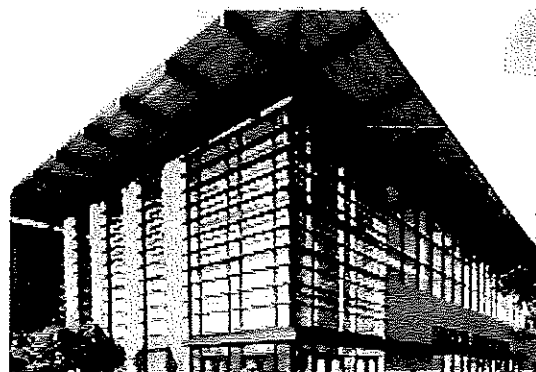


Sinton High School



COURSE CATALOG

- ★ Public Service / Health Science
- ★ Arts & Humanities
- ★ Science, Technology, Engineering, & Mathematics (STEM)
- ★ Business & Industry
- ★ Multidisciplinary

PROGRAMS

- | | |
|---|--|
| ★ Agriculture, Food & Natural Resources | ★ Health |
| ★ DMC-SISD Course Crosswalk | ★ Health Science |
| ★ Engineering & Industrial Technology Careers - Craft Training Center | ★ Languages Other Than English |
| ★ Engineering Electives | ★ Online or Face to Face Dual Credit Courses |
| ★ Fine Arts | ★ P-TECH Academy |
| ★ General Electives | ★ Speech |

Distinguished Level of Achievement

- ☐ Must be achieved to be eligible for top 10% automatic admission, by successfully completing:
 - ☐ a total of four credits in mathematics, which must include Algebra II
 - ☐ a total of four credits in science
 - ☐ the remaining curriculum requirements for the Foundation Plan
 - ☐ the curriculum requirements for at least one endorsement

Performance Acknowledgements

- ☐ Can be earned in for exemplary performance in
 - ☐ dual credit coursework - at least 12 hours
 - ☐ bilingualism and biliteracy
 - ☐ AP tests
 - ☐ in PSAT, the ACT-Plan, the SAT, or the ACT
 - ☐ for earning a nationally or internationally recognized business or industry certification or license

ADDITIONAL INFORMATION

COLLEGE DAYS

Two excused absences for college visits are provided for juniors and seniors to visit college campuses. The only college days that will be approved are those arranged in advance through the counselors' office. Those students that are approved must secure a college day card from the counselors' office,

which must be presented to, and signed by a college representative. These cards are to be returned to the attendance clerk when returning to school the next day. Approved, documented college days do not count against a student for perfect attendance.

DUAL CREDIT (Online and Face to Face Instruction)

Sinton ISD, in conjunction with Del Mar College, Texas Virtual School Network (TxVSN), and other institutions of higher education will provide online, high school dual credit courses to students that meet the eligibility requirements. Many of the credits earned through this program are transferable to any state university in Texas. These credits are also accepted at many other private and out of state institutions. Students must meet with their counselor for current eligibility requirements. If students do not complete the course and/or pass with a 70, parents, guardians and students will be responsible for paying the full cost that SISD pays on the student's behalf. (possibility of tuition, fees, and or books)

Not all Del Mar courses can be taken for high school credit. Therefore, all Del Mar courses require the review of the content area department, counselor, and curriculum director for coverage of Texas Essentials of Knowledge and Skills.

The following forms must be completed and forwarded to the appropriate institution of higher education by the due date:

- ✎ Apply to Del Mar College - Apply Texas
- ✎ A Del Mar College registration form signed by student, parent, and counselor.
- ✎ A dual credit contract must be signed by student & parent; must also be notarized ✎
- Updated shot record - meningitis vaccine needs to be current
- ✎ High school transcript

EARLY GRADUATION

Students wishing to complete high school at the end of any semester earlier than the spring semester of their fourth year of high school enrollment must have permission of his/her parents/guardians. The principal must be notified in writing by the student one semester prior to the semester in which the student plans to finish coursework. The student must fulfill all requirements for graduation. Early graduation students will not be eligible for Valedictorian, Salutatorian or Honor Student. Students graduating early, who wish to participate in the graduation ceremony at the close of the spring semester, must notify the principal in writing no later than the beginning of the semester in which the ceremony is held.

