Endorsement you choose will determine many of your high school elective choices!**

Students may earn a Performance Acknowledgement for outstanding performance in the areas of:

- Dual Credit (at least 12 hours of college credit with a grade of A or B or earn an Associate Degree)
- Bilingual/Bi-literacy (complete 3 credits in the same or any foreign language with a grade of 80+)
- College Board Advanced Placement (AP) exams (earn a score of 3 or above on an AP exam)
- PSAT, SAT, or ACT Performance
- Nationally or Internationally Recognized Business or Industry Certification or License

General Information – High School course levels

- **On-level** (the course title without a letter after it; *Example: Algebra I*) - Choose this level if you are currently in an on-level class. If you have an 85 or above average in that class, you will receive a letter in late spring and will have the opportunity to modify your plan and choose K-level **at that time**
- **K (Accelerated level)**: Choose this level only if you are currently in a K-level class of that content area **and** you have a 75 or above average in the class
- **H (Horizons)**: Choose “H” only if you are currently in Horizons classes
- **AP (Advanced Placement)**: earn possible college credit by taking AP exam in the spring
- **DC (Dual Credit)**: earn both high school credit and college credit for specific high school courses; specific entry requirements must be met before enrolling in a dual credit course

Graduation Requirements for the Classes of 2018 and Beyond

Students who enter the ninth grade in the fall of 2014 and thereafter must enroll in courses necessary to complete the Foundation High School Program with an endorsement. Students may also earn Distinguished Level of Achievement by including and successfully completing Algebra II in their selected coursework. Students should study the table below which outlines requirements for 22 credits for the Foundation High School Program plus the 4 additional credits required for an endorsement. Counselors at each high school will furnish details associated with endorsements and other information necessary for student to complete registration.

| Course | Foundation | +Endorsement | Notes |
|--|---|--|---|
| English | 4 | | |
| PACE (Personal, Academic, & Career Exploration) or PACE Plus | 1/2 or 1 | | <ul style="list-style-type: none"> • One-half credit is required in grade 9. • One credit is required for 9th-grade students who did not pass all 8th grade core academic classes (language arts, reading, math, science, and social studies) and who have not met the state standards on any 8th grade STAAR assessment. • <i>The state required speech TEKS are embedded in PACE and PACE Plus.</i> |
| Mathematics | 3 Algebra I, Geometry, <u>and</u> an additional math course | + 1 additional advanced math course | <ul style="list-style-type: none"> • Algebra II must be taken to earn the Distinguished Level of Achievement. <p>NOTE: State graduation requirements do not mandate that a student complete Algebra II to graduate under the Foundation High School Program. If a student does not complete an Algebra II course, the student will not be eligible for automatic college admission or certain financial aid including the TEXAS Grant Program and the Texas Educational Opportunity Grant Program.</p> |
| Science | 3 Biology and IPC, Chemistry, <u>or</u> Physics, <u>and</u> an additional science course | +1 additional advanced science course | <ul style="list-style-type: none"> • Biology is required for all students. |
| Social Studies | 3 World Geography <u>or</u> World History, U.S. History, Government (1/2) & Economics (1/2) | | <ul style="list-style-type: none"> • Students may substitute AP Human Geography for World Geography. • Students <u>may not</u> substitute the Personal Financial Literacy Elective for Personal Financial Literacy Plus Economics. |
| Languages other than English (Foreign Language) | 2 | | <ul style="list-style-type: none"> • Students take and earn two credits in the same language. |
| Health | 1/2 | | <ul style="list-style-type: none"> • Health may be taken in any grade or through correspondence, summer school, or credit-by-exam. • Principles of Health Science satisfies the Health requirement. • CPR - The State required instruction in cardiopulmonary resuscitation (CPR) is instructed in Health. |

Graduation Requirements for the Classes of 2018 and Beyond

| Course | Foundation | +Endorsement | Notes |
|-------------------------------|------------|--------------------------|--|
| Physical Education | 1 | | <ul style="list-style-type: none"> • Beginning in the fall of 2022, students may earn a maximum of two (2) credits in PE toward graduation. • Students may meet the PE requirement through after school participation in the fall semester of marching band and cheerleading, and both semesters of drill team. Students may also meet the PE requirement if they participate in a district-approved Olympic caliber off-campus training program, athletics or AFROTC. • Students may earn up to four (4) credits of PE through off-campus PE, athletics or AFROTC. • PE credit may be earned through approved correspondence courses. |
| Fine Arts | 1 | | <ul style="list-style-type: none"> • Approved fine arts courses include art, music, dance, theatre courses and floral design. • Students must take 2 sequential semesters of the same course to meet the Fine Arts credit requirement. |
| Electives | 4 | + 2 additional electives | |
| Total Credits Required | 22 | 26 | |

Financial Aid Application for High School Graduation

Completing a free application for federal student aid (FAFSA) is a graduation requirement. FAFSA and/or TAFSA must be completed before a student can receive a high school diploma. A parent or legal guardian may provide written notice to opt out their child. Students who are at least 18 years old may opt themselves out of the requirement.

Course Offerings

This publication lists the high school course offerings with grade placement, credit(s), prerequisites, and some brief information on each course. It serves as an overview of students' requirements for graduation including course descriptions. This bulletin also outlines procedures for changing courses and possible consequences of changes.

Career and Technical skills preparation courses are offered to junior and senior students who are at least 16 years old. These courses are two to three hours daily with all or part of the instruction given on campus. Students participating in courses which involve off-campus instruction (practicums) must provide their own transportation.

Special Education

Students experiencing difficulties in school may be referred for services in special education. Before a student can receive special education and/or related services for the first time, an initial evaluation must be conducted. Decisions regarding the provision of special education services are made by an Individual Education Plan (IEP) committee. If a student is determined to be eligible for services in accordance with the Texas Education Agency guidelines, an individualized education plan is developed. Instruction that is designed to meet a student's unique educational needs may be provided in a variety of settings. Instructional settings may include (a) general education classroom with accommodations, (b) general education classroom with support, (c) resource classroom, (d) self-contained classroom, or (e) a separate campus. Related services necessary for the student to benefit from special education may also be provided.

Grade Classification Standards

Class of 2015 and Beyond

| Grade | Criteria for Students Entering 9th Grade Beginning 2011-12 |
|-------|---|
| 9th | Promotion from middle school |
| 10th | 1 year of attendance and 5 credits, including English I and Algebra I |
| 11th | 2 years of attendance and 11 credits |
| 12th | 3 years of attendance and 17 credits or early graduation plan |

Course Selection and Request for Changes

Students will select courses for the next school year during the spring semester. A decision of this nature should be considered with parental aid. Factors to be considered in selecting courses are the

- requirements for graduation;
- significance of the course to the student's overall program and educational/career goals;
- purpose of the course; or
- possible prerequisite(s) for other courses.

All requests for changes must be submitted in writing by the last day of April.

The following guidelines will be used in honoring changes/requests made after that date.

1. Changes will be made during the first two weeks of a semester for the following reasons. The student
 - does not meet prerequisite(s) for the course;
 - does not meet grade placement requirement of the course;
 - already has credit in the course;
 - is placed in an inappropriate level; or
 - has not met requirement for K-level, AP, or HORIZONS placement.
2. After consultation with the teacher, students may withdraw from band, dance, JROTC, or athletics at any time, but in each case, they will be assigned to a regular physical education class.
3. No course changes are allowed after the second week of each semester.

Note: Schedule changes after the second week of either semester will be according to district policy (i.e. they are primarily AP to K-level or K-to L-level changes). No other course changes are allowed; course changes may raise eligibility issues.

Class Ranking

Beginning with courses taken between the eighth and ninth grade, all high school courses, including correspondence, night school, college courses taken for dual credit, credit-by-exam, and summer school, are averaged in the class rank with the exception of student assistant, local credit, and courses taken under the pass/fail option. High school courses taken by seventh or eighth-grade students and completed by the end of the eighth-grade year will not count in class rank with the exceptions of Geometry, Biology, Art I and the third or higher levels of a foreign language. Rank will be determined by grade point averages (GPA) of the students. GPA and class rank are calculated in the summer after students complete the ninth and tenth grades. Estimated class rankings are determined at the end of the junior year and the first semester of the senior year for the express purpose of college entrance requirements. Another ranking is performed at the end of the third grading period to identify summa cum laude, magna cum laude, and cum laude graduates.

Note: New students to CFISD will be awarded credit for all transcribed high school courses. However, these courses will be included/excluded from GPA and class rank calculation in alignment with CFISD's GPA and class rank structures.

Honor Graduate Designation

At graduation ceremonies, graduates will be recognized in the following categories: summa cum laude (6.5 GPA), magna cum laude (6.25 GPA), and cum laude (6.0 GPA). A final calculation of GPA and class rank is determined at the end of the senior year and will be reflected on the final transcript which is sent to colleges.

Grading Scale

CFISD uses a weighted 6.0 grading scale. Grade points are allocated for a course of study based on the designation of the course as indicated in the chart below.

| GRADE | LEVEL OR COURSE | | | |
|--------------|----------------------------|--------------------|---|----------------|
| | K, AP, and HORIZONS Levels | L-Level (on-level) | Below Level Adaptive Behavior, ICS-M, NAC, Resource | Life Skills |
| A (90-100) | 7 grade points | 6 grade points | 5 grade points | 4 grade points |
| B (80-89) | 6 grade points | 5 grade points | 4 grade points | 3 grade points |
| C (75-79) | 5 grade points | 4 grade points | 3 grade points | 2 grade points |
| C- (70-74) | 4 grade points | 3 grade points | 2 grade points | 1 grade points |
| F (below 70) | 0 grade points | 0 grade points | 0 grade points | 0 grade points |

The semester grades are computed by allocating a weight of 3/7 for each grading period average and 1/7 for a semester exam. A student will receive credit for each semester passed. If the course is a two-semester sequence and the student passes the second semester after having failed the first, he/she may receive the credit for both semesters if the yearly average is passing (70+).

Four mathematics and four science courses will be included in a student's GPA calculation. If a student takes Algebra I in 8th-grade and takes four math courses in grades 9-12, the four math courses taken in high school will be included in the student's GPA. But, if a student takes Algebra I in 8th-grade and only takes three math courses in grades 9-12, the Algebra I course will be included in the student's GPA calculation. Algebra I taken at any time will carry L-level grade points.

Participation in Commencement

To be eligible to participate in commencement exercises, a student must meet state graduation requirements by earning a minimum of 22 credits in designated courses and pass all required state assessments.

ENGLISH

4 credits required – English I, II, III, and IV

- **9th – 10th Grade:** Indicate a level for English I & II (On-level, K, or H)
- **11th – 12th Grade:** Indicate a level for English III & IV (On-level, K, K/DC, H/DC, AP & H/AP)

SOCIAL STUDIES

3 credits required

- **World Geography** (On-level, K or H) or **World History** (On-level, K, H, AP, or H/AP)
 - Students have flexibility in determining the course & year of study (**9th or 10th grade**)
 - Students may substitute AP Human Geography (or H/AP) for World Geography but may **not** earn credit for both courses
- **U.S. History** (On-level, K, K/DC, H/DC, AP, or H/AP) – **11th grade**
- **Government (1/2 credit)** (On-level, K, K/DC, H/DC, AP, or H/AP) – **12th grade**
- **Economics (1/2 credit) – 12th grade (choose 1 course from the following)**
 - Personal Financial Literacy (PFL) Plus Economics (On-level)
 - Economics Free Enterprise System (K-level/H)
 - Macro Economics AP, H/AP, K/DC, or H/DC

| Course Title | Grade Level(s) | Description |
|---|----------------|---|
| World Geography | 9-10 | Analysis of the relationships between people, places, and environments |
| Human Geography AP | 9-12 | Provides framework to understand how the world is organized and how events in one region can have a major impact on events in other regions |
| World History | 9-10 | Study of significant people, events, and issues in world history |
| US History | 11 | Prerequisite – World Geography or World History; required course for graduation |
| Government (1/2 credit) | 12 | Prerequisite – US History; required course for graduation |
| Personal Financial Literacy Plus Economics (On-level) OR Economics Free Enterprise System (K-level) OR Macro Economics AP (1/2 credit) | 12 | Prerequisite – US History; required course for graduation |

MATH

Requirements

- Algebra I – 8th or 9th Grade (*On-level credit regardless of when taken*) - required for all students
- Geometry – (*On-level, K, or H*)
- An additional math course
- +1 additional advanced math course (see chart below)
 - All STEM endorsements - must take Algebra II
 - Algebra II must be taken to earn the *Distinguished Level of Achievement*
 - Accounting II K & Robotics II K may count as a math credit
- **NOTE:** State graduation requirements do not mandate that a student complete Algebra II to graduate under the Foundation HS Program. If a student does not complete Algebra II, the student will not be eligible for automatic college admission or certain financial aid.

| | 8 th Grade | 9 th Grade | 10 th Grade | 11 th Grade | 12 th Grade |
|-------------------|----------------------------|------------------------------|--------------------------------|---|---|
| Example #1 | 8 th Grade Math | Algebra I (On-level) | Geometry (On-level, K, or H) | Statistics (On-level) \implies <div style="text-align: center;">OR</div> MMA (Math Models with Applications) \implies <div style="text-align: center;">OR</div> Algebra II (On-level, K, or H) \implies | Algebra II (On-level, K, or H) or Algebraic Reasoning (On-level) - - - Algebraic Reasoning (On-level) or Algebra II (On-level, K, or H) or Statistics (On-level) - - - Precalculus (On-level, K, H, DC or AP) or ISM Advanced Algebra (On-level) or ISM College Algebra (K or H) or Statistics AP (or H/AP) or AQR (Advanced Quantitative Reasoning) (K) |
| Example #2 | Algebra I | Geometry (On-level, K, or H) | Algebra II (On-level, K, or H) | Precalculus \implies <div style="text-align: center;">OR</div> ISM – College Algebra (K or H) \implies <div style="text-align: center;">OR</div> Statistics AP (or H/AP) \implies <div style="text-align: center;">OR</div> AQR (K) \implies | Calculus AB AP (or H/AP) or Calculus BC AP (or H/AP) or Statistics AP (or H/AP) or ISM College Algebra (K or H) or AQR (K) - - - Precalculus (On-level, K, H, DC or AP) or Statistics AP (or H/AP) or AQR (K) - - - Precalculus (On-level, K, H, DC or AP) or ISM College Algebra (K or H) or AQR (K) - - - Precalculus (On-level, K, H, DC or AP) or ISM – College Algebra (K or H) or Statistics AP (or H/AP) |

SCIENCE

Requirements

- **Biology – 9th Grade (On-level, K, or H) - required for all students**
- **IPC, Chemistry, or Physics (or AP Physics I)**
- **An additional science course**
- **+1 additional advanced science course (from the chart below)**
 - All STEM endorsements - must take Biology, Chemistry, & Physics (or AP Physics I)
 - Multidisciplinary Studies – Option 1 – 4 x 4 – must have Biology + Chemistry + Physics (or AP Physics I)
 - Students who do not take Chemistry may meet the high school graduation requirements but this does not position them for career and college readiness

| Course Name | Prerequisites | Information |
|--|--|---|
| IPC (Integrated Physics & Chemistry) (On-level) | Biology | Introduces basic concepts of Chemistry & Physics |
| Chemistry (On-level, K, or H) | Biology and Algebra I | Characteristics of matter; use of Periodic Table |
| Physics (On-level, K, or H) | Biology & completion or concurrent with Algebra I | Laws of motion & forces, energy, waves, & electricity |
| Aquatic Science (On-level) | Biology | Fresh water & marine aquatic systems |
| Astronomy (On-level) | Biology | Moon, stars, planets, space exploration |
| Earth and Space (On-level, K, or H) | Biology, Chemistry & completion or concurrent with 3 rd science & 3 rd math | Earth's systems and space |
| Environmental Systems (On-level) | Biology and IPC or Chemistry | Native plants & animals, endangered species, disasters & events that affect the environment |
| AP Biology | Biology and Chemistry | Molecular biology, cellular processes, human genetics, plants & animals; college prep course |
| AP Chemistry | Chemistry and Algebra II | In-depth study of chemistry; comparable to a first year college course |
| AP Physics I | Completion or concurrent enrollment in Algebra II | May substitute for Physics Algebra-based; the equivalent of a first semester algebra-based Physics college course but taught over a full year |
| AP Physics II | Physics K or AP Physics I and completion or concurrent enrollment in Precalculus | Algebra-based; comparable to a second semester algebra-based college Physics course but taught over a full year |
| AP Physics C (2 credits/2 period block) | Physics or AP Physics I and completion or concurrent enrollment in Calculus | Calculus-based; principles of mechanics, electricity, & magnetism; the equivalent of calculus-based college Physics for engineers & science majors |
| AP Environmental Science | Biology and Chemistry | Identify & analyze natural and human-made environmental problems |
| Anatomy & Physiology K | Biology and Chemistry; recommended – Medical Term & Prin of Health Sci Grades 11-12 | Organ systems & physiology; dissection techniques; cause & effect of disease |
| Food Science K | Culinary Arts and three units of science (including Biology & Chemistry) Grades 11-12 | Study of the nature of foods, the causes of deterioration, the principles underlying food processing, and the improvement of foods for the consuming public |
| Forensic Science K | Biology and Chemistry; recommended – Medical Term & Prin of Health Sci Grades 11-12 | Terminology and investigative procedures related to crime scene investigation – fingerprint analysis, ballistics, and blood spatter analysis |
| Engineering Design & Problem Solving K | Algebra II + Biology, Chemistry & Physics (or concurrent) and Engineering Design & Presentation I Grades 11-12 | Use the engineering design process cycle to investigate, design, plan, create, and evaluate solutions |
| Advanced Animal Science K | Biology, Chemistry, and Vet Med or at least one credit from the following: Small Animal, Equine Science, or Livestock Production; Grades 11-12 | For students seeking career in animal science |
| Advanced Plant and Soil Science K | Biology, Chemistry, and Horticultural Science; Grades 11-12 | Provides a way of learning about the natural world; basis for many other fields of science |
| Pathophysiology K | Biology and Chemistry; recommended – Medical Term & Prin of Health Sci Grades 11-12 | Study of the disease process and how humans are affected |

Other Required Courses for Graduation

PACE, Health, & Languages Other Than English (LOTE)/Foreign Language

- **PACE (.5 credit) – Personal, Academic, & Career Exploration (00120)** – builds skills to assist in the transition to high school as well as future transitions to career, college, adulthood, and independence.
 - **Required in 9th grade**
 - **Not available to take in Summer School**
 - **The state required speech TEKS are embedded in this class**

- **Health – Health or Principles of Health Science (choose one)**
 - _____ Health – .5 credit **(46120)**
(may be taken in any grade or through correspondence, summer school, or Credit-by-exam)
 - OR**
 - _____ Principles of Health Science – 1 credit **(94423)** (may be taken 9th – 11th grade)
(Recommended for those choosing the Public Services/Health Science endorsement option)

- **LOTE/Foreign Language – 2 credits in the same language are REQUIRED (choose one)**
(This includes any Foreign Language credits earned in middle school)

- _____ Spanish I (61223), II (61323), III (61523), IIIK (61513), IVK (61613), IV AP (61653), IV AP/Dual (61673), V K (61713), V AP (61753), V AP/Dual (61783), VI K (61913)
- _____ Spanish I – Native Speakers (61023), II NS (60820), III K NS (60920), IV AP NS (60933)
- _____ French I (62123), II (62223), III K (62413), IV K (62513), IV AP (62553), IV AP/Dual (62523), V K (62613), VI K (62913)
- _____ German I (63223), II (63323), III K (63513), IV K (63613), IV AP (63653)
- _____ Latin I (64123), II (64223), III K (64313), IV K (64413), IV AP (64453), V K (64513)
- _____ American Sign Language (Cy-Ridge & Langham Creek only)
- _____ Computer Programming * Computer Science Principles AP (26423)
Computer Science I K (26513), II K (26583), III K (26523)

***Note:** Colleges and universities set their own entrance requirements. Consequently, a student should verify admission requirements with the specific college/university.

Fine Arts

- **Fine Arts - 1 credit required (choose one)**
Students must take **2 sequential semesters of the same course** to meet the Fine Arts requirement

Dance

- _____ Dance I (45273), II (45283), III (45323), IV (45423)
- _____ Dance Team I (45113), II (45253), III (45313), IV (45413)

Art

- _____ Drawing & Painting I (70123), II (70523), III (70923), IV (72523), AP Art Drawing (71453), AP Art 2-D Design (71353)
- _____ Ceramics/Sculpture I (70223), II (70623), III (71023), IV (72533), AP Art 3-D Design (71553)
- _____ Photography I (70323), II (70723), III (71123), IV (72623), AP Art Photography (71753)
- _____ Digital Art & Media I (70113), II (70423), III (71223), IV (71233), AP Digital Art & Media (71853)
- _____ AP Art History (71653)

Music

- _____ Band I (75113), II (75213), III (75313), IV (75413)
- _____ Band I/Color Guard (76713), II/CG (76723), III/CG (76733), IV/CG (76743)
- _____ Choir I (78153), II (78253), III (78353), IV (78453)
- _____ Orchestra I (77143), II (77243), III (77343), IV (77443)
- _____ AP Music Theory (79153)

Theatre

- _____ Theatre Arts I (74123), II (74223), III (74323), IV (74423)
- _____ Technical Theatre I (73923), II (74023), III (74033), IV (74043)
- _____ Theatre Production I (74723), II (74823), III (74923), IV (75023)

Floral Design _____ 93133 (Grades 10-12 only); required prerequisite or concurrent enrollment in Principles of Ag

Physical Education

➤ **Physical Education - 1 credit required (choose one)**

PE credit may also be earned through approved correspondence courses (subject to approval by high school counselor after successful completion of one semester in 9th grade with an overall average of at least 75)

PE courses

- Lifetime Fitness & Wellness Pursuits - 40543
- Skill-based Lifetime Activities - 40323
- Dance I (PE) - 45033
- Dance II (PE) – 45043

Note: Students may earn a maximum of 2 credits in PE toward graduation

Athletics (Please refer to your high school list of sports & course numbers provided by your school counselor)

- Baseball I
- Basketball
- Cross Country
- Football
- Golf
- Soccer
- Softball
- Swimming & Diving
- Tennis
- Track
- Volleyball
- Water Polo
- Wrestling
- Student Athletic Trainer (Football I)

Students are placed in **Athletics** as the result of student performance criteria conducted in pre-season try-out sessions and the ultimate recommendation from the head coach.

Note: Students may earn up to 4 credits of PE toward graduation through Athletics

Off-Campus PE – I (99523), II (99563), III (99573), IV (99583) (prior approval required)

PE Substitutions (Other course options that will satisfy the PE graduation requirement)

- Air Force JROTC I (46313), II (46323), III (46333), IV (46353)
- Band I & Band II (75113, 75213)
- Cheerleading I & II (44623, 44633)
- Dance Team I or II (45113, 45253)
- Band/Color Guard I & II (76713, 76723)

Note: Students may earn up to 4 credits of PE through Off-Campus PE or PE Substitutes

CHECK YOUR WORK

Once you have entered your selections on your 4-Year Plan worksheet, make sure that you have:

- ✓ 4 English credits
- ✓ 4 Math credits
- ✓ 4 Science credits
- ✓ At least 3 Social Studies credits
- ✓ 2 LOTE/Foreign Language credits (including those earned in Middle School + any additional years desired)
- ✓ 1 Fine Art credit (+ any additional years desired)
- ✓ 1 PE credit (+ any additional years desired)
- ✓ Health (add in the blank next to PACE)

OR

Principles of Health Science in 9-11th grade

(If choosing this, you will need to add an additional semester course next to PACE for 9th grade – see page 52)

NOTES

Cypress-Fairbanks ISD - The Endorsements

A student must complete the Foundation High School Program (22 credits), one additional math credit, one additional science credit, and two additional elective credits while completing the specific requirements of his/her selected endorsement.

| STEM <i>Science, Technology, Engineering, & Math</i> | Business & Industry | Public Services | Arts & Humanities | Multidisciplinary Studies |
|--|--|--|---|--|
| <p>Students may earn a STEM endorsement by selecting and completing the requirements from among these <u>5</u> options.</p> <p>Note: Algebra II, Chemistry, and Physics are required for the STEM endorsement <u>regardless</u> of the option the student selects from below.</p> <p>Option 1: Computer Science (Technology) Students take 4 computer science courses.</p> <ul style="list-style-type: none"> • Computer Science 1 K • Computer Science Principles AP • Computer Science II K • Computer Science III K • Project-based Research in Computer Science K <p>Option 2: CTE (Engineering) Students earn four (4) CTE credits by taking at least two (2) courses in the same cluster that lead to a final course in the STEM cluster. At least one (1) of the courses must be an advanced CTE course (3rd year or higher course in a sequence).</p> <p style="text-align: center;"><u>OR</u> *</p> <p>*Students earn four (4) or more credits by taking at least three (3) courses in a TEA- approved program of studywith at least one (1) advanced course (3rd year or higher in the sequence).</p> | <p>Students may earn a Business & Industry endorsement by selecting and completing the requirements from among these <u>3</u> options.</p> <p>Option 1: CTE Students earn four (4) credits by taking at least two (2) courses in the same cluster in one of the following areas</p> <ul style="list-style-type: none"> • Agriculture, Food and Natural Resources • Architecture and Construction • Arts, Audio/Video Technology, and Communication • Business, Marketing and Finance • Hospitality and Tourism • Information Technology • Manufacturing • Transportation, Distribution, and Logistics <p>with at least one (1) advanced course (3rd year or higher course in the sequence).</p> <p style="text-align: center;"><u>OR</u> *</p> <p>*Students earn four (4) or more credits by taking at least three (3) courses in a TEA- approved program of studywith at least one (1) advanced course (3rd year or higher in the sequence).</p> <p>Option 2: English Students take four (4) English elective credits that include three levels in one of the following areas</p> <ul style="list-style-type: none"> • Advanced Journalism: • Newspaper or Yearbook • Debate | <p>Students may earn a Public Services endorsement by selecting and completing the requirements from among these <u>2</u> options.</p> <p>Option 1: CTE Students earn four (4) credits by taking at least two (2) courses in the same career cluster in one of the following areas</p> <ul style="list-style-type: none"> • Education and Training • Health Science • Human Services <p>With at least one (1) advanced course (3rd year or higher course in the sequence).</p> <p style="text-align: center;"><u>OR</u> *</p> <p>*Students earn four (4) or more credits by taking at least three (3) courses in a TEA- approved program of studywith at least one (1) advanced course (3rd year or higher in the sequence).</p> <p>Option 2: AFJROTC Student takes four (4) AFJROTC courses for (4) credits.</p> | <p>Students may earn an Arts & Humanities endorsement by selecting and completing the requirements from among these <u>3</u> options.</p> <p>Option 1: Social Studies Students earn five (5) social studies credits.</p> <p>Option 2: Languages Other Than English (Foreign Language) Students take four (4) levels of the same foreign language.</p> <p style="text-align: center;"><u>OR</u></p> <p>Students take two (2) levels of one foreign language AND two (2) levels of a different foreign language (two levels in each of two different foreign languages for 4 credits).</p> <p>Option 3: Fine Arts Students take four (4) courses in the same fine arts area for 4 credits</p> <p style="text-align: center;"><u>OR</u></p> <p>Students take two (2) courses in one fine arts area AND two (2) courses in a different fine arts area (two courses in each of two different fine arts areas for 4 credits).</p> | <p>Students may earn a Multidisciplinary Studies endorsement by selecting and completing the requirements from among these <u>2</u> options.</p> <p>Option 1: Four by Four (4 X 4) Students take four (4) courses in each of the four core content areas.</p> <ul style="list-style-type: none"> • Four (4) English credits including English IV • Four (4) math credits • Four (4) science credits including biology and chemistry and/or physics • Four (4) social studies credits <p>Option 2: AP / Dual Students take four (4) Advanced Placement (AP) or four (4) Dual Credit courses for four (4) credits in English, math, science, social studies, foreign language, or fine arts.</p> <p style="text-align: center;"><u>OR</u></p> <p>Students take a combination of Advanced Placement (AP) or Dual credit courses for four (4) credits in English, math, science, social studies, foreign language, or fine arts.</p> |

| STEM <i>Science, Technology, Engineering, & Math</i> | Business & Industry | Public Services | Arts & Humanities | Multidisciplinary Studies |
|---|---|-----------------|-------------------|---------------------------|
| <p>Option 3: Math Students take Algebra I, Geometry, and Algebra II AND two (2) of the following courses for which Algebra II is a prerequisite.</p> <ul style="list-style-type: none"> • Pre-Calculus • Calculus AB or BC • Statistics AP • AQR K • Advanced Algebra • College Algebra K <p>Option 4: Science Students take Biology, Chemistry, and Physics, AND two (2) of the following courses.</p> <ul style="list-style-type: none"> • AP Chemistry • AP Biology • Anatomy & Physiology • AP Environmental Science • AP Physics I • AP Physics II • AP Physics C • Aquatic Science • Astronomy • Earth & Space Science • Environmental Systems • Forensic Science • Engineering Design & Problem Solving • Advanced Animal Science • Advanced Plant and Soil Science • Pathophysiology <p>Option 5: Combination Students take Algebra II, Chemistry, and Physics, an additional math course, an additional science course, AND three (3) additional credits from Option 1 (Computer Science) and/or Option 2 (CTE) in the STEM endorsement. If the combination plan includes a CTE course, at least one (1) course must be advanced.</p> | <p>Option 3: Combination Students take a coherent sequence of four (4) credits from Option 1 and 2. Combination plan must include one (1) advanced CTE course.</p> | | | |

STEM – Science, Technology, Engineering & Math

Areas of study that relate to possible careers:

| Science | Technology (Computer Science) | Engineering | Math |
|--------------------------------|-------------------------------|------------------------|---------------------------|
| Medical/Dental | Computer Programming | Aerospace Engineering | Accounting |
| Astronomy | Computer Science | Architecture | Data Analysis |
| Environmental Science | Computer Systems | Biomedical Engineering | Economics |
| Forensic Science | Cyber Security | Chemical Engineering | Financial Planning/Stocks |
| Geology | Software Design | Civil Engineering | Research Development |
| Marine Biology or Oceanography | | Electrical Engineering | Statistics |
| Meteorology | | Industrial Engineering | |
| Physics | | Mechanical Engineering | |
| Zoology | | Petroleum Engineering | |

Note: Algebra II, Chemistry, and Physics or AP Physics I are required for the STEM endorsement regardless of the option the student selects from below.

Students may earn a **STEM endorsement** by selecting and completing the requirements from among these **5** options:

➤ **Option 1: Computer Science (Technology)**

Students take 4 computer science courses from the following:

- Computer Science I K
- Computer Science Principles AP
- Computer Science II K
- Computer Science III K
- Project-based Research in Computer Science K

➤ **Option 2: CTE (Engineering)**

Students earn four (4) CTE credits by taking at least 2 courses in the same cluster that lead to a final course in the STEM cluster; at least one (1) of the courses must be an advanced CTE course (3rd year or higher course in a sequence).

OR*

*Students earn four (4) or more credits by taking at least three (3) courses in a TEA-approved program of study with at least one (1) advance course (3rd year or higher in the sequence).

➤ **Option 3: Math**

Students take Algebra I, Geometry, and Algebra II **AND** two (2) of the following courses for which Algebra II is a prerequisite:

Pre-Calculus; Calculus AB or BC; Statistics AP; AQR K; Advanced Algebra; College Algebra K

➤ **Option 4: Science**

Students take Biology, Chemistry, and Physics (or AP Physics I), **AND** two (2) courses from the list on [page 8](#)

➤ **Option 5: Combination**

Students take Algebra II, Chemistry, and Physics (or AP Physics I), an additional math course, an additional science course, **AND** three (3) additional credits from Option 1 (Computer Science) and/or Option 2 (CTE) in the STEM endorsement. **If the Combination plan includes a CTE course, at least one (1) course must be advanced.**

PROGRAMS of STUDY

- **STEM1 – Programming & Software Development**
- **STEM2 – Cyber Security**
- **STEM3 – Engineering**
- **STEM4 – STEM Academy for Automation, Robotics & Computer Science (ARC) @ Cypress Springs HS**

Glossary – STEM Careers

Aerospace Engineer – Work on the leading edge of science and technology, designing aircraft, rockets, and other air or space equipment.

Agricultural Engineer – A meeting of the physical and natural sciences.

Biomedical Engineer – Use high tech engineering to develop medical equipment like CAT scanners, pacemakers, and artificial joints and organs.

Chemical Engineer – Use your knowledge of chemistry to turn pulp into paper, plastics into skateboards, or toxic substances into safe ones.

Civil Engineer – Ever wonder why tall buildings don't fall down and bridges can support millions of pounds of weight?

Computer Scientist – Help create the next wave of technological advances as a computer scientist.

Electrical Engineer – Designing high-tech products like microwaves, cell phones, and computers.

Environmental Engineer – Use your math and science skills to help solve problems related to clean drinking water, air pollution, waste disposal, and toxic substances.

Forensic Scientist – Use your love of science to help identify suspects and victims of crime.

Geologist – Study the earth and learn its secrets: ancient fossils, oil, gold, diamonds, and millions of years of history.

Industrial Engineer – Help companies streamline their manufacturing operations as an industrial engineer.

Marine Biologist – Scuba diving, teaching, laboratory work – marine biology has it all.

Mechanical Engineer – Experts in the design and operations of machines.

Meteorologist – Use satellites, radar and sophisticated computers to study and predict weather.

Neurologist – Help people coping with neurological disorders, such as Alzheimer's and Parkinson's disease.

Nuclear Engineer – Solve some of the most complex and interesting technical problems on (or off) the planet.

Oceanographer – Are you fascinated by the ocean and its tides, currents, waves and storms?

Paleontologist – Piecing together the history of life through the fossil record.

Petroleum Engineer – Search the world for reservoirs of oil and gas; plan and supervise the drilling of wells, and the extraction and refinement processes.

Pharmacologist – Study the effects of different substances on the body, and help develop new drugs for everything from headaches to heart disease.