EXAMINATION FOR CREDIT

In accordance with board policy EHDC, students may use a Texas Tech University or University of Texas exam to gain credit for a subject or class in which the student has not received prior instruction. The student must score at least 80 on this examination in order to receive credit for the course. Grades earned from these examinations do receive grade points. If a student plans to take an exam, the student (or parent) must register with the principal no later than 30 days prior to one of the four designated testing dates. With 30 days' notice, the District will honor a request by a parent to administer a test on a date other than the published dates

A student in any grade may use a state-approved examination to gain credit for a subject or class in which the student has received prior instruction. The student must score at least 70 on this examination in order to receive credit for the course. Grades earned from these examinations do not receive grade points. [For further information, see Local EIC].

GRADE CLASSIFICATION

The grade level, or classification, of a student depends upon the number of credits the student has earned. Classification is made on the following basis:

- 0 – 6.0 credits and promotion from middle school = freshman (9th)
- 6.5 – 12.5 credits and one year of attendance = sophomore (10th)
- 13 – 19 credits and two years of attendance = junior (11th)
- 19.5 or more credits and three years of attendance or
an approved early graduation plan = senior (12th)

Grade classification is determined once a year prior to the beginning of school. Classification at the beginning of the school year is a student's classification for the entire year on official records with the exception of fourth year students classified as juniors. At midterm, those juniors who are candidates for the current year graduation will be reclassified as seniors and ranked accordingly provided they have at least 19.5 state credits.

GRADING SCALE

A 100-90 B 89-80 C 79-70 F 69-0

WEIGHTED GRADE SYSTEM

The District shall categorize and weight courses as AP/Honors and Regular in accordance with the provisions of this policy. All AP courses, Honors courses, dual credit courses and courses in PLTW Engineering, AVID, ASL III, Academic Decathlon, Future Problem solving, and Debate II-IV shall be categorized and weighted as AP/Honors courses. *Only the following classes will be weighted: All AP Courses; and Honors courses or dual credit courses in English, mathematics, science, social studies, and languages other than English III and IV.*

GRADUATION

Valedictorian, salutatorian, and honor graduates shall be students with the highest, second highest, and third highest ranking, as determined by the District's class-ranking procedure described in this policy. To be eligible for valedictorian, salutatorian, or honor graduate, a student must have been continuously enrolled in the District school for their entire junior and senior year. [For further information, see EIC].

COLLEGE ADMISSION TESTS

Most colleges require an admissions test. The most common admission tests are the American College Test (ACT) or the Scholastic Aptitude Test (SAT). Students must talk with the counselor during their sophomore or junior year to determine the appropriate exam to take. Sinton High School offers the ACT test on campus in April. Students that qualify for a "fee waiver" can apply it for this test.

TEXAS SUCCESS INITIATIVE ASSESSMENT (TSIA) - If you are a student entering a Texas college you are required to meet college readiness standards in reading, writing and math. Students who do not meet TSIA standards upon graduation will be required to pass developmental courses at the college they are attending in order to start college-level coursework. Developmental courses are costly and do not count towards graduation. The same TSIA standards are also required for students who participate in the Del Mar College Dual Credit program. The TSI Assessment is designed to help Texas institutions determine if students are ready for college level coursework in reading, writing, and math. SHS administers the TSI Assessment to any interested student. Students who wish to take the TSIA will sign up in the counselors' office. The test is free of charge for SISD students.

SCHEDULE CHANGES

To receive credit in a class, a student must attend at least 90% of the days the class is offered; therefore, schedule changes will be received up to and no later than the ninth day from the first day of each semester. The following steps should be taken:

- ✎ Pick up a schedule change form from the counselors' office
- ✎ Fill out the information requested
- ✎ Have your parent/guardian sign the change form
- ✎ The teacher, coach or sponsor involved must also sign the change form
- ✎ Return the change form to the counselors' office

Ⓜ Not all changes can be granted.