Physicist – Using math and science to try to understand the basic nature of the universe.

Zoologist – Scientists who study animals – everything from elephants to tiny insects.

SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Programs of Study STEM Endorsement

STEM 1 PROGRAMMING & SOFTWARE DEV

| |
|---|
| 9th Grade Computer Science Principles AP (1) or Computer Science I K (1) |
| 10th Grade Computer Science I K (1) or Computer Science II K (1) |
| 11th Grade Computer Science II K (1) or *Computer Science III K (1) |
| 12th Grade *Computer Science III K (1) or *Project-based Computer Science: Mobile App Development K (1) |
| Certifications **Oracle Java SE Programming **IT Specialist Java |
| Careers Computer Network Architect (\$121K) Computer Programmer (\$80K) Software Developer (\$103K) |

STEM 2 CYBERSECURITY

| |
|---|
| 9th Grade Principles of Info Tech (1) 8th gd only Networking (1) |
| 10th Grade Computer Science I K (1) and *Internetworking Technologies I (1) |
| 11th Grade *Internetworking Technologies II (1) |
| 12th Grade *Project-based Research in Networking: Cybersecurity (1) and/or *Practicum in Info Tech (2) |
| Certifications **CompTIA A+ **IT Specialist Networking **CompTIA Networking **CompTIA IT Fundamentals **CompTIA Security+ **Cisco CCNA |
| Careers Information Security Analyst (\$119K) Computer Systems Analyst (\$88K) Computer Network System Admin (\$96K) |

STEM 3 ENGINEERING

| |
|---|
| 9th Grade Principles of Applied Engineering (1) |
| 10th Grade Engineering Design & Presentation I (1) |
| 11th Grade *Engineering Design & Presentation II (2) |
| 12th Grade *Eng Design & Problem Solving K (1-science) or *Practicum in STEM (2) |
| Certifications **Autodesk Inventor |
| Careers Industrial Engineer (\$97K) Mechanical Engineer (\$91K) Chemical Engineer (\$113K) Electrical Engineer (\$98K) |

STEM 4 STEM ACADEMY FOR ARC (HOUSED AT CYPRESS SPRINGS APPLICATION REQUIRED)

| |
|--|
| 9th Grade Computer Science I K (1-LOTE) AND Manufacturing Engineer Tech I K (1) |
| 10th Grade Computer Science II K (1-LOTE) AND Digital Electronics K (1-math) |
| 11th Grade *Computer Science III (1) AND *Engineering Math K (1-math) |
| 12th Grade *Project-based Computer Science: Robotics Programming K (1) AND *Scientific Research & Design I K (1-science) |
| Certifications **Certified SolidWorks Associate IT Specialists: Java **Oracle Java SE 8 Programmer |
| Careers Mechanical/Electrical Engineer(\$95K) Hardware Engineer (\$116K) Industrial Designer-CAD (\$69K) Software Engineer (\$103K) |

Endorsement: STEM – Options 1-5

*** NOTE: Students must also complete Algebra II, Chemistry, & Physics or AP Physics I

| Program of Study – STEM 1 – PROGRAMMING & SOFTWARE DEVELOPMENT | | | | | |
|--|----------|----------------|--|---|--|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Computer Science Principles AP (1 LOTE Credit*) | 26423 | 9-12 | Algebra I | (Computer Science Principles AP Exam) | Introduce essential ideas of computer science and show how computing and technology can influence the world around you Lab supply fee |
| Computer Science I K (1 LOTE Credit*) | 26513 | 9-12 | Algebra I | | Computer programming; read and write small programs in Java Lab supply fee |
| Computer Science II K (AP A exam prep) (1 LOTE Credit*) | 26583 | 10-12 | Algebra II (or concurrent) AND Computer Science I K (or Geometry K & prior programming experience) | (Computer Science AP A exam) | Designed to cover the Computer Science AP A exam topics; object-oriented components in the language of Java will be stressed Lab supply fee |
| Computer Science III K (1 LOTE Credit*) (A) | 26523 | 11-12 | Computer Science II K | Oracle Java SE 8 Programmer \$\$\$\$ (P) | Builds upon topics such as object-oriented programming, inheritance & classes; advanced topics in preparation and alignment with college-level computer science Lab supply fee |
| Project-based Computer Science: Mobile App Development K (A) | 26373 | 11-12 | Computer Science III K (or concurrent) | | Collaborate, problem solve, create & design mobile computing solutions for individuals & businesses Lab supply fee |

*Colleges & universities set their own entrance requirements. Consequently, a student should verify admission requirements with the specific university.

| Program of Study – STEM 2 - CYBERSECURITY | | | | | |
|--|----------|----------------|--|---|---|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Principles of Information Technology | | 8 | None | | |
| Networking | 54223 | 9-12 | <i>Recommended</i> – Prin of Information Technology | CompTIA IT Fundamentals CompTIA A+ \$\$\$ (P) | Fundamentals of computer hardware/software; networking & security Lab supply fee |
| Computer Science I K (1 LOTE Credit*) | 26513 | 9-12 | Algebra I | | Computer programming; read and write small programs in Java Lab supply fee |
| Internetworking Technologies I (A) | 82123 | 10-12 | <i>Recommended</i> – Networking & Comp Sci I | CompTIA Network + \$\$\$ (P) | Prepares students to install, operate, and trouble-shoot a home or small business enterprise branch network Lab supply fee |
| Internetworking Technologies II (A) | 85123 | 11-12 | Internetworking Tech I | CompTIA Server + Cisco CCNA \$\$\$\$ (P) | Prepares students to install, operate, and trouble-shoot a home or medium-size business enterprise branch network Lab supply fee |
| Project-based Research in Networking Cybersecurity (A) | 85153 | 11-12 | (Or concurrent) At least 2 technology courses with at least 1 being Networking or Internetworking Tech I | | Supervised research study project-based class; Projects will focus on either the Internet of Things or Cybersecurity Lab supply fee |
| Practicum in Information Technology (2 credits) (A) | 85133 | 12 | (Or concurrent) At least 2 technology courses with at least 1 being Networking or Internetworking Tech I | | Students are required to work 10 hours per week in an approved training site Lab supply fee |

| Program of Study – STEM 3 - ENGINEERING | | | | | |
|--|----------|----------------|---|-------------------------------|---|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Prin of Applied Engineering | 84543 | 7-10 | None | | Provides overview of STEM field & various fields of engineering; computer graphics, modeling & presentations Lab supply fee |
| Engineering Design & Presentation I | 81123 | 9-12 | Principles of Applied Engineering | | Use multiple software applications and tools necessary to produce working drawings, solid model renderings, and prototypes Lab supply fee |
| Engineering Design & Presentation II (2 credits) (A) | 81143 | 10-12 | Engineering Design & Presentation I | Autodesk Inventor \$\$ (P) | Develop design skills including those related to team-building, problem solving, project design & development Lab supply fee |
| Engineering Design & Problem-Solving K (A) | 33913 | 11-12 | Algebra II, Chemistry, Physics (or concurrent), Eng Design I, or Manuf Eng Tech K (ARC) | | Use the engineering design process cycle to investigate, design, plan, create, & evaluate solutions Lab supply fee |
| Practicum in STEM (2 credits) (A) | 84723 | 12 | Engineering Design I | | Required to work 10 hours per week at an approved training site Lab supply fee |

(A) = Advanced Course

(P) = Performance Acknowledgement

Certification Fees: \$ = \$25 or less; \$\$ = \$50 or less; \$\$\$ = \$110 or less; \$\$\$\$ = \$111 or more (this does not include lab fees)



**CFISD STEM ACADEMY FOR AUTOMATION, ROBOTICS
& COMPUTER SCIENCE (ARC)**
(housed at Cypress Springs High School)
Endorsement: Science, Technology, Engineering & Mathematics (STEM)



Apply to attend the **CFISD STEM Academy for Automation, Robotics, and Computer Science (ARC)** if you desire a focused experience on advanced engineering and robotics.

Academy Entry Requirements:

- Successful completion of Algebra I (80+ end-of-year average) in middle school
- Score Meets or Masters on 8th Reading STARR and Algebra I EOC
- Recommended to have completed Principles of Applied Engineering and/or Principles of Manufacturing
- If LOTE requirement for graduation is not met in middle school, one credit of LOTE, PE, or Art may need to be taken in summer school
- Enroll at Cypress Springs High School
- Application required - see your counselor

Course Sequence (Program of Study) that satisfy the CTE course requirement for STEM Endorsement
Earn at least 4 credits by taking at least two courses in the same cluster, with at least one containing advanced topics in that field (*)--see page in this document on Endorsements or your counselor for more information on graduation requirements.

| STEM4 - Automation, Robotics & Computer Science | | | |
|--|--|---|---|
| 9th Grade | Computer Science I K (1-LOTE) Manufacturing Engineering Tech I K (1) | English I K (1) Biology K (1) Geometry K (1) | Health (0.5) PACE (0.5) LOTE/PE/Fine Arts/Elective (1) |
| 10th Grade | Computer Science II K (1-LOTE) Digital Electronics K (1-math) | English II K (1) Chemistry K (1) Algebra II K (1) | Wld Geog K or Human Geog AP or Wld Hist AP (1) LOTE/PE/Fine Arts/Elective (1) |
| 11th Grade | *Computer Science III (1) *Engineering Math K (1-math) | English III K (1-dual) Pre-Calculus K (1-dual) US History AP (1-dual) | ***Physics K (1) LOTE/PE/Fine Arts/Elective (1) |
| 12th Grade | *Project-based Computer Science: Robotics Programming K (1) *Scientific Research & Design I K (1-science) | English IV K (1-dual) Physics C AP (2-dual) | Calculus AB/BC AP (1-dual)) Government AP (0.5) Economics AP (0.5) |
| Certifications (** Satisfies Performance Aknowledgement) | IT Specialist Python IT Specialist Java (replacing MTA Intro to Java Programming) **Oracle Java SE Programming **Certified SolidWorks Associate | | |
| Careers | Mechanical or Electrical Engineer (\$95K) Hardware Engineer (\$99K) CAD Drafter (\$46K) Software Engineer (\$100K) Computer Programmer (\$75K) | | |

***Students who already have credit for Physics should consider taking Engineering Design and Problem Solving K as their science course.

Endorsement: STEM – STEM 4
STEM ACADEMY FOR ARC (Automation, Robotics & Computer Science)

Located at Cypress Springs High School

Application Required

NOTE: Students must also complete Algebra II, Chemistry, & Physics or AP Physics I

These courses are only available to students enrolled in CFISD ARC Academy

| Program of Study – STEM 4 – STEM ACADEMY FOR ARC | | | | | |
|--|----------|----------------|---|--|--|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Computer Science I K (ARC) (1 LOTE Credit*) | 26513 | 9 | Algebra I | | Computer programming; read and write small programs in Jav Lab supply fee |
| Manufacturing Engineering Technology I K (ARC) | 87133 | 9 | Algebra I | | Application, design, production & assessment of products, services, & systems as related to manufacturing, robotics & automation Lab supply fee |
| Computer Science II K (ARC) (AP A exam prep) (1 LOTE Credit*) | 26583 | 10 | Computer Science I K | (Computer Science AP A exam) | Designed to cover the Computer Science AP A exam topics; object-oriented components in the language of Java will be stressed Lab supply fee |
| Digital Electronics K (ARC) (1 Math Credit) | 87163 | 10 | Manufacturing Engineering Technology K | | Study of electronic circuits that are used to process and control digital signals Lab supply fee |
| Computer Science III K (ARC) (1 LOTE Credit*) (A) | 26523 | 11 | Computer Science II K | Oracle Java SE 8 Programmer \$\$\$\$ (P) | Builds upon topics such as object-oriented programming, inheritance & classes; advanced topics in preparation and alignment with college-level computer science Lab supply fee |
| Engineering Math K (ARC) (1 Math Credit) (A) | 87173 | 11 | Digital Electronics K | | Real-world engineering applications such as robotics, data acquisition, spatial applications, electrical measurement, manufacturing processes, materials engineering, mechanical drives, pneumatics, process control systems, quality control, and computer programming Lab supply fee |
| Project-based Computer Science: Robotics Programming K (ARC) (A) | 26363 | 12 | Computer Science III K (or concurrent) | | Focus on variations of the C programming language Lab supply fee |
| Scientific Research & Design I K (ARC) (A) | 87143 | 12 | Biology, Chemistry, Physics, Engineering Math K | Certified Solidworks Associate \$\$\$ (P) | Allows students to apply manufacturing, robotics, & automation concepts and principles in the classroom and the workplace. Prepares students to gain entry-level employment in high-skill, high-wage jobs and/or continue their education Lab supply fee |
| CFISD ARC Academy Related Elective (May be taken in addition to the CFISD ARC Academy Program of Study) | | | | | |
| Engineering Design & Problem-Solving K (1 Science credit) (A) | 33913 | 11-12 | Algebra II, Chemistry, Physics (or concurrent), Engineering Design & Presentation I or Manufacturing Engineering Tech K (ARC) | | Students apply critical thinking skills to justify a solution from multiple design options; intended to stimulate students' ingenuity, intellectual talents, & practical skills in devising solution to engineering design problems in a project-based learning environment |

*Colleges & universities set their own entrance requirements. Consequently, a student should verify admission requirements with the specific university.

(A) = Advanced Course (P) = Performance Acknowledgement

Certification Fees: \$ = \$25 or less; \$\$ = \$50 or less; \$\$\$ = \$110 or less; \$\$\$\$ = \$111 or more (this does not include lab fees)

BUSINESS & INDUSTRY



Check out these YouTube videos to see the real opportunities offered here in CFISD for this endorsement

Career Cluster/Areas of Study:

https://www.youtube.com/results?search_query=cfisd+cte

Option 1: CTE

| Agriculture, Food, & Natural Resources <i>(p. 22-23)</i> | Architecture & Construction <i>(p. 24-25)</i> | Arts, A/V Technology & Communication <i>(p.26-27)</i> | Business, Marketing & Finance <i>(p. 28-31)</i> |
|---|--|--|--|
| Animal Science (Veterinary Science) | Architecture | Digital Communication/Video | Accounting & Financial Services |
| Plant Science/Floral Design | Construction & Carpentry | Digital Communication/Audio | Business Management |
| Applied Ag Engineering | Construction/Plumbing | Multimedia Arts (Animation) | Entrepreneurship |
| Environmental & Natural Resources | Interior Design | Fashion Design | Sales & Marketing |

| Hospitality & Tourism <i>(p. 32-33)</i> | Information Technology <i>(p. 34-35)</i> | Manufacturing <i>(p. 36-37)</i> | Transportation, Distribution & Logistics <i>(p. 38-39)</i> |
|--|---|------------------------------------|---|
| Culinary Arts | Networking Systems | Manufacturing | Automotive Technician |
| | Web Development | Welding | |
| | | Robotics | |

Option 2: English

Option 3: Combination

| English | Combination |
|-----------------------------------|--------------------------------|
| Journalism (Newspaper & Yearbook) | <i>(See information below)</i> |
| Debate | |
| Law/Government/Politics | |
| Public Relations | |

Students may earn a **Business & Industry endorsement** by selecting and completing the requirements from among these **3 options**:

➤ **Option 1: CTE**

Students earn 4 credits by taking at least 2 courses in the same career cluster with at least 1 advanced course (3rd or higher course in the sequence)

OR*

*Students earn four (4) or more credits by taking at least three (3) courses in a TEA-approved program of study with at least one (1) advanced course (3rd year or higher in the sequence)

For each Career Cluster area above, there are specific **Programs of Study** available. These can be found on each Career Cluster chart in the pages that follow.

➤ **Option 2: English**

Students take four (4) English elective credits that include three (3) levels in **one** of the following areas:

- Advanced Journalism (Newspaper or Yearbook)
- Debate

➤ **Option 3: Combination**

Students take a coherent sequence of four (4) credits from Option 1 and 2 (**Combination plan must include one (1) advanced CTE course**)

Glossary - Business & Industry Careers

Accountant – Helping people and businesses prepare and maintain their financial records

Agronomist – Using scientific research and know-how to help farmers

Architect – Using artistic and math skills to design office towers, houses and other buildings

Art Dealer – Hired by art galleries to bring in various types of pieces, such as paintings and sculptures, from artists

Book Editor – Editing text as well as evaluating manuscripts and selecting books for publication

Caterer – Organize parties, and other events involving food and fun

Computer Programmer – Write the logical commands that tell computers what to do

Content Producer – Websites need writers and editors for their ever-changing content; combines communication background with strong technical skills.

Copywriter – Whenever you watch an advertisement on television, hear one on the radio or read one in the newspaper, a copywriter developed the message being delivered. If you're naturally persuasive and creative and can cram a lot of convincing information into a few words, this job should grab your attention.

Electrician – Bringing safe and efficient electrical power to our homes and work places

Farm Equipment Technician – Today's farms rely on a lot of high-tech equipment, and it's the technician's job to keep them running smoothly.

Grant Writer – Use your persuasive writing talents to demonstrate the importance of an organization's causes to win the money necessary to promote them

Graphic Design – Create visual concepts for the overall layout and production design for advertisements, brochures, magazines, and corporate reports

Horticulturist – Works with flowers, trees, vegetables, and other plants – you can do it inside nurseries, and greenhouses, or outside at parks and farms

Human Resources Specialist – Hiring, firing, and training staff for all types of corporations and organizations

Insurance Claim Adjuster – An investigator who makes sure that insurance claims are valid and then determines the amount to be paid

Landscape Architect – Design parks, gardens, schoolyards, and other outdoor spaces

Lawyer – There are many types of law, but they all involve research, writing, debate and hard work.

Management – Strong communication and debate skills as well as organizational skills are critical to being a successful manager

Marketing Specialist – Thinking up new and better ways to sell products and services

Politician – Debate skills are critical to advocating the stance most appropriate to the needs of the people you represent.

Public Relations Specialist – Helping businesses and other organizations get the "right message" across

Real Estate Appraiser – Ever wonder who decides how much land and buildings are worth?

Special Effects Technician – Create the realistic storms, explosions, gore, and computer animations that bring films and television shows to life

Sports Information Director – Help local, regional and national sports journalists get the stories they need from coaches and athletes and coordinate media coverage for various athletic events

Technical Writer – Writing clear instructions, particularly for a technical product or service

Transportation Inspector – Help keep our transportation systems safe by inspecting trucks, trains, planes, and boats.

Video Game Developer – Programmers, animators, sound designers, writers, and testers all work together to create the video games you play.

Welder – Using heat and electricity to melt metals and create permanent bonds

Writer – Fiction, non-fiction, technical writing, advertising, copywriting, web writing – good writers are always needed.

AGRICULTURE, FOOD, & NATURAL RESOURCES

Programs of Study Business & Industry Endorsement



AG 1 ANIMAL SCIENCE

| |
|---|
| 9th Grade Principles of Agriculture (1) |
| 10th Grade Small Animal Mgmt (0.5) and Equine Science (0.5) or Livestock Production (1) |
| 11th Grade *Veterinary Med Appl (1) or Livestock Production (1) |
| 12th Grade *Adv Animal Science K (1-science) or *Practicum in Ag (2) |
| Certifications Quality Counts Verification Fear Free Veterinary Certification **Equine Mgmt & Evaluation **Fundamentals of Animal Science **Veterinary Medical Appl Cert **Certified Vet Assistant Lvl 1 & 2 |
| Careers Certified Vet Assistant (\$15/hour) Animal Breeders (\$39K) Animal Scientists (\$58K) Zoologists (\$67K) Veterinarians (\$93K) |

AG 2 PLANT SCIENCE

| |
|---|
| 9th Grade Principles of Agriculture (1) |
| 10th Grade Greenhouse Operation & Production (1) |
| 11th Grade Floral Design (1-fine arts) |
| 12th Grade *Adv Plant & Soil Sci K (1-science) or *Adv Floral Design (1) or *Practicum in Ag (2) |
| Certifications Quality Counts Verification **TSFA Floral Designer Skills **TSFA Floral Designer Lvl 1 **TSFA Floral Designer Lvl 2 **BASF Plant Science Certification |
| Careers Soil & Plant Scientist (\$65K) Biological Technician (\$43K) Floral Designer (\$53K) Landscaping Supervisors (\$45) |

AG 3 APPLIED AG ENGINEERING

| |
|--|
| 9th Grade Principles of Agriculture (1) |
| 10th Grade Ag Mechanics (1) |
| 11th Grade *Ag Equipment (1) |
| 12th Grade *Project-Based Research: AgMech Focus (1) or *Practicum in Ag (2) |
| Certifications Quality Counts Verification OSHA 10-hr **AWS D9.1 (Sheet Metal) **AWS D1.1 (Structural) **OSHA 30-hr |
| Careers Small Engine Mechanic(\$32K) Welder (\$51K+) Farm Equipment Mech(\$40K) Heavy Equipment Mech (\$47K) Agricultural Engineer (\$65K) |

AG 4 ENVIRONMENTAL & NATURAL RESOURCES

| |
|---|
| 9th Grade Principles of Agriculture (1) |
| 10th Grade Wildlife, Fisheries & Ecology Mgmt (1) |
| 11th Grade *Range Ecology Mgmt (1) |
| 12th Grade *Practicum in Ag (2) |
| Certifications Quality Counts Verification Hunter Safety Boater Safety Angler Safety **NOCTI Natural Resources Systems |
| Careers Environmental Sci & Protection Tech (\$40K) Environmental Scientist (\$78K) Environmental Engineer (\$87K) Zoologists & Wildlife Biologists (\$67) Surveying/Mapping Technicians (\$44) |



*Meets Advanced Course Requirement for B&I Endorsement
**Meets Requirement to Earn Performance Acknowledgment
For more information, see your counselor, CTE teachers, or <https://www.cfisd.net/CTE>.



AGRICULTURE, FOOD, and NATURAL RESOURCES

NOTE: Principles of Ag, Food, & Natural Resources is a REQUIRED prerequisite of all 9th/10th grade students wanting to take an Ag course

| Program of Study – Ag1 – ANIMAL SCIENCE | | | | | |
|--|----------|----------------|---|--|--|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Principles of Ag, Food, & Natural Resources | 91123 | 9-10 | Required of all 9th/10th graders wanting to take an Ag course | Quality Counts Verification | Introductory class that prepares students for careers in agriculture, food, and natural resources |
| Small Animal Management (1/2 credit) | 93320 | 10-12 | (Required or concurrent) Prin of Ag for 10 th graders | Fear Free Vet Certification | Small mammals, amphibians, reptiles, birds, dogs, & cats; <i>Students may log job shadowing hours for CVA</i> |
| Equine Science (1/2 credit) | 92420 | 10-12 | (Required or concurrent) Prin of Ag for 10 th graders | Equine Mgt & Eval Cert (P) | Breeds, nutrition, health & management of horses <i>Students may log job shadowing hours for CVA</i> |
| Livestock Production | 92223 | 10-12 | (Required or concurrent) Prin of Ag for 10 th graders | Fund of Animal Sci Cert (P) | Animal foods, health, handling techniques, & sales <i>Students may log job shadowing hours for CVA</i> |
| Veterinary Med Applications (A) | 88823 | 11-12 | Small Animal, Equine Science, or Livestock Production | Vet Med Appl Cert & Certified Vet Assistant I \$\$\$\$ (P) | Vet practices, industry expectations, large & small animals; Scrubs or Lab supply fee Requires students to job shadow at vet-related facility |
| Advanced Animal Science K (1 Science Credit) (A) | 33733 | 11-12 | Biology, Chemistry, AND Vet Med or at least 1 credit from Small Animal, Equine, or Livestock | | For students preparing for careers in animal science <i>Students may log job shadowing hours for CVA</i> |
| Practicum in Agriculture (2 credits) (A) | 90923 | 12 | At least 2 Ag courses | Certified Vet Assistant II \$\$\$\$ | Requires students to job shadow at vet-related facility 10 hours per week |
| Program of Study – Ag2 – PLANT SCIENCE | | | | | |
| Greenhouse Operation & Production | 91733 | 10-12 | (Required or concurrent) Prin of Ag for 10 th graders | | Greenhouse production techniques & practices; plant nutrition, use & identification; tools & equipment |
| Floral Design (1 Fine Arts Credit) | 93133 | 10-12 | (Required or concurrent) Prin of Ag for 10 th graders | TSFA Floral Design Skills Knowledge-based & TSFA Floral Design Level 1 \$\$\$ (P) | Floral design & industry expectations Lab supply fee Note: The TSFA Level 1 certification is required to move on to Advanced Floral Design |
| Advanced Floral Design (A) | 93233 | 10-12 | Floral Design AND TSFA Floral Design Level 1 | TSFA Floral Design Level 2 \$\$\$ (P) | Advanced floral design concepts, specialty designs & occasion planning Lab supply fee |
| Advanced Plant & Soil Science K (1 Science Credit) (A) | 33743 | 11-12 | Biology, Chemistry AND Greenhouse Op & Prod | BASF Plant Sci Cert (P) | Provides way of learning about the natural world; basis for many other fields of science |
| Practicum in Agriculture (2 credits) (A) | 90923 | 12 | At least 2 Ag courses | TSFA Floral Design Level 2 \$\$\$ (P) | Students are required to work 10 hours per week at an approved training site |
| Program of Study – Ag3 – APPLIED AG ENGINEERING | | | | | |
| Agricultural Mechanics & Metal Technologies | 91323 | 10-12 | (Required or concurrent) Prin of Ag for 10 th graders | OSHA-10 AWS D9.1 \$\$ (P) | Safety & skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete & metal work techniques Lab supply fee |
| Agricultural Equipment & Design (A) | 92133 | 11-12 | Ag Mechanics & Metal Tech | AWS D1.1 \$\$ (P) | Projects might include items such as agricultural machinery & equipment, fences, corrals, or other agricultural enclosures Lab supply fee |
| Project-based Research in Ag Mechanics (A) | 82633 | 11-12 | Ag Mechanics & Metal Tech | OSHA-30 AWS D1.1 \$\$ (P) | Supervised research/project-based class Lab supply fee |
| Practicum in Agriculture (2 credits) (A) | 90923 | 12 | At least 2 Ag courses | OSHA-30 AWS D1.1 \$\$ (P) | Students are required to work 10 hours per week at an approved training site Lab supply fee |
| Program of Study – Ag4 – ENVIRONMENTAL & NATURAL RESOURCES | | | | | |
| Wildlife, Fisheries & Ecology Mgt. | 92523 | 10-12 | (Required or concurrent) Prin of Ag for 10 th graders | Hunter, Boater & Angler Safety | Hunting & fishing skills and safety are taught as well as water & boating safety |
| Range Ecology Mgt. | 92233 | 11-12 | Wildlife, Fisheries & Ecology Mgt. | | Methods for maintaining & improving rangeland for livestock & wildlife management |
| Practicum in Agriculture (2 credits) (A) | 90923 | 12 | At least 2 Ag courses | Wastewater Collection \$\$\$\$ (P) | Students are required to work 10 hours per week at an approved training site. Students wishing to earn the Wastewater Collections certification must attain a job/internship at a facility in that industry. |

(A) = Advanced Course

(P) = Performance Acknowledgement

Certification Fees: \$ = \$25 or less; \$\$ = \$50 or less; \$\$\$ = \$110 or less; \$\$\$\$ = \$111 or more (this does not include lab fees)

ARCHITECTURE & CONSTRUCTION

Programs of Study Business & Industry Endorsement



A&C 1 ARCHITECTURE (FOR THOSE TAKING ARCH DES I IN 2022-23 OR EARLIER)

| |
|---|
| 9th Grade Principles of Architecture (1) |
| 10th Grade Architecture Design I (1) |
| 11th Grade *Architecture Design II (2) or *Architecture Design II Workforce (2) |
| 12th Grade *Practicum Arch Design(2) or *Project-based Research in Architecture Workforce (2) |
| Certifications **Autodesk Revit **Autodesk AutoCAD |
| Careers Architects (\$85K) Architectural/Civil Drafters (\$50K) Geographic Info Analysts (\$59) Construction Mgt (\$87K) |

A&C 1 - REVISED WF OPTIONS ARCHITECTURE (FOR THOSE TAKING ARCH DES I AFTER 2022-2023)

| |
|---|
| 9th Grade Principles of Architecture (1)-8th gd Architecture Design I (1)-9th gd |
| 10th Grade *Architecture Design II (2) |
| 11th Grade *Practicum Architectural Design I Workforce (2) |
| 12th Grade *Practicum Architectural Design II Workforce (2) |
| Certifications **Autodesk Revit **Autodesk AutoCAD |
| Careers Architects (\$85K) Architectural/Civil Drafters (\$50K) Geographic Info Analysts (\$59) Construction Mgt (\$87K) |

A&C 2 CONSTRUCTION

| |
|---|
| 9th Grade Principles of Architecture (1) or Principles of Manufacturing (1) |
| 10th Grade Construction Technology I (2) |
| 11th Grade *Construction Technology II (2) or *Mill & Cabinetmaking Technology (2) |
| 12th Grade *Practicum in Construction Tech (2) |
| Certifications OSHA 10-hr **NCCER CORE **NCCER Carpentry Lvl 1 (Other certs/training via internships) |
| Careers Carpenters (\$42K) Plumber/Pipefitter (\$45K) Cost Estimator (\$64K) Construction Manager (\$86) |

A&C 3 INTERIOR DESIGN

| |
|--|
| 9th Grade Principles of Architecture (1) |
| 10th Grade Interior Design (1) |
| 11th Grade Architecture Design I (1) |
| 12th Grade *Architecture Design II (2) |
| Certifications **NCCER CORE **Autodesk Revit **Autodesk AutoCAD |
| Careers Interior Designer (\$55K) Corporate Designer (\$63K) Architects (\$77K) Construction Manager (\$86) |



*Meets Advanced Course Requirement for B&I Endorsement
 **Meets Requirement to Earn Performance Acknowledgment
 For more information, see your counselor, CTE teachers, or <https://tinyurl.com/CTECFISD>.

ARCHITECTURE and CONSTRUCTION

| Program of Study – A & C 1 – ARCHITECTURE (Revised WF Options – For those taking Arch Design I after 2022-2023) | | | | | |
|--|-----------------|-----------------------|---|--|---|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Principles of Architecture | 84233 | 8-11 | NONE | | Highly recommended for all Programs of Study in Architecture & Construction; explore the fields of architecture, construction science & construction technology. Lab supply fee |
| Architectural Design I | 81523 | 9-12 | Prin of Architecture <i>(Geometry recommended)</i> | | Explore the design, planning, & development of architectural drawings Lab supply fee |
| Architectural Design II (2 credits) Ⓐ | 81623 | 11-12 | Arch Design I | Autodesk Revit Autodesk Auto CAD \$\$ Ⓟ | Advanced design, design history, techniques, & tools related to the production of drawings, renderings, & scaled models for commercial or residential purposes Lab supply fee |
| Practicum in Architectural Design I Workforce (2 credits) Ⓐ | 83523 | 11-12 | Architectural Design I | | Students are required to work 10 hours per week at an approved training site Lab supply fee |
| Practicum in Architectural Design II Workforce (2 credits) Ⓐ | 81723 | 11-12 | Arch Design I AND Approved LSC portfolio | Autodesk Revit Autodesk Auto CAD \$\$ Ⓟ | Similar to Arch Design II, except students must also have a Student Work Portfolio submitted & approved by Lone Star College. This is the required prerequisite for Project-Based Research in Architectural Workforce Lab supply fee |
| Program of Study – A & C 2 – CONSTRUCTION - CARPENTRY | | | | | |
| Principles of Architecture | 84233 | 8-11 | NONE | | Explore the fields of architecture, construction science & construction tech. Lab supply fee |
| Principles of Manufacturing | 82023 | 8-11 | NONE | | Use hand tools, power tools, machinery, computer hardware & software applications Lab supply fee |
| Construction Technology I (2 credits) | 83743 | 10-12 | Prin of Arch OR Prin of Manufacturing | OSHA-10 and NCCER CORE Ⓟ | Skills in safety, tool and machine usage, building materials, codes, & framing Lab supply fee |
| Construction Technology II (2 credits) Ⓐ | 83753 | 11-12 | Construction Tech 1 | NCCER Carpentry Lvl 1 (NCCER CORE required) Ⓟ | Advanced skills needed to enter the workforce or prepare for a postsecondary degree Lab supply fee |
| Mill & Cabinetmaking Tech (2 credits) Ⓐ | 83823 | 10-12 | Construction Tech 1 | | Mill work, cabinet making and installation Lab supply fee |
| Practicum in Construction & Tech (2 credits) Ⓐ | 83763 | 12 | Construction Tech 1 | Other certs/training via internships | Required to work 10 hours per week at an approved training site Lab supply fee |
| Program of Study – A & C 3 – INTERIOR DESIGN | | | | | |
| Principles of Architecture | 84233 | 8-11 | NONE | | Explore the fields of architecture, construction science & construction tech. Lab supply fee |
| Interior Design | 85543 | 10-12 | <i>Prin of Arch recommended</i> | | Basic principles and elements of design and construction Lab supply fee |
| Architectural Design I | 81523 | 10-12 | Prin of Architecture | | Explore the design, planning, & development of architectural drawings Lab supply fee |
| Architectural Design II Ⓐ | 81623 | 11-12 | Architectural Design I | Autodesk Revit Autodesk AutoCAD \$\$ Ⓟ | Advanced design, design history, techniques, & tools related to the production of drawings, renderings, & scaled models for commercial or residential purposes Lab supply fee |

Ⓐ = Advanced Course

Ⓟ = Performance Acknowledgement

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ARTS, A/V TECHNOLOGY, & COMMUNICATIONS

Programs of Study Business & Industry Endorsement



ARTS 1 DIGITAL COMMUNICATION - VIDEO

| |
|---|
| 9th Grade Digital Media (1) or Digital Audio Tech I (1) |
| 10th Grade Audio Video Production I (2) |
| 11th Grade *Audio Video Production II (2) |
| 12th Grade *Practicum in Audio Video Production (2) |
| Certifications **Adobe Photoshop **Adobe Premiere Pro **Adobe After Effects **Remote Drone Pilot |
| Careers Camera Operator (\$50K) A/V Equipment Technician (\$41K) Film/Video Editor (\$59K) |