Availability of classes, class size and reason for the change are factors, which will be considered in granting these requests.

HEALTH SCIENCE

Diagnostic and Therapeutic Services

The medical profession is predicted to be one of the fastest growing occupations for the next 10 years and as such these courses could be a great opportunity to get a head start in these careers while in high school. In addition, advanced sciences and mathematics are recommended.

MEDICAL TERMINOLOGY PEIMS#:13020300 Grade Placement: 10 1 Credit *Prerequisite:*

Principles of Health Science

This beginning course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, combining forms, and singular and plural forms, plus medical abbreviations and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology. It is important in the Health Science field for students to be able to break apart a word and understand its meaning. This knowledge and skill is applied during further education and employment. Recommended for students planning to follow the Patient Care Tech, CNA, EKG Tech, and/or Phlebotomy Tech tracks.

ANATOMY & PHYSIOLOGY PEIMS#:13020600 Grade Placement: 11-12 1 Credit *Prerequisites:*

Biology and second science credit.

Recommended Prerequisite: a Health Science Career Cluster Course

Anatomy and Physiology is a study of the human systems and is geared to meet the needs of students interested in a career in the medical field. This lab-oriented course is designed to demonstrate safe practices using biological equipment and chemicals as well as safe dissecting techniques. Students will participate fully in labs and use safe procedures in handling dissection specimens, recognize and identify organs on models and on dissected specimens. Students will describe the function of each body system and identify disorders of homeostasis of a particular system.

HEALTH SCIENCE THEORY + HEALTH SCIENCE CLINICAL (EKG Tech, Phlebotomy Tech)

PEIMS#:13020410 Grade Placement 11-12 2 Credits *Prerequisite: Biology*

Recommended prerequisites: Principles of Health Science, Medical Terminology

Corequisite: Health Science Theory

Recommended to be taken concurrently with Health Science Theory. This is a course designed to provide for the development of multi-occupational knowledge and skills related to a wide variety of health careers. Students will have hands-on experiences for continued knowledge and skill development in both high school and hospital/clinical settings. Students may need to purchase medical scrubs. During hospital/clinical rotations, students must meet the same safety, privacy, and patient care guidelines which hospital/clinical facility employees must follow. TB tests may be required for hospital/clinical facility admission. Students may be required to pass a drug screening to participate. **Industry Based Certification: Electrocardiograph Technician, Phlebotomy Technician**

PRACTICUM IN HEALTH SCIENCE (Patient Care Tech, Medical Assistant) PEIMS#:13020500

Grade Placement: 11-12 2 Credits *Prerequisite: Health Science Theory, Biology*

Recommended prerequisites: Principles of Health Science, Medical Terminology, Anatomy & Physiology

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

experience. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, and communicate effectively. Students should recognize that quality health care depends on the ability to work well with others. Students are expected to apply the knowledge and skills necessary to pursue a health science career through further education and employment. Professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities and limitations and understand the implications of their actions. A significant portion of the work required in this course may be performed at local health care facilities.

Industry Based Certification: Patient Care Tech, Certified Nursing Assistant /Aide (CNA), Phlebotomy Tech, EKG Tech., and Medical Assistant (MA) Students must be 17 at the time of certification exam.

	Grade	Fall/Spring	DMC Course Equivalent	Certification
Year 1	9			
Year 2	10			
Year 3	11	Fall	BCRD 1011 Electrocardiography	Electrocardiography Technician
		Spring	PLAB 1023 Phlebotomy	Phlebotomy Technician
Year 4	12	Fall	NUPC 1020 Patient Care Technician	Patient Care Technician
		Spring	MDCA 1000, PHRA 1009, HITT 1013, & MDCA 1054 Medical Assistant Training OR NURA 1001 & NURA 1060 CNA Lecture/ CNA Clinical	Medical Assistant OR Certified Nurse Aide

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

The Diagnostic and Therapeutic Services program of study focuses on occupational and educational opportunities associated with diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study includes exploration of patient treatment and rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.