ARTS 2 DIGITAL COMMUNICATION - AUDIO

| |
|---|
| 9th Grade Digital Audio Tech (1) |
| 10th Grade Audio Video Production I (2) |
| 11th Grade *Digital Audio Tech II (1) |
| 12th Grade *Practicum in Audio Video Production (2) |
| Certifications **Adobe Premiere Pro **Remote Drone Pilot |
| Careers Sound Engineer (\$40K) Camera Operator (\$50K) A/V Equipment Technician (\$41K) |

ARTS 3 MULTIMEDIA ARTS

| |
|--|
| 9th Grade Digital Media (1) |
| 10th Grade Animation I (1) |
| 11th Grade *Animation II (2) |
| 12th Grade *Practicum in Animation (2) |
| Certifications **Adobe Photoshop **Adobe Animate Autodesk Maya |
| Careers Graphic Designer (\$45K) Multimedia Artist & Animator (\$67K) |

ARTS 4 FASHION DESIGN

| |
|---|
| 9th Grade Digital Media (1) |
| 10th Grade Fashion Design I (1) |
| 11th Grade *Fashion Design II (2) |
| 12th Grade *Project-based Research in Fashion Design (1) |
| Certifications **Adobe Photoshop |
| Careers Graphic Designer (\$45K) Assistant Fashion Designer (\$40K) Tailors, Dressmakers, & Custom Sewers (\$33K) Fashion Designer (\$76K) |

BUSINESS, MARKETING, & FINANCE

Programs of Study Business & Industry Endorsement

BMF 1 ACCOUNTING & FINANCIAL SERVICES

| |
|---|
| 9th Grade Principles of Business, Mktg & Finance (1) or Bus Info Mgmt I (1) or Money Matters (1) |
| 10th Grade * Accounting I (1) or |
| 11th Grade * Accounting II K (1-math) |
| 12th Grade * Securities & Investments (1) or * Practicum in Business Mgmt (2) |
| Certifications **Quickbooks Certified User **Microsoft Office-Word/ ExpertWord **Microsoft Office-Excel/Expert Excel Microsoft PowerPoint **Microsoft Access Expert **Microsoft Office Specialist **NOCCT Accounting Foundations |
| Careers Accountants&Auditors (\$71K) Loan Officers (\$69K) Financial Advisor (\$87K) Admin Service Mgr (\$96K) Insurance Underwriter(\$66K) |

BMF 2 BUSINESS MANAGEMENT

| |
|--|
| 9th Grade Principles of Business, Mktg & Finance (1) or Bus Info Mgmt I (1) |
| 10th Grade Bus Info Mgmt I (1) or * Bus Info Mgmt II (1) |
| 11th Grade *Bus Management (1) or Global Bus (0.5) and Human Resources Mgmt (0.5) |
| 12th Grade *Practicum in Business Management (2) |
| Certifications **Microsoft Office-Word/ExpertWord **Microsoft Office-Excel/Expert Excel Microsoft PowerPoint **Microsoft Access Expert **Microsoft Office Specialist |
| Careers Admin Service Managers (\$96K) General & Operations Mgr (\$108K) Supervisor of Support Workers (\$58K) |

BMF 3 ENTREPRENEURSHIP

| |
|--|
| 9th Grade Principles of Business, Mktg & Finance (1) |
| 10th Grade Bus Info Mgmt I (1) |
| 11th Grade Entrepreneurship (1) |
| 12th Grade *Practicum in Business Management (2) or *Practicum in Marketing (2) |
| Certifications **Microsoft Office-Word/Expert Word **Microsoft Office-Excel/Expert Excel Microsoft PowerPoint **Microsoft Access Expert **Microsoft Office Specialist **Entrepreneurship & Small Business |
| Careers General & Operations Mgr (\$107K) Management Analyst (\$88K) Managers, All Others (\$113K) |

BMF 4 MARKETING & SALES

| |
|--|
| 9th Grade Principles of Business, Mktg & Finance (1) |
| 10th Grade Sports & Entertainment Mkt I (0.5) and Sports & Entertainment Mktg II (0.5) and/or Social Media Marketing (0.5) and/or Virtual Business (0.5) |
| 11th Grade *Advanced Marketing (2) or |
| 12th Grade *Practicum in Marketing (2) |
| Certifications ** Real Estate Sales Agent License **Microsoft Office-Word **Microsoft Office-Expert Word Microsoft PowerPoint **STUKENT Social Media |
| Careers Marketing Specialist (\$70K) Wholesale & Retail Buyer (\$51K) Insurance Sales Agent (\$43K) Supervisor of Sales Workers (\$73K) |



*Meets Advanced Course Requirement for B&I Endorsement
 **Meets Requirement to Earn Performance Acknowledgment
 For more information, see your counselor, CTE teachers, or <https://tinyurl.com/CTECFISD>.



Business, Marketing, & Finance

| Program of Study – BMF 1 – ACCOUNTING & FINANCIAL SERVICES | | | | | |
|--|------------------------|----------------|---|--|---|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Principles of Business, Marketing and Finance | 51123 | 8-10 | NONE | | Global business, marketing of goods/services, advertising and product pricing, sales process, & financial management principles; provides the foundation for more advanced BMF courses Lab supply fee |
| Business Information Mgt. I (BIM I) | 54623 | 8-12 | <i>Recommended</i> – Touch System Data Entry | Multiple Microsoft Office certs \$ (P) | Word processing, spreadsheets, multimedia presentations, databases, internet research, & emerging technologies Lab supply fee |
| Money Matters | 53913 | 9-12 | NONE | | Fundamental principles of money & personal financial planning; bank record management, use of credit, investing, insurance, budgets, & financial markets & securities analysis Lab supply fee |
| Accounting I (A) | 52123 | 10-12 | Geometry <i>Recommended</i> – Prin of Bus, Mkg, Fin | NOCTI Accounting Foundations \$ (P) | Complete accounting cycle, end-of-period statements, bank reconciliation, payrolls, & petty cash Lab supply fee |
| Accounting II K (1 Math credit) (A) | 52253 | 11-12 | Algebra II (<i>or concurrent</i>) AND Accounting I | Quickbooks Certified User \$\$ (P) | Corporate accounting & integrated financial analysis; vital for students planning to major in Finance or seeking an entry-level position in accounting Lab supply fee |
| Securities & Investments (A) | 52923 | 11-12 | <i>Recommended</i> – At least 1 Finance course | | Students taking this course should also consider taking <i>Banking & Financial Services</i> Lab supply fee |
| Practicum in Business Mgt. I/II (2 credits) (A) | I – 53983 II- 58333 | 11-12 | At least 1 credit in Bus, Mkg, & Fin | Multiple Microsoft Office Certs \$ (P) | Students required to work 10 hours per week in an approved training site Lab supply fee |

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Business, Marketing, & Finance (continued)

| Program of Study – BMF 2 – BUSINESS MANAGEMENT | | | | | |
|---|-------------------------|-------|--|---|---|
| Principles of Business, Marketing and Finance | 51123 | 8-10 | NONE | | Global business, marketing of goods/services, advertising and product pricing, sales process, & financial management principles; provides the foundation for more advanced BMF courses Lab supply fee |
| Business Information Mgt. I (BIM I) | 54623 | 8-12 | <i>Recommended – Touch System Data Entry</i> | Multiple Microsoft Office certs \$ (P) | Word processing, spreadsheets, multimedia presentations, databases, internet research, & emerging technologies Lab supply fee |
| Business Information Mgt. II (BIM II) (A) | 54723 | 10-12 | BIM I | Multiple Microsoft Office certs \$ (P) | Advanced level of proficiency in word processing, spreadsheet, database & presentation applications that is expected in the world of business Lab supply fee |
| Global Business (1/2 credit) | 52620 | 10-12 | <i>Recommended – Prin of BMF</i> | | Theories in trading and investing across national borders; students should also consider taking Virtual Business and/or Human Resources Mgt. Lab supply fee |
| Human Resources Mgt (1/2/ credit) | 85120 | 11-12 | <i>Recommended – Prin of BMF</i> | | Recruitment, selection, training, development and compensation of employees Lab supply fee |
| Business Management (A) | 53923 | 11-12 | At least 1 credit in Bus, Mkg, & Fin | | Legal, managerial, marketing, financial, ethical and international dimensions of business; strongly recommended for students wanting to own their own business Lab supply fee |
| Practicum in Business Mgt. I/II (2 credits) (A) | I- 53983 II- 58333 | 11-12 | At least 1 credit in Bus, Mkg, & Fin | Multiple Microsoft Office certs \$ (P) | Students required to work 10 hours per week in an approved training site Lab supply fee |
| Program of Study – BMK 3 - ENTREPRENEURSHIP | | | | | |
| Principles of Business, Marketing and Finance | 51123 | 8-10 | NONE | | Global business, marketing of goods/services, advertising and product pricing, sales process, & financial management principles; provides the foundation for more advanced BMF courses Lab supply fee |
| Business Information Mgt. I (BIM I) | 54623 | 8-12 | <i>Recommended – Touch System Data Entry</i> | Multiple Microsoft Office certs \$ (P) | Word processing, spreadsheets, multimedia presentations, databases, internet research, & emerging technologies Lab supply fee |
| Entrepreneurship | 53523 | 10-12 | <i>Recommended- Prin of BMF</i> | Entrepreneurship and Small Business \$\$\$ (P) | Skills needed to become an entrepreneur – analyzing a business opportunity, preparing a business plan, organizing & promoting the business, capital, return on investment, & potential for profit Lab supply fee |
| Practicum in Business Mgt. I/II (2 credits) (A) | I- 53983 II- 58333 | 11-12 | At least 1 credit in Bus, Mkg, & Fin | Multiple Microsoft Office certs \$ (P) | Students required to work 10 hours per week in an approved training site Lab supply fee |
| Practicum in Marketing I/II (2 credits) (A) | I – 53353 II – 53393 | 11-12 | At least 1 credit in Bus, Mkg, & Fin | Real Estate Agent License (must be 18 to test) \$\$\$ (P) | Students required to work 10 hours per week in an approved training site Lab supply fee |

Business, Marketing, & Finance (continued)

| Program of Study – BMF 4 – MARKETING & SALES | | | | | |
|--|-------------------------|-------|--|---|--|
| Principles of Business, Marketing and Finance | 51123 | 8-10 | NONE | | Global business, marketing of goods/services, advertising and product pricing, sales process, & financial management principles; provides the foundation for more advanced BMF courses |
| Sports & Entertainment Marketing I (1/2 credit) | 53420 | 10-12 | <i>Recommended-Prin of BMF</i> | | Sponsorships, promotion/public relations, merchandising, advertising, sales & events |
| Sports & Entertainment Marketing II (1/2 credit) (A) | 52430 | 10-12 | Sports & Entertainment Marketing I | | Advanced marketing concepts – branding, sponsorships, endorsements, etc. |
| Social Media Marketing (1/2 credit) | 50220 | 10-12 | <i>Recommended-Prin of BMF</i> | STUKENT Social Media (P) | Integrating social media tools in the overall marketing strategy |
| Virtual Business (1/2 credit) | 52720 | 10-12 | <i>Recommended-Prin of BMF</i> | | Develop a website for a virtual business |
| Advanced Marketing (2 credits) (A) | 53363 | 11-12 | At least 1 Marketing course (Sports & Entertainment Mktg or Social Media Mktg) | Microsoft Word or PowerPoint \$ (P) | Advanced marketing principles & careers; the importance of entrepreneurship in our economy Lab supply fee |
| Practicum in Marketing I/II (2 credits) (A) | I – 53353 II – 53393 | 11-12 | At least 1 credit in Bus, Mkg, & Fin | Real Estate Agent License (must be 18 to test) \$\$\$\$ (P) | Students required to work 10 hours per week in an approved training site Lab supply fee |

Related elective that may be taken *in addition to* any program of study in this field:

| | | | | | |
|--------------------------------------|-------|------|--|--|---|
| Touch System Data Entry (1/2 credit) | 51220 | 7-10 | | | Develops keyboarding & formatting skills all students need for success in the workplace |
|--------------------------------------|-------|------|--|--|---|

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HOSPITALITY & TOURISM

Programs of Study Business & Industry Endorsement



HOSP 1 CULINARY ARTS

| |
|--|
| 9th Grade Principles of Hospitality (1) 8th gd only Intro to Culinary Arts (1) 9th gd |
| 10th Grade Culinary Arts I (2) |
| 11th Grade * Advanced Culinary Arts (2) or *Food Science K (1-science) |
| 12th Grade *Practicum in Culinary Arts (2) or *Advanced Culinary Arts (2) |
| Certifications ServSafe Food Handler **ServSafe Manager |
| Careers Food Service Manager (\$56K) Chef and Head Cook (\$43K) Food Science Technician (\$34K) Food & Beverage Manager (\$56K) |



* Meets Advanced Course Requirement for B&I Endorsement
 ** Meets Requirement to Earn Performance Acknowledgment

For more information, see your counselor, CTE teachers, or <https://tinyurl.com/CTECFISD>.



HOSPITALITY & TOURISM

NOTE: Principles of Hospitality & Tourism (1 credit) taken in 8th Grade may be used to fulfill Endorsement requirements

| Program of Study – Hosp 1 – CULINARY ARTS | | | | | |
|---|----------|----------------|---|---|---|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Introduction to Culinary Arts | 86143 | 9-10 | Recommended – Prin of Hospitality | ServSafe Food Handler <i>(This certification is required to continue in this program of study)</i> | Planning, organizing, staffing, directing and controlling the management of food service operations as well as food production and hospitality skills Lab supply fees |
| Culinary Arts (2 credits) | 85923 | 10-12 | ServSafe Food Handler Certification <i>Recommended – Prin of H & T <u>or</u> Intro to Culinary</i> | ServSafe Manager \$\$ (P) | Fundamental skills in the art of cooking and the science of baking, including management and production skills and techniques Lab supply/uniform fee |
| Advanced Culinary Arts ** (A) | 86153 | 11-12 | Culinary Arts <u>AND</u> ServSafe Food Handler or ServSafe Food Manager certification | | Combines classroom instruction with actual business & industry career experiences; students are actually major participants in operating a restaurant and catering business Lab supply/uniform fee Students will take this course at Cy-Fair High School, Cypress Park High School, or Cypress Ridge High School |
| Food Science K (1 Science credit) (A) | 33753 | 11-12 | Culinary Arts <u>AND</u> 3 units of science (including Biology & Chemistry) | | Study of the nature of foods, the causes of deterioration, the principles underlying food processing, & the improvement of foods for the consuming public Lab supply/uniform fee |
| Practicum in Culinary Arts ** (A) | 86163 | 12 | Adv Culinary Arts <u>AND</u> ServSafe Food Handler or ServSafe Food Manager certification | | Gain additional real-world experience in a commercial kitchen Lab supply/uniform fee Students will take this course at their home campus Student must provide transportation to any off-campus work sites |

****Declaration of Interest form may be required if demand exceeds capacity**

(A) = Advanced Course

(P) = Performance Acknowledgement

Certification Fees: \$ = \$25 or less; \$\$ = \$50 or less; \$\$\$ = \$110 or less; \$\$\$\$ = \$111 or more (this does not include lab fees)

INFORMATION TECHNOLOGY

Programs of Study Business & Industry Endorsement



INFOTCH 1 NETWORKING SYSTEMS

| |
|---|
| 9th Grade Principles of Info Tech (1) 8th gd only Networking (1) |
| 10th Grade Computer Science I K (1-LOTE) |
| 11th Grade *Internetworking Technologies I (1) |
| 12th Grade *Internetworking Technologies II (1) |
| Certifications **CompTIA IT Fundamentals **CompTIA A+ **CompTIA Network **IT Specialist Networking **Cisco CCNA |
| Careers Computer Network Architect (\$112K) Computer Systems Analyst (\$88K) Computer Network Support Specialist (\$68K) |

INFOTCH 2 WEB DEVELOPMENT

| |
|--|
| 9th Grade Principles of Info Tech (1) 8th gd only Computer Science I K (1) 9th gd |
| 10th Grade Web Design (1) |
| 11th Grade *Web Game Development (1) |
| 12th Grade *Project-based Research in Web Development (1) |
| Certifications *IT Specialist HTML/CSS |
| Careers Web Administrator (\$76k) |