Level 3

- Anatomy and Physiology
- Health Science Theory + Health Science Clinical

- Level d • Practicum in Health Science

AP or IB

- | | |
|---------------|-----------------|
| AP Biology | AP Chemistry |
| IB Biology SL | IB Chemistry SL |
| IB Biology HL | IB Chemistry HL |

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility
- Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job

Expanded Learning Opportunities

- Participate in Health Occupation Students of America (HOSA) or SkillsUSA
- Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event

Aligned Industry-Based Certifications

- Certified Clinical Medical Assistant
- Certified EKG Technician
- Nationally Registered Certified EKG Technician
- Patient Care Technician
- Phlebotomy Technician

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



Apprenticeships

- Medical Assistant



Associate Degrees

- Emergency Medical Technology
- Radiologic Technology/Science

Bachelor's Degrees

- Emergency Medical Technology
- Medical Insurance Coding

Master's, Doctoral, and Professional Degrees

- Medicine
- Occupational Therapy

Additional Stackable IBCs/License

- * Registered Diagnostic Medical Sonographer



Example Aligned Occupations

Medical Assistants

Median Wage: \$36,834

Annual Openings: 11,638

10-Year Growth: 29%

Dental Hygienists

Median Wage: \$79,663

Annual Openings: 1,352

10-Year Growth: 32%

Physician Assistants

Median Wage: \$127,332

Annual Openings: 974

10-Year Growth: 41%



For more information visit:
<http://middlesexlaw.com/enhancedcaseownerandmattersforlitigantsandattorneys>

Successful completion of the Diagnostic and Therapeutic Services program of study will fulfill requirements of the Public Service endorsement or the SED endorsement if the content and subject requirements are met.



Health Science Career Cluster

Statewide Program of Study: Diagnostic and Therapeutic Services

Course Information

Level 2

Course	Prerequisites Corequisites	Career Clusters
Medical Terminology* 13020300 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 3

Course	Prerequisites Corequisites	Career Clusters
Anatomy and Physiology* 13020600 (1 credit)	Prerequisites: One credit in Biology and one credit in Chemistry, Integrated Physics and Chemistry, or Physics Corequisites: None Recommended Prerequisites: A course from the Health Science career cluster Recommended Corequisites: None	
Health Science Theory + Health Science Clinical* 13020410 (2 credits)	Prerequisites: One credit in Biology and at least one credit in a course from the Health Science career cluster Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 4

Course	Prerequisites Corequisites	Career Clusters
Practicum in Health Science* First Time Taken: 13020500 (2 credits) Second Time Taken: 13020510 (2 credits)	Prerequisites: Health Science Theory and Biology Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

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

For additional information on the Health Science career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>

TEA (Texas Education Agency) does not discriminate on the basis of race, color, national origin, sex, or disability in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: [title], [address], [telephone number], [email]. Further nondiscrimination information can be found at <http://tea.texas.gov/cte> and <http://tea.texas.gov/cte>

AGRICULTURE, FOOD & NATURAL RESOURCES

PRINCIPLES OF AGRICULTURE, FOOD AND NATURAL RESOURCES PEIMS#:13000200 Grade Placement: 9-12 1 Credit

To be prepared for careers in agriculture, food and natural resources, students must attain academic skills and knowledge in agriculture. This course allows students to focus on the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources and develop knowledge and skills regarding career opportunities, personal development, globalization, industry standards, details, practices and expectations. To prepare for success, students need to have opportunities to learn, reinforce experience, apply and transfer their knowledge and skills in a variety of settings.