INFORMATION TECHNOLOGY

Note: Principles of Information Technology (1 credit) taken in 8th Grade may be used to fulfill Endorsement requirements for all Programs of Study

| Program of Study – InfoTech 1 – NETWORKING SYSTEMS | | | | | |
|--|----------|----------------|---|---|--|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Networking | 54223 | 9-12 | <i>Recommended</i> – Prin of Information Technology | COMPTIA IT Fundamentals CompTIA A+ \$\$\$ (P) | Fundamentals of computer hardware/software; networking & security Lab supply fee |
| Computer Science I K (1 LOTE Credit*) | 26513 | 9-12 | Algebra I | | Computer programming; read and write small programs in Java Lab supply fee |
| Internetworking Technologies I (A) | 82123 | 10-12 | <i>Recommended</i> – Networking & Comp Sci I | COMPTIA Network + \$\$\$ (P) | Prepares students to install, operate, and trouble-shoot a home or small business enterprise branch network Lab supply fee |
| Internetworking Technologies II (A) | 85123 | 11-12 | Internetworking Tech I | CompTIA Server + Cisco CCNA \$\$\$\$ P | Prepares students to install, operate, and trouble-shoot a home or medium-size business enterprise branch network Lab supply fee |
| Program of Study – InfoTech 2 – WEB DEVELOPMENT | | | | | |
| Computer Science I K (1 LOTE Credit*) | 26513 | 9-12 | Algebra I | | Computer programming; read and write small programs in Java |
| Web Design | 26403 | 9-12 | NONE | Adobe Dreamweaver \$ NOCTI Web Design (P) | Students will learn how to design, create, & Maintain web pages including campus pages on the district website |
| Web Game Development (A) | 24503 | 10-12 | Web Design | | Advanced web page concepts & applications including JavaScript, Perl or MySQL |
| Project-based Research in Web Development (A) | 83133 | 11-12 | Web Game Development | | Supervised research study/project-based class |

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MANUFACTURING

Programs of Study Business & Industry Endorsement



MANUF 1 MANUFACTURING

| |
|--|
| 9th Grade Principles of Manufacturing (1) |
| 10th Grade Diversified Manufacturing I (1) |
| 11th Grade *Diversified Manufacturing II (1) OR *Precision Metal Manufacturing I (2) |
| 12th Grade *Practicum in Manufacturing (2) OR *Precision Metal Manufacturing II (2) |
| Certifications OSHA 10-hr **NCCER CORE **MasterCAM Professional Level Certification |
| Careers Mechanical Engineering Technician (\$57K) Production & Operating Technician (53K) CNC Machine Operator (\$39K) CNC Machine Programmer (\$63K) |

MANUF 2 WELDING

| |
|---|
| 9th Grade Principles of Manufacturing (1) |
| 10th Grade Welding I (2) |
| 11th Grade *Welding II (2) |
| 12th Grade *Practicum in Manufacturing (2) |
| Certifications OSHA 10-hr **NCCER CORE **AWS D1.1 (Structural Welding) **API Welding |
| Careers Welder, Cutter, Solderer, and Brazer (\$41k+) |

MANUF 3 ROBOTICS

| |
|---|
| 9th Grade Principles of Applied Engineering (1) OR Principles of Manufacturing (1) |
| 10th Grade Robotics I (1) |
| 11th Grade *Robotics II K (1-math) |
| 12th Grade *Practicum in Manufacturing (2) |
| Certifications **FANUC Robot Operator Level 1 |
| Careers Electro-Mechanical Assembler (\$30K) Electro-Mechanical Technician (\$57K) Industrial Machinery Mechanic(\$50K) |

MANUFACTURING

Note: Principles of Manufacturing (1 credit) taken in 8th Grade may be used to fulfill Endorsement requirements for both Programs of Study

| Program of Study – Manuf 1 – MANUFACTURING TECHNOLOGY | | | | | |
|--|----------|----------------|--|---|---|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Principles of Manufacturing | 82023 | 8-11 | NONE | | Students will use hand tools, power tools, machinery, computer hardware & software applications to design and complete projects Lab supply fee |
| Diversified Manufacturing I | 82343 | 9-12 | Prin of Manufacturing | OSHA 10-hour | Application, design, production and assessment of products, services, and systems in manufacturing; mass production process Lab supply fee |
| Diversified Manufacturing II (A) | 82353 | 10-12 | Diversified Manufacturing I | MasterCAM Professional \$\$\$ (P) | Advanced skills related to the manufacturing industry Lab supply fee |
| Precision Metal Manufacturing I (2 credits) (A) | 82333 | 11-12 | Diversified Manufacturing I | | Provides necessary skills in precision machining, may also address a variety of materials such as plastics, ceramics, and wood Lab supply fee |
| Precision Metal Manufacturing II (2 credits) (A) | 82383 | 12 | Precision Metal Manufacturing I | MasterCAM Professional \$\$\$ (P) | Provides necessary skills for employment in precision machining & a real-world foundation for any engineering discipline Lab supply fee |
| Practicum in Manufacturing (2 credits) (A) | 83323 | 12 | Diversified Manuf I, Precision Metal Manuf I, Robotics I <u>or</u> Welding I | | Students are required to work 10 hours per week at an approved training site Lab supply fee |
| Program of Study – Manuf 2 - WELDING | | | | | |
| Principles of Manufacturing | 82023 | 8-11 | NONE | | Students will use hand tools, power tools, machinery, computer hardware & software applications to design and complete projects Lab supply fee |
| Welding I (2 credits) | 95723 | 9-12 | <i>Recommended</i> – Prin of Manuf <u>or</u> Ag Mechanics & Metal Tech | OSHA 10-Hour AWS D1.1 \$\$ (P) | Entry-level skills in welding trades; hand & power tools, welding on various types of metals, reading blueprints, metal characteristics, equipment set-up Lab supply fee |
| Welding II (2 credits) (A) | 95743 | 10-12 | Welding I | Additional AWS API Welding \$\$ (P) | Training for employment with advanced skills in Welding Lab supply fee |
| Practicum in Manufacturing (2 credits) (A) | 83323 | 12 | Welding I, Diversified Manuf I, Precision Metal Manuf I, <u>or</u> Robotics I | | Students are required to work 10 hours per week at an approved training site Lab supply fee |
| Program of Study – MANUF 3- ROBOTICS | | | | | |
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Principles of Applied Engineering | 84543 | 7-10 | None | | Provides overview of STEM field; computer graphics, modeling & presentation using a variety of computer hardware and software applications; explore various fields of engineering Lab supply fee |
| Principles of Manufacturing | 82023 | 8-11 | NONE | | Students will use hand tools, power tools, machinery, computer hardware & software applications to design and complete projects Lab supply fee |
| Robotics I | 84653 | 9-12 | Prin of Applied Engineering <u>or</u> Prin of Manufacturing | | Design & build prototypes or use simulation software to test designs Lab supply fee |
| Robotics II K (1 Math credit) (A) | 84693 | 10-12 | Robotics I | FANUC Robot Operator 1 \$\$ (P) | Artificial intelligence and programming in the robotic & automation industry Lab supply fee |
| Practicum in Manufacturing (2 credits) (A) | 83323 | 12 | Robotics, I, Diversified Manuf I, Precision Metal Manuf I, <u>or</u> Welding I | | Students are required to work 10 hours per week at an approved training site Lab supply fee |

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TRANSPORTATION, DISTRIBUTION, & LOGISTICS

Programs of Study

Business & Industry Endorsement



TRANS 1 AUTOMOTIVE TECHNICIAN

| |
|---|
| 9th Grade Automotive Basics (1) |
| 10th Grade Automotive Technology I (2) |
| 11th Grade * Automotive Technology II (2) |
| 12th Grade *Practicum in Transportation Systems (3) |
| Certifications Safety & Pollution Prevention (S/P2) ** Automotive Service Excellence Entry Level (ASE) |
| Careers Automotive Service Technician/Mechanic (\$39K) |

*Meets Advanced Course Requirement for B&I Endorsement
**Meets Requirement to Earn Performance Acknowledgment

For more information, see your counselor, CTE teachers, or <https://tinyurl.com/CTECFISD>.



TRANSPORTATION

| Program of Study – Trans 1 – AUTOMOTIVE TECHNICIAN | | | | | |
|---|----------|----------------|-------------------------|---|--|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Automotive Basics | 93943 | 9-12 | NONE | Safety & Pollution Prevention (S/P2) | Basic repair, maintenance and servicing of vehicle systems Lab supply fee |
| Automotive Technology I (2 credits) | 93953 | 10-12 | NONE | Safety & Pollution Prevention (S/P2) Multiple entry level Automotive Service Excellence (ASE) certs \$\$ (P) | Repair, maintenance, diagnosis of vehicle systems; training for entry-level employment in the automotive technician career field Lab supply fee |
| Automotive Technology II (2 credits) (A) | 93963 | 11-12 | Automotive Technology I | Safety & Pollution Prevention (S/P2) Multiple entry level Automotive Service Excellence (ASE) certs \$\$ (P) | Specific training for employment in the automotive technician career field Lab supply fee |
| Practicum in Transportation Systems (3 credits) (A) | 93813 | 11-12 | Automotive Technology I | Safety & Pollution Prevention (S/P2) Multiple entry level Automotive Service Excellence (ASE) certs \$\$ (P) | Required to work 10 hours per week at an approved training site |

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PUBLIC SERVICES



*Check out these
YouTube videos to
see the real
opportunities offered
here in CFISD for this
endorsement area!*

Areas of study that relate to possible careers:

https://www.youtube.com/results?search_query=cfisd+cte

| Education (p. 42-43) | Health Science (p. 44-45) | Human Services (p. 46-47) | Military or Public Safety/Security |
|------------------------------------|------------------------------------|------------------------------|---|
| Teaching | Medical * | Cosmetology | AFJROTC (Air Force Junior Reserve Officer Training Corps) |
| Child Guidance (Early Learning) | EMT (Emergency Medical Technician) | | |
| Guidance Counseling | Nursing * | | |
| Social Work | CNA (Certified Nursing Aide) | | |
| Education Administrator | Pharmacy Tech | | |

***Students interested in these careers beyond an Associate’s Degree (2-Year) program may also consider an additional STEM- Option 4 - Science endorsement**

Students may earn a **Public Services endorsement** by selecting and completing the requirements from among these **2** options:

➤ **Option 1: CTE**

Students earn 4 credits by taking at least two (2) courses in the same career cluster in one of the following areas with at least one (1) advanced course (3rd year or higher course in the sequence)

- Education and Training
- Health Science
- Human Services

OR*

*Students earn four (4) or more credits by taking at least three (3) courses in a TEA-approved Program of Study with at least one (1) advanced course (3rd year or higher in the sequence)

For each Career Cluster area above, there are specific **Programs of Study** available. These can be found on each Career Cluster chart in the pages that follow.

➤ **Option 2: AFJROTC** – 4 Air Force JROTC courses for 4 credits

| Career Interest | 9 th Grade | 10 th Grade | 11 th Grade | 12 th Grade |
|--|-----------------------|------------------------|------------------------|------------------------|
| Military, Law, Public Safety, Security | AF JROTC I | AF JROTC II | AF JROTC III | AF JROTC IV |

Glossary - Public Services Careers

Audiologist – Combine science, communication, and special electronic equipment to help people with hearing impairments.

Cardiologist – Doctors who specialize in the care and treatment of one our most important organs: the heart.

Chiropractor – Offer hands on care to patients with stiff joints, sore backs, and other aches and pains.

Cosmetologist – Hairstyling, makeup, skin care, and nail care – it is the art and science of beauty.

Dental Hygienist – Cleaning teeth and teaching patients dental health.

Enlisted member of the Armed Forces – From infantry soldiers to ship cooks to supply technicians – the military offers a wide range of opportunities.

ESL Teacher – Teach English to newcomers to our country, or travel the world and teach it to people in other countries.

Family and Consumer Scientist – Experts in nutrition, hygiene, household finances, and all other things that go into running a good home.

Family Physician – A medical generalist who cares for patients from infancy to old age.

Instructional Coordinator – Work behind the scenes to improve the quality of classroom education.

Kinesiologist – Use your knowledge of human movement to prepare exercise, help people rehab injuries, and design more ergonomic workplaces.

Librarian – Become the original information expert.

Licensed Practical Nurse – Taking temperatures, applying bandages and many more tasks required in caring for sick or hurt people.

Medical Imaging Tech – Use x-rays, CT scanners, MRI equipment, and other imaging tools to help diagnose medical problems.

Pharmacist – Use your knowledge of chemistry, biology, and medicine to make sure people get the right drugs and medicine.

Principal – Managing a school to ensure that students get a good education.

Social Worker – Helping people with problems like alcoholism, child care and poverty.

Sports Psychology Consultant – Helping athletes mentally prepare for competition.



EDUCATION & TRAINING

Programs of Study Public Services Endorsement



E&T 1

TEACHING & TRAINING

| |
|---|
| 9th Grade Principles of Human Services (1-7th/8th grade) or Principles of Education & Training (1) |
| 10th Grade Communication and Technology in Education (1) or Child Development (1) |
| 11th Grade *Teacher Prep I (Instructional Practices) (2-student teaching) |
| 12th Grade *Teacher Prep II (Practicum in Education & Training) (2-student teaching) |
| Certifications CFISD Letter of Intent to Interview **Educational Aide I |
| Careers CFISD starting salary \$58,500 (2021-2022) Statewide Averages: Elementary Teachers (\$58K) Secondary Teachers (\$58K) Special Ed Teachers (\$58K) |

E&T 2

EARLY LEARNING

| |
|---|
| 9th Grade Principles of Human Services (1-7th/8th grade) or Principles of Education & Training (1) |
| 10th Grade Child Development Associate Foundations (1) or Child Development (1) |
| 11th Grade *Child Guidance (2-preschool lab) |
| 12th Grade *Practicum in Early Learning (2-preschool lab) |
| Certifications AHA Heartsaver CPR/First Aid CFISD Letter of Intent to Interview **Child Development Associate or **Educational Aide I |
| Careers CFISD starting salary \$58,500 (2021-2022) Statewide Averages: Preschool Teachers (\$42K) Kindergarten Teachers (\$58K) Elementary Teachers (\$58K) |



*Meets Advanced Course Requirement for Public Services Endorsement
**Meets Requirement to Earn Performance Acknowledgment

For more information, see your counselor, CTE teachers, or <https://tinyurl.com/CTECFISD>.



EDUCATION & TRAINING

Note: Principles of Human Services (1 credit) taken in middle school may be used to fulfill Endorsement requirements for both Programs of Study

| Program of Study – E & T 1 – TEACHING & TRAINING | | | | | |
|--|----------|----------------|--|---|---|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Principles of Education & Training | 86423 | 9-11 | NONE | | Explore careers such as teaching, coaching, paraprofessional jobs, administrative, counseling, psychologist, social worker, & corporate trainer Lab supply fee |
| Communications & Technology in Education | 85253 | 10-12 | <i>Recommended</i> – Prin of Educ & Training or Prin of Human Services | | Professional, ethical, & legal responsibilities in teaching related to educational technology as well as laws regarding classroom technology use Lab supply fee |
| Child Development | 85233 | 10-12 | <i>Recommended</i> – Prin of Educ & Training or Prin of Human Services | | Child growth from prenatal through school-age children Lab supply fee |
| Teacher Prep I (2 credits) Ⓐ | 96423 | 11-12 | <i>Recommended</i> – Prin of Educ & Training or Prin of Human Svs AND Comm & Tech in Educ or Child Dev | CFISD Letter of Intent to Interview (Seniors) | Work with children at a designated elementary school under the supervision of a teacher Background check required; Lab supply fee |
| Teacher Prep II (2 credits) Ⓐ | 96223 | 12 | Teacher Prep I | Educational Aide I \$\$\$ Ⓟ CFISD Letter of Intent to Interview | Students assigned to an elementary and/or secondary “cooperating” school environment Background check required; Lab supply fee |
| Program of Study – E & T 2 – EARLY LEARNING | | | | | |
| Principles of Education & Training | 86423 | 9-11 | NONE | | Explore careers such as teaching, coaching, paraprofessional jobs, administrative, counseling, psychologist, social worker, & corporate trainer Lab supply fee |
| Child Development Associate (CDA) Foundations | 85243 | 10-12 | <i>Recommended</i> –Prin of Human Services or Prin of Educ & Training | | Applying CDA Competency Standards in early childhood environments & using these to help young children move with success from one developmental stage to the next. Students may need to work some hours in an approved outside licensed child care facility in addition to the hours worked in their high school’s preschool lab setting |
| Child Development | 85233 | 10-12 | <i>Recommended</i> –Prin of Human Services or Prin of Educ & Training | | Child growth from prenatal through school-age children Lab supply fee |
| Child Guidance (2 credits) Ⓐ | 95923 | 11-12 | <i>Recommended</i> –Prin of Human Services or Prin of Educ & Training AND Child Dev Assoc Found or Child Development | AHA Heartsaver CPR/First Aid CFISD Letter of Intent to Interview (Srs.) | Work with 3- & 4-year-old children in a preschool educational environment in the high school Background check required; Lab supply fee |
| Practicum in Early Learning (2 credits) Ⓐ | 96133 | 12 | Child Guidance | Child Development Associate(CDA) or Early Childhood Educ Cert \$\$\$\$ Ⓟ CFISD Letter of Intent to Interview | Advanced skills in preschool program; students expected to produce a professional portfolio Background check required; Lab supply fee |

Related elective that may be taken in addition to any program of study in this field:

| | | | | | |
|--|-------|-------|---|--|--|
| Lifetime Nutrition & Wellness (1/2 credit) | 85720 | 10-12 | <i>Recommended</i> –Prin of Human Svs or Prin of Educ & Training | | Nutrition, digestion, calories/metabolism, diet-related diseases, food allergies, safety and sanitation in food preparation |
| Interpersonal Studies (1/2 credit) | 86020 | 10-12 | <i>Recommended</i> –Prin of Human Svs or Prin of Educ & Training | | Study of how relationships significantly affect one’s quality of life; learn strategies that promote physical, emotional, intellectual and social development; beneficial for those interested in the areas of counseling & mental health as well as social work |

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HEALTH SCIENCE

Programs of Study

Public Services Endorsement



HLTHSCI 1 HEALTHCARE DIAGNOSTICS

| |
|---|
| 9th Grade Principles of Health Science (1) |
| 10th Grade Medical Terminology (1) |
| 11th Grade *Health Science Theory/Clinicals(2) or *Anatomy & Physiology K (1-science) |
| 12th Grade *Anatomy & Physiology K (1-science) or *Pathophysiology K (1-science) or *Practicum in Health Science: work study (2) |
| Certifications AHA Heartsaver CPR/First Aid AHA Basic Life Support OSHA 10-hr **Certified EKG Technician |
| Careers Diag Med Sonographer (\$70K) Nuclear Med Tech (\$76K) Radiologic Tech (\$55K) Magnetic Resonance Imaging Tech (\$69K) |

HLTHSCI 2 HEALTHCARE THERAPEUTIC

| |
|---|
| 9th Grade Principles of Health Science (1) |
| 10th Grade Medical Terminology (1) |
| 11th Grade *Anatomy & Physiology K (1-science) and *Pathophysiology K (1-science) OR *Health Science Theory/Clinicals(2) |
| 12th Grade *Practicum in Health Science: certification (2) |
| Certifications AHA Heartsaver CPR/First Aid AHA Basic Life Support OSHA 10-hr **Certified EKG Technician **Cert Nursing Assistant or ** EMT or **Dental Assistant or **Pharmacy Technician |
| Careers Medical Assistants (\$30K) EMT (\$40K) Surgical Tech (\$46K) LVN-Licensed Voc Nurse (\$45K) RN-Registered Nurse (\$68K) Pharmacy Technician (\$37K) Pharmacist (\$125K) Physician & Surgeon (\$213K) |

HEALTH SCIENCE

| Program of Study – HlthSci 1 – HEALTHCARE DIAGNOSTICS | | | | | |
|--|----------------|----------------|--|--|---|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Principles of Health Science (1 Health credit) | 94423 | 9-11 | NONE | AHA Heartsaver CPR/First Aid | Designed for students interested in medical and associated health careers. Overview of the therapeutic, diagnostic, environmental, & informational systems of the health care industry Lab supply fee |
| Medical Terminology | 94323 | 10-12 | <i>Recommended</i> – Prin of Health Science | | Develop a working knowledge of the language of medicine Lab supply fee |
| Health Science Theory/Clinicals (2 credits) (A) | 94533 | 11-12 | Prin of Health Sci, AND Medical Terminology, AND Biology | AHA Basic Life Support CPR OSHA 10-Hour Certified EKG Tech \$\$\$\$ (P) | CPR, standard precautions, ethics of the medical field. Practice entry-level occupational skills in a clinical setting (hospitals or other medical-related agencies.) Lab supply fee |
| Anatomy & Physiology K (1 Science credit) (A) | 34213 | 11-12 | Biology & Chemistry; <i>Recommended</i> – Prin of Health Sci AND Med Term | | Understanding human body structure & function; lab-oriented & teaches proper dissection techniques Recommended for students pursuing an education in the medical field |
| Pathophysiology K (1 Science credit) (A) | 33843 | 11-12 | Biology & Chemistry; <i>Recommended</i> – Prin of Health Sci , Med Term AND Anatomy & Physiology K (or concurrent with A & P) | | Disease process and how humans are affected; emphasis is placed on prevention and treatment of disease |
| Practicum in Health Science Work Study (2 credits) (A) | 94723 94623 | 12 | Prin of Health Sci AND 1 health science related advanced course | <i>See the Healthcare Therapeutic program of study for additional certifications in the Health Science field</i> | Allows students to select & pursue a specialization & skills needed for specific certifications & licensure. Students are required to work 10 hours per week at an approved training site. Lab supply fee |
| Program of Study – HlthSci 2 – HEALTHCARE THERAPEUTIC | | | | | |
| Principles of Health Science (1 Health credit) | 94423 | 9-11 | <i>See information above</i> | | |
| Medical Terminology | 94323 | 10-12 | <i>See information above</i> | | |
| Anatomy & Physiology K (1 Science credit) (A) | 34213 | 11-12 | <i>See information above</i> | | |
| Pathophysiology K (1 Science credit) (A) | 33843 | 11-12 | <i>See information above</i> | | |
| Health Science Theory/Clinicals (2 credits) (A) | 94533 | 10-12 | <i>See information above</i> | | |
| Practicum in Health Science Certification (2 credits) (A) | 94723 94623 | 12 | <i>See information above</i> Students gain knowledge & develop advanced clinical skills needed for a specific certification or licensure in a health career such as: Pharmacy Technician, Certified Nursing Aide (CNA), Dental Assistant, or Emergency Medical Technician (EMT). CNA & EMT also require enrollment at Lone Star College. | | |

Related elective that may be taken *in addition to* any Program of Study in this field:

| | | | | | |
|--|-------|-------|--|--|---|
| Forensic Science K (1 Science credit) (A) | 33813 | 11-12 | Biology AND Chem <i>Recommended</i> – Prin of Health Sci AND Med Term | | Enhances reading, writing, computing, communication & reasoning skills & applies them to the business environment |
|--|-------|-------|--|--|---|

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HUMAN SERVICES

Programs of Study

Public Services Endorsement



HUMSVS 1 COSMETOLOGY

| |
|---|
| <p>9th Grade</p> <p>Principles of Human Services(1) 7th/8th grade only Principles of Cosmetology Design & Color Theory (1)</p> |
| <p>10th Grade</p> <p>Introduction to Cosmetology (1)</p> |
| <p>11th Grade</p> <p>Cosmetology I (2)</p> |
| <p>12th Grade</p> <p>*Cosmetology II (3)</p> |
| <p>Certifications</p> <p>**Cosmetology Operators License</p> |
| <p>Careers</p> <p>Hairdresser, Hairstylist, or Cosmetologist (\$27k+)</p> |

HUMAN SERVICES

NOTE: Principles of Human Services (1 credit) taken in middle school may be used to fulfill Endorsement requirements

| Program of Study – HumSvs 1 – COSMETOLOGY | | | | | |
|---|----------|--|--------------------------------|--|--|
| Course Title | Course # | Grade Level(s) | Prerequisites | Certification (Cert Fee \$) | Description |
| Principles of Cosmetology Design & Color Theory | 95233 | 9-10 <i>(may be taken in 11th or 12th grade if concurrent with COS I or Cos II)</i> | NONE | \$25 Permit fee is required and MUST be paid within 7 days of enrollment to remain in the class if this is a student's first course in Cosmetology \$ | Exploratory course in cosmetology <i>Good attendance is necessary as students earn clock hours toward state licensing requirement of 1000 hours</i> Lab kit/uniform fee |
| Introduction to Cosmetology | 94023 | 10 <i>(may be taken in 11th grade if concurrent with COS I)</i> | NONE | \$25 Permit fee is required and MUST be paid within 7 days of enrollment to remain in the class if this is a student's first course in Cosmetology \$ | <i>This course is required for students who are interest in a career in Cosmetology; it also assists students who have an interest but are unsure this is the career path they wish to follow.</i> Hair styling/coloring, manicures, skin care, make up, and other aspects of the personal care service industry <i>Good attendance is necessary as students earn clock hours toward state licensing requirement of 1000 hours</i> Lab kit/uniform fee |
| Cosmetology I (2 credits) | 95243 | 11 | Intro to Cosmo (or concurrent) | | 2-hour block instructional lab course; integration of knowledge & skills designed to provide job-specific training for employment in cosmetology careers Attendance is critical to the earning of the monitored 1000 clock hours required to qualify for state licensing exam Lab kit/uniform fee |
| Cosmetology II (3 credits) (A) | 95263 | 12 | Cosmetology I | Cosmetology Operator's License \$\$\$\$ (P) | Provides the final advanced training needed for employment & to fulfill the 1000 clock hours required to qualify for state licensing exam Lab kit/uniform fee |

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Arts & Humanities

Areas of study that relate to possible careers:

| Art | Dance | Music | Theatre |
|---------------------|------------|--------------------------|--------------------|
| Drawing & Painting | Dance | Band or Band/Color Guard | Theatre Arts |
| Digital Art & Media | Dance Team | Choir | Technical Theatre |
| Ceramics/Sculpture | | Orchestra | Theatre Production |
| Photography | | | |

| Social Studies | Languages Other Than English (LOTE)/Foreign Language | |
|-------------------|--|--|
| Political Science | Spanish | Programming Languages (<i>see * below</i>) |
| Law | French | Computer Science Principles AP |
| Psychology | German | Computer Science I K |
| Criminal Justice | Latin | Computer Science II K |
| | ASL – Cy-Ridge & Langham only | Computer Science III K |

***Colleges and universities set their own entrance requirements. Consequently, a student should verify admission requirements with the specific college/university.**

Students may earn an **Arts & Humanities endorsement** by selecting and completing the requirements from among these **3** options:

- **Option I: Social Studies** – Students earn five (5) social studies credits
 - Note:** *This includes the 3 credits of Social Studies that are required for graduation
 - *Students may **NOT** earn credit for both World Geography & Human Geography AP

| Course Title | Course # | Grade Level(s) | Description |
|--|----------------|----------------|---|
| World Geography | | 9-10 | Analysis of the relationships between people, places, and environments |
| Human Geography AP | | 9-12 | Provides framework to understand how the world is organized and how events in one region can have a major impact on events in other regions |
| World History | | 9-10 | Study of significant people, events, and issues in world history |
| US History | | 11 | Prerequisite – World Geography or World History; required course for graduation |
| Government (1/2 credit) | | 12 | Prerequisite – US History; required course for graduation |
| Personal Financial Literacy Plus Economics (On-level) OR Economics Free Enterprise System (K-level) OR Macro Economics AP (1/2 credit) | | 12 | Prerequisite – US History; required course for graduation |
| ELECTIVES | | | |
| African-American Studies | 14213 | 10-12 | Focuses on the historical and cultural contributions of African Americans |
| Mexican-American Studies | 14113 | 10-12 | Focuses on the historical and cultural contributions of Mexican Americans |
| Psychology or Psychology AP (1/2 credit) | 13620 13650 | 11-12 | Understanding the concept of human behavior, theories of personality, human growth & development |
| Sociology (1/2 credit) | 13420 | 11-12 | Understanding of self and the society in which one lives |
| Street Law (1/2 – 1 credit) | 13720 13723 | 11-12 | Court structure, criminal procedure, civil rights & other legal issues; criminal law one semester & civil law the other semester |
| World Area Studies K or H (1/2- 1 credit) | 14010 14013 | 11-12 | Study of geography, culture, history, politics, and economic development of selected regions |
| European History AP | 15553 | 11-12 | Prerequisite – US History or concurrent enrollment European history from 1450 to the present |
| Personal Financial Literacy (1/2 credit) | 10400 | 10-12 | Analyze decision involving earning & spending, saving & investing, credit |

Arts & Humanities

- **Option 2: Languages Other Than English (LOTE)/Foreign Language** - 4 levels of the same foreign language OR
LOTE/Foreign Language Combo – 2 levels in each of 2 different foreign languages (for 4 credits)

(Note: This includes the 2 credits of foreign language that are required for graduation)

- _____ Spanish I (61223), II (61323), III (61523), IIIK (61513), IVK (61613), IV AP (61653), IV AP/Dual (61673),
V K (61713), V AP (61753), V AP/Dual (61783), VI K (61913)
- _____ Spanish I – Native Speakers (61023), II NS (60820), III K NS (60920), IV AP NS (60933)
- _____ French I (62123), II (62223), III K (62413), IV K (62513), IV AP (62553), IV AP/Dual (62523), V K (62613), VI K (62913)
- _____ German I (63223), II (63323), III K (63513), IV K (63613), IV AP (63653)
- _____ Latin I (64123), II (64223), III K (64313), IV K (64413), IV AP (64453), V K (64513)
- _____ **Computer Science Principles AP (26423)
- _____ **Computer Science I K (26513), II K (26583), III K (26523)

****Colleges and universities set their own entrance requirements. Consequently, a student should verify admission requirements with the specific college/university**

- **Option 3: Fine Arts** - 4 sequential courses in the same fine arts area (for 4 credits) OR
Fine Arts Combo - 2 courses in each of 2 different fine arts areas (for 4 credits)

(Note: This includes the 1 credit of Fine Arts that is required for graduation)

Dance

- _____ Dance I (45273), II (45283), III (45323), IV (45423)
_____ Dance Team I (45113), II (45253), III (45313), IV (45413)

Art

- _____ Drawing & Painting I (70123), II (70523), III (70923), IV (72523), AP Art Drawing (71453),
AP Art 2-D Design (71353)
_____ Ceramics/Sculpture I (70223), II (70623), III (71023), IV (72533), AP Art 3-D Design (71553)
_____ Photography I (70323), II (70723), III (71123), IV (72623), AP Art Photography (71753)
_____ Digital Art & Media I (70113), II (70423), III (71223), IV (71233), AP Art Digital Art & Media (71853)
_____ AP Art History (71653)

Music

- _____ Band I (75113), II (75213), III (75313), IV (75413)
_____ Band I/Color Guard (76713), II/CG (76723), III/CG (76733), IV/CG (76743)
_____ Choir I (78153), II (78253), III (78353), IV (78453)
_____ Orchestra I (77143), II (77243), III (77343), IV (77443)
_____ AP Music Theory (79153)

Theatre

- _____ Theatre Arts I (74123), II (74223), III (74323), IV (74423)
_____ Technical Theatre I (73923), II (74023), III (74033), IV (74043)
_____ Theatre Production I (74723), II (74823), III (74923), IV (75023)

Glossary - Arts and Humanities Careers

Actor – Actors express ideas and portray characters in theatre, film, television and other performing arts media. Actors often teach in schools.

Archaeologist – Uncovering the past through its tools, buildings, artworks, and culture

Art Dealer – Hired by art galleries to bring in various types of pieces, such as paintings and sculptures, from artists

Arts Administrator – Works with schools, universities, professional organizations and non-profits to manage and lead Fine Arts organizations

Choreographer – A person who composes the sequence of steps and movements for dance performances and productions including teaching dance in schools

Civil Litigator – Standing up for clients' rights in non-criminal cases like contract disputes, personal injuries and divorces

Composer – Creating original music for everything from classical symphonies to movie soundtracks and TV commercials

Corporate/Commercial Lawyer – Looking after the legal side of business operations and transactions

Correctional Officer – Maintaining order and security and helping inmates choose a better life.

Court Reporter – Play a role in the justice process by ensuring that proceedings are accurately recorded

Curator – Assembling, cataloguing, managing and presenting/displaying artistic and cultural collections at museums and galleries

Dancer – Dancers express ideas and emotions through various styles such as ballet, hip-hop, jazz, lyrical, modern and tap. Dancers often teach in schools.

Federal Agent – Investigating crimes and helping to preserve national security

Graphic Designer – Create visual concepts for the overall layout and production design for advertisements, brochures, magazines, and corporate reports

Historian – Studying the past and bringing it to life in schools, museums and historical sites

Illustrator – Produce still drawings for use in advertisements, books, magazines, packaging, greeting cards and newspapers

Interpreter – Provide spoken language or sign language interpretations in courtrooms, business conferences, political meetings, and anywhere else people from different countries and cultures come together

Judge – Guardian of justice and the legal system

Lawyer – There are many types of law, but they all involve research, writing, and hard work.

Musician – Musicians sing or play instruments to entertain audiences through a variety of venues such as symphony orchestra or chorus, solo artist, rock or jazz, and classroom music teacher

Playwright – A person who writes plays for the stage

Sociologist – Studying how individuals are shaped by the groups they are a part of

Teacher – Many Fine Arts professionals teach music, dance, theatre, and visual arts in schools and universities

Technical Director – Individual within a theatrical company, film/television studio who possesses the highest level of knowledge and skill with a specific technical field (see also Theatrical Designer)

Theatrical Designer – Person who is responsible for the creation of the costumes, hair/makeup, lighting, scenery/ props and/or sound within a theatrical, film or television production

Translator – Translating books, contracts, and other written documents from one language to another without losing the meaning or style

Visual Artist – Works across a variety of mediums - paper, metal, clay, photographic film and wood – usually specializing in a single Fine Arts sub-category; artists often teach Art in schools and universities

Writer – Fiction, non-fiction, technical writing, advertising, copywriting, web writing – good writers are always needed.

Multidisciplinary Studies

This endorsement provides flexibility for students with a wide range of interests and talents and includes courses from multiple content areas. It is appropriate for careers that span more than one category or that do not completely fit a specific category. Students are allowed to take classes from all the endorsement areas to see what they may be interested in for the future.

| Option 1: Four by Four (4 X 4) | Option 2: AP / Dual Credit |
|---|---|
| <p>Students take 4 courses in each of the four core content areas:</p> <ul style="list-style-type: none"> • 4 English credits including English IV • 4 math credits including Algebra I & Geometry • 4 science credits including Biology + Chemistry and/or Physics (or AP Physics I) • 4 social studies credits including World Geography and/or World History + US History + Government (.5 credit) + PFL Plus or Economics (.5 credit) | <p>Students take 4 Advanced Placement (AP) <u>or</u> 4 Dual Credit courses for 4 credits in English, math, science, social studies, Foreign Language, or fine arts</p> <p style="text-align: center; font-weight: bold; margin: 10px 0;">OR</p> <p>Students take a combination of Advanced Placement (AP) or Dual Credit courses for 4 credits in English, math, science, social studies, Foreign Language, or fine arts</p> |

Completing the 4-Year Plan - Important Reminders

- Endorsement(s)/Electives should be chosen based on student preference and with consideration of anticipated college requirements. **Remember: You will have a chance to modify or change your plan in high school!**

- You have flexibility in determining the course and year of study for the following graduation requirements:
 - World History or World Geography (or Human Geography AP)
 - LOTE/Foreign Language
 - Fine Arts
 - PE
 - Health

- If you have space available in your 4-Year Plan **AFTER** fulfilling your endorsement requirements, you may consider including the following in your plan:
 - Additional courses in any of the 4 core academic areas (English, Math, Science, Social Studies)
 - Additional courses from your endorsement area
 - Other elective courses (**see p. 52**)

- **If pursuing more than one endorsement, begin with your #1 choice and then use any blank spaces for courses that meet the requirements for the additional endorsements (in order of preference). You may discover that you do not have room for the additional endorsements; if so, please remove those from your plan.**

- If you choose a semester course (.5 credit), you must choose another semester course to go with it; place the name of both courses in the same box on your 4-Year Plan worksheet

After completing your 4-Year Plan, check to make sure you have included the following:

- Foundation courses needed for graduation (see the chart on the 4-Year Plan worksheet)
- Endorsement & Option/Program of Study courses
- Course levels for all courses
- 7 credits for each school year
- 2 alternate electives for 9th grade (write these in the blanks provided at the bottom of the 4-Year Plan worksheet)

Additional Courses Available

If you have space available in your 4-Year Plan AFTER fulfilling your endorsement requirements, you may want to consider including:

- ❖ Additional courses in any of the 4 core academic areas (English, Math, Science, Social Studies)
- ❖ Additional courses from your Endorsement area
- ❖ Any of the courses listed below

| Course Title | Course # | Grade Level (s) | Description |
|---|----------------|-----------------|---|
| Professional Communications (.5 credit) | 06020 | 9-12 | Develop effective interpersonal communication skills |
| Touch System Data Entry (Keyboarding) (.5 credit) | 51220 | 9-10 | Develop keyboarding & formatting skills needed for success in the workplace |
| LeadWorthy (.5 credit) | 60220 | 9-12 | Activity-oriented course designed to develop personal responsibility, leadership, and professional skills through explicit social-emotional participatory learning experiences |
| Photojournalism (.5 credit) | 08620 | 9-12 | Introduces the world of photography and journalism; must have your own digital camera |
| Principles of Education & Training | 86423 | 9-11 | Basic knowledge and skills needed for a career in education |
| Lifetime Nutrition & Wellness (.5 credit) | 85720 | 9-11 | 9th graders may enroll after taking Principles of Human Services or Principles of Hospitality & Tourism in middle school Nutrition, digestion, calories/metabolism, diet-related diseases, food allergies, safety & sanitation in food preparation |
| Automotive Basics | 93943 | 9-11 | Basic repair, maintenance and servicing of vehicle systems |
| Business Information Management I | 54623 | 9-12 | Word processing, spreadsheets, multimedia presentations, databases, internet research, & emerging technologies |
| Journalism I | 08123 | 9-12 | Required prerequisite for Adv. Journalism I – Yearbook or Adv. Journalism I - Newspaper Writing, technology, visual, and electronic media are used as tools for learning as students produce effective communications |
| Debate I | 06513 | 9-12 | Required prerequisite for Debate II-IV Study current events and logic while preparing and presenting arguments on a variety of controversial issues; participation in competitive speech and debate events is required |
| Intro to Cosmetology | 94023 | 9-11 | Hair style, manicures, skin care, make up, and other aspects of the personal care service industry |
| Digital Media | 54543 | 9-12 | Design and create multimedia projects using Adobe Photoshop; potential for certification |
| Child Development | 85233 | 10-12 | Child growth from prenatal through school-age children |
| Money Matters | 53913 | 9-12 | Bank record management, credit cards, investing, insurance and budgets |
| Creative & Imaginative Writing (.5 or 1 credit) | 09520 09523 | 10-12 | Develop increased skill, creativity, and versatility as writers |
| ACT/SAT Prep (.5 credit) | 00370 | 11-12 | Prerequisite: Completion of or concurrent enrollment in Algebra II Provides students with strategies for college entrance exams |
| African-American Studies | 14213 | 10-12 | Focus on the historical and cultural contributions of African-Americans |
| Mexican-American Studies | 14113 | 10-12 | Focus on the historical and cultural contributions of Mexican-Americans |
| Psychology (.5 credit) <u>or</u> Psychology AP (.5 credit) | 13620 13650 | 11-12 | Understanding the concept of human behavior, theories of personality, human growth & development |
| Sociology (.5 credit) | 13420 | 11-12 | Understanding of self and the society in which one lives |
| Street Law (.5 credit) <u>or</u> (1 credit) | 13720 13723 | 11-12 | Court structure, criminal procedure, civil rights & other legal issues; criminal law one semester & civil law the other semester |
| World Area Studies K or H (.5) <u>or</u> (1 credit) | 14010 14113 | 11-12 | Study of geography, culture, history, politics, and economic development of selected regions |
| PALs I PALs II | 60023 60123 | 11-12 | Peer Assistance & Leadership program; work as a peer mentor with elementary, middle & high school age youth; effective training in resiliency strategies. Application required |
| College Readiness & Study Skills (.5 credit) | 00340 | 12 | Open to students who plan to attend post-secondary education; designed to help students transition into the post-secondary environment |

CAREER AND TECHNICAL EDUCATION

Students participating in career and technical education (CTE) courses may incur some **additional expense if the course includes constructing projects** to be taken home for personal use. Cost of the personal project will vary, depending upon the type of project, its size, and the materials used. Some CTE courses also include requirements to **purchase tools and/or uniforms** for personal use (such as lab kits for cosmetology and smocks for some health science classes).



Several of the CTE courses include training for industry-standard certifications. While **students pay for the certification exam**, the **training is offered at no cost**. Some of these certifications meet the requirements for a student to earn a Performance Acknowledgment. Certifications that relate to safety (such as CPR and OSHA) are required for all students in the course. There is an opportunity for students to receive a state-funded reimbursement for certification fees if they successfully earn the credential. See your teacher or counselor for more information.

While not a course requirement, if any **student chooses to raise an animal as an ag project**, all animal-project costs are the responsibility of the student. Raising animal projects may require one to two hours per day outside of school hours. See your agriscience teacher for more information.



Students may choose to **participate in extra-curricular contests** related to their coursework. Preparation for contest events may be held outside of school hours, possibly one to two hours per week.

FREQUENTLY ASKED QUESTIONS ABOUT EARNING CERTIFICATIONS WITHIN CTE COURSES

What certifications are available?

Over 60 certifications are available. The certifications are listed on the following pages, next to the course in which the certification prep takes place.

| | | | | |
|-----------------------------|---------|---------------------------------|---|---|
| Architectural Design II (2) | 11 - 12 | Required Architectural Design I | <div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; margin: 0 auto; display: flex; flex-direction: column; justify-content: center; align-items: center;"> Autodesk Revit Autodesk AutoCAD </div> | Students will gain advanced knowledge and skills specific to those needed to enter a career in architecture and construction. Advanced knowledge of the design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for commercial or residential architectural purposes. Lab supply fee. |
|-----------------------------|---------|---------------------------------|---|---|

Why should I get certified?

Being able to add certifications to your resume allows you to stand out against others in whatever comes next for you. That might be a job or college application. Even if your next step ends up being in an area unrelated to your certification, having the credential on your resume proves to prospective employers and/or institutions that you are trainable.

While some of the certifications are free to students, some have a cost. Is it worth the cost?

While there is a cost for some of the certifications, in almost every case, it is at a fraction of the cost for anyone wishing to earn that certification outside of doing so in their CTE course. The largest savings is related to there being little or no cost for the training and practice certification exams. Whereas someone may pay \$300 to \$500 for software training and exam practice, CFISD CTE students pay nothing. Those same students then do pay for a certification exam voucher, but in most cases it is at a reduced cost. Likewise, some pay as much as \$15,000 to go to cosmetology school, yet CFISD CTE students pay as little as \$400 from start to finish to leave high school with their Cosmetology Operator License.

Want more information?

See your CTE teacher or counselor, or visit the CFISD CTE website at <https://www.cfisd.net/CTE>.



MIDDLE SCHOOL COURSES FOR HIGH SCHOOL CREDIT

| Course | Credit | Endorsement | Option # | Graduation Requirement | Notes |
|--|----------|---------------------|--|------------------------|---|
| Algebra I | 1.0 | STEM | 3-Math | Yes | See note below * |
| Art I | 1.0 | Arts & Humanities | 3-Fine Arts/ Combo | Fine Arts | On-level credit; WILL be included in the high school GPA calculation |
| French I & II | 1.0 each | Arts & Humanities | 2-LOTE/LOTE combo | Yes | Must earn 2 credits in the same Foreign Language |
| Spanish I & II | 1.0 each | Arts & Humanities | 2-LOTE/LOTE Combo | Yes | Must earn 2 credits in the same Foreign Language |
| Spanish for Native Speakers I, II, & III K | 1.0 each | Arts & Humanities | 2-LOTE/LOTE Combo | Yes | Must earn 2 credits in the same Foreign Language |
| Professional Communications | .5 | Business & Industry | 1-Arts, A/V, Technology | | |
| Intermediate Speech | .5 | | | | Professional Communications credit earned if full year course completed |
| Touch System Data Entry (Keyboarding) | .5 | Business & Industry | 1-Business, Marketing & Finance | | |
| Business Information Management I (BIM I) | 1.0 | Business & Industry | 1-Business Marketing & Finance 1-Information Technology 3- Combo | | |
| Principles of Applied Engineering | 1.0 | STEM | 2-CTE/Engineering 5-Combo | | |
| Principles of Architecture | 1.0 | Business & Industry | 1-Architecture & Construction | | |
| Principles of Business, Marketing, & Finance | 1.0 | Business & Industry | 1-Business, Marketing & Finance | | |
| Principles of Hospitality & Tourism | 1.0 | Business & Industry | 1-Hospitality & Tourism | | |
| Principles of Human Services | 1.0 | Public Services | 1-Human Services 1-Education & Training | | |
| Principles of Information Technology | 1.0 | Business & Industry | 1-Information Technology | | |
| Principles of Manufacturing | 1.0 | Business & Industry | 1-Manufacturing 1-Architecture & Construction | | |

NOTE: All of these courses, which carry on-level weight, will count for credit only and shall be excluded in the high school GPA calculation.
Art I is an exception – this on-level class WILL be included in the high school GPA calculation.

* Algebra I taken at any time will carry on-level grade points. If a student takes Algebra in 8th grade, the Algebra I course will be included in the student's high school GPA calculation only if he/she does NOT take 4 math courses in high school.

If a student successfully completes a high school K-level course (such as Geometry K or Spanish for Native Speakers III K), they will earn both credit and appropriate grade points that will be included in the high school GPA.

◆ Cypress-Fairbanks ISD ◆
 High School Four-Year Plan – Foundation High School Program + Endorsement
 Class of 2018 and Beyond

Name: _____ ID # _____ Current Campus: _____ Next Year Campus: _____

The Four-Year Plan is intended to give you and your parent(s) a guide to use as you progress through high school. You will want to review the plan each year to make sure you are taking the required courses for graduation. Your course selection should support your aptitude and interests and align with the career you wish to pursue. **You will be given opportunities to review and/or modify your plan in high school.**

CAREER GOAL - _____

| Graduation Plans for the class of 2018 and Beyond | | | |
|---|-----------|-----------------------------|------------------------------------|
| Discipline | Credits | Foundation + Endorsement(s) | Distinquished Level of Achievement |
| English | 4 | | Credits |
| PACE (1/2) | 1/2 | | |
| Math | 3 | 1 | Incl. Algebra II |
| Science | 3 | 1 | |
| Social Studies | 3 | | |
| LOTE/Foreign Language | 2 | | |
| Fine Arts | 1 | | |
| PE (1) and Health (1/2) | 1 1/2 | | |
| Electives/Endorsement Courses | 4 | 2 | |
| Total Credits for Graduation | 22 | 26 | 26 |

| ENDORSEMENT | OPTION | PROGRAM OF STUDY |
|-------------|--------|------------------|
| | | |
| | | |
| | | |
| | | |
| | | |

Directions: Courses required at a specific grade level are noted in the chart below. Students have flexibility in determining the year of study for the following graduation requirements: World History or World Geography, Foreign Language, Fine Arts, PE and Health.

| Pds | High School credits earned in Middle School | 9 th Grade | 10 th Grade | 11 th Grade | 12 th Grade |
|-----|---|-------------------------------|--------------------------------|----------------------------------|---|
| 1 | | English I _____ (Level) _____ | English II _____ (Level) _____ | English III _____ (Level) _____ | English IV: _____ (Level) _____ |
| 2 | | Math: _____ (Level) _____ | Math: _____ (Level) _____ | Math: _____ (Level) _____ | Math: _____ (Level) _____ |
| 3 | | Biology _____ (Level) _____ | Science: _____ (Level) _____ | Science: _____ (Level) _____ | Science: _____ (Level) _____ |
| 4 | | (Course #) _____ | (Course #) _____ | U.S. History _____ (Level) _____ | Government (1/2) _____ (Level) _____ PFL Plus or Economics (1/2) _____ (Level) _____ |
| 5 | | PACE (1/2) _____ (1/2) _____ | (Course #) _____ | (Course #) _____ | (Course #) _____ |
| 6 | | (Course #) _____ | (Course #) _____ | (Course #) _____ | (Course #) _____ |
| 7 | | (Course #) _____ | (Course #) _____ | (Course #) _____ | (Course #) _____ |

Alternate Electives for 9th Grade: 1. _____ 2. _____

Parent Signature _____ Date _____

◆ Cypress-Fairbanks ISD ◆
 High School Four-Year Plan – Foundation High School Program + Endorsement
 Class of 2018 and Beyond

Name: _____ ID # _____ Current Campus: _____ Next Year Campus: _____

The Four-Year Plan is intended to give you and your parent(s) a guide to use as you progress through high school. You will want to review the plan each year to make sure you are taking the required courses for graduation. Your course selection should support your aptitude and interests and align with the career you wish to pursue. **You will be given opportunities to review and/or modify your plan in high school.**

CAREER GOAL - _____

| ENDORSEMENT | OPTION | PROGRAM OF STUDY |
|-------------|--------|------------------|
| | | |
| | | |
| | | |
| | | |
| | | |

| Graduation Plans for the class of 2018 and Beyond | | |
|---|-----------------------------|------------------------------------|
| Discipline | Foundation + Endorsement(s) | Distinguished Level of Achievement |
| English | Credits 4 | Credits |
| PACE (1/2) | 1/2 | |
| Math | 3 | 1 |
| Science | 3 | 1 |
| Social Studies | 3 | |
| LOTE/Foreign Language | 2 | |
| Fine Arts | 1 | |
| PE (1) and Health (1/2) | 1 1/2 | |
| Electives/Endorsement Courses | 4 | 2 |
| Total Credits for Graduation | 22 | 26 |
| | | 26 |

Directions: Courses required at a specific grade level are noted in the chart below. Students have flexibility in determining the year of study for the following graduation requirements: World History or World Geography, Foreign Language, Fine Arts, PE and Health.

| Pds | High School credits earned in Middle School | 9 th Grade | 10 th Grade | 11 th Grade | 12 th Grade |
|-----|---|-------------------------------|--------------------------------|----------------------------------|---|
| 1 | | English I _____ (Level) _____ | English II _____ (Level) _____ | English III _____ (Level) _____ | English IV: _____ (Level) _____ |
| 2 | | Math: _____ (Level) _____ | Math: _____ (Level) _____ | Math: _____ (Level) _____ | Math: _____ (Level) _____ |
| 3 | | Biology _____ (Level) _____ | Science: _____ (Level) _____ | Science: _____ (Level) _____ | Science: _____ (Level) _____ |
| 4 | | (Course #) _____ | (Course #) _____ | U.S. History _____ (Level) _____ | Government (1/2) _____ (Level) _____ PFL Plus or Economics (1/2) _____ (Level) _____ |
| 5 | | PACE (1/2) _____ (1/2) _____ | (Course #) _____ | (Course #) _____ | (Course #) _____ |
| 6 | | (Course #) _____ | (Course #) _____ | (Course #) _____ | (Course #) _____ |
| 7 | | (Course #) _____ | (Course #) _____ | (Course #) _____ | (Course #) _____ |

Alternate Electives for 9th Grade: 1. _____ 2. _____

Parent Signature _____ Date _____