Agricultural Technology and Mechanical Systems

AGRICULTURAL STRUCTURES DESIGN AND FABRICATION PEIMS#:13002300 Grade Placement: 10-12 1 Credit

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

AGRICULTURAL EQUIPMENT DESIGN AND FABRICATION (ADVANCED CTE COURSE)
PEIMS#:13002350 Grade Placement: 11-12 1 Credit

To be prepared for careers in agricultural power, structural, and technical systems, students should attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the workplace; and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students should have opportunities to learn, reinforce, apply, and transfer their knowledge and technical skills in a variety of settings. This course is designed to develop an understanding of construction plans, material selection, maintain agriculture enclosures, agriculture equipment, construction techniques, and knowledge of laws related to construction. Class sizes should not exceed 15 students.

Industry Based Certification: Equipment Design (AWS D1.1 or D9.1)

AGRICULTURAL POWER SYSTEMS+ AGRICULTURAL LABORATORY AND FIELD EXPERIENCE (ADVANCED CTE COURSE) PEIMS#:13002410

Grade Placement: 11-12 2 Credits *Prerequisite: Principles of Agriculture, Food and Natural Resources*

To be prepared for careers in agricultural power, structural, and technical systems, students should attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the workplace; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. To prepare for success, students should have opportunities to learn, reinforce, apply, and transfer their knowledge and technical skills in a variety of settings. This course is designed to develop an understanding of power and control systems as related to energy sources, small and large power systems, and agricultural machinery. Class sizes should not exceed 15 students.

Industry Based Certification: Ag Power (ICEV Small Engines)

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

The Agricultural Technology and Mechanical Systems program of study focuses on occupational and educational opportunities associated with applying engineering technology and biological science to agricultural problems related to power and machinery, electrification, structures, soil and water use, and processing agricultural products. This program of study includes diagnosing, repairing, or overhauling farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.



Course 1 Principles of Agriculture, Food, and Natural Resources

- ### Aligned Advanced Academic Courses

Work-Based Learning and Expanded Learning Opportunities

- ## Expanded Learning Opportunities

- ### Aligned Industry-Based Certifications

- AWS Certified Welder
- AWS D1.1 Structural Steel
- AWS D9.1 Sheet Metal Welding

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



Apprenticeships

- Farm Equipment Mechanic I



Associate Degrees

- Diesel Mechanics Technology
- Industrial Mechanics and Maintenance Technology

Bachelor's Degrees

- Agricultural Engineering
- Agricultural Systems Management

Master's, Doctoral, and Professional Degrees

- Agricultural Engineering
- Industrial Technology

Additional Stackable IBCs/License

- Diesel Equipment Technology-Off Highway Specialization CER1
- Accredited Farm Manager



Example Aligned Occupations

Farm Equipment Mechanics and Service Technicians

Median Wage: \$46,582
Annual Openings: 326
10-Year Growth: 23%

Mobile Heavy Equipment Mechanics

Median Wage: \$57,943
Annual Openings: 2,637
10-Year Growth: 31%

Farmers, Ranchers, and Other Agricultural Managers

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

Agricultural Technology

Successful completion of the Agricultural Technology and Mechanical Systems program of study will fulfill requirements of the Business and Industry endorsement.

Data Source: <https://www.bls.gov>, Text Workforce Composition. Retrieved 3/3/2024.

For more information visit:

2109/1991-1992/1993/1994/1995/1996/1997/1998/1999/2000/2001/2002/2003/2004/2005/2006/2007/2008/2009/2010/2011/2012/2013/2014/2015/2016/2017/2018/2019/2020/2021/2022/2023/2024/2025/2026/2027/2028/2029/2030/2031/2032/2033/2034/2035/2036/2037/2038/2039/2040/2041/2042/2043/2044/2045/2046/2047/2048/2049/2050/2051/2052/2053/2054/2055/2056/2057/2058/2059/2060/2061/2062/2063/2064/2065/2066/2067/2068/2069/2070/2071/2072/2073/2074/2075/2076/2077/2078/2079/2080/2081/2082/2083/2084/2085/2086/2087/2088/2089/2090/2091/2092/2093/2094/2095/2096/2097/2098/2099/2100/2101/2102/2103/2104/2105/2106/2107/2108/2109/2110/2111/2112/2113/2114/2115/2116/2117/2118/2119/2120/2121/2122/2123/2124/2125/2126/2127/2128/2129/2130/2131/2132/2133/2134/2135/2136/2137/2138/2139/2140/2141/2142/2143/2144/2145/2146/2147/2148/2149/2150/2151/2152/2153/2154/2155/2156/2157/2158/2159/2160/2161/2162/2163/2164/2165/2166/2167/2168/2169/2170/2171/2172/2173/2174/2175/2176/2177/2178/2179/2180/2181/2182/2183/2184/2185/2186/2187/2188/2189/2190/2191/2192/2193/2194/2195/2196/2197/2198/2199/2200/2201/2202/2203/2204/2205/2206/2207/2208/2209/2210/2211/2212/2213/2214/2215/2216/2217/2218/2219/2220/2221/2222/2223/2224/2225/2226/2227/2228/2229/2230/2231/2232/2233/2234/2235/2236/2237/2238/2239/2240/2241/2242/2243/2244/2245/2246/2247/2248/2249/2250/2251/2252/2253/2254/2255/2256/2257/2258/2259/2260/2261/2262/2263/2264/2265/2266/2267/2268/2269/2270/2271/2272/2273/2274/2275/2276/2277/2278/2279/2280/2281/2282/2283/2284/2285/2286/2287/2288/2289/2290/2291/2292/2293/2294/2295/2296/2297/2298/2299/2300/2301/2302/2303/2304/2305/2306/2307/2308/2309/2310/2311/2312/2313/2314/2315/2316/2317/2318/2319/2320/2321/2322/2323/2324/2325/2326/2327/2328/2329/2330/2331/2332/2333/2334/2335/2336/2337/2338/2339/2340/2341/2342/2343/2344/2345/2346/2347/2348/2349/2350/2351/2352/2353/2354/2355/2356/2357/2358/2359/2360/2361/2362/2363/2364/2365/2366/2367/2368/2369/2370/2371/2372/2373/2374/2375/2376/2377/2378/2379/2380/2381/2382/2383/2384/2385/2386/2387/2388/2389/2390/2391/2392/2393/2394/2395/2396/2397/2398/2399/2400/2401/2402/2403/2404/2405/2406/2407/2408/2409/2410/2411/2412/2413/2414/2415/2416/2417/2418/2419/2420/2421/2422/2423/2424/2425/2426/2427/2428/2429/2430/2431/2432/2433/2434/2435/2436/2437/2438/2439/2440/2441/2442/2443/2444/2445/2446/2447/2448/2449/2450/2451/2452/2453/2454/2455/2456/2457/2458/2459/2460/2461/2462/2463/2464/2465/2466/2467/2468/2469/2470/2471/2472/2473/2474/2475/2476/2477/2478/2479/2480/2481/2482/2483/2484/2485/2486/2487/2488/2489/2490/2491/2492/2493/2494/2495/2496/2497/2498/2499/2500/2501/2502/2503/2504/2505/2506/2507/2508/2509/2510/2511/2512/2513/2514/2515/2516/2517/2518/2519/2520/2521/2522/2523/2524/2525/2526/2527/2528/2529/2530/2531/2532/2533/2534/2535/2536/2537/2538/2539/2540/2541/2542/2543/2544/2545/2546/2547/2548/2549/2550/2551/2552/2553/2554/2555/2556/2557/2558/2559/2560/2561/2562/2563/2564/2565/2566/2567/2568/2569/2570/2571/2572/2573/2574/2575/2576/2577/2578/2579/2580/2581/2582/2583/2584/2585/2586/2587/2588/2589/2590/2591/2592/2593/2594/2595/2596/2597/2598/2599/2600/2601/2602/2603/2604/2605/2606/2607/2608/2609/2610/2611/2612/2613/2614/2615/2616/2617/2618/2619/2620/2621/2622/2623/2624/2625/2626/2627/2628/2629/2630/2631/2632/2633/2634/2635/2636/2637/2638/2639/2640/2641/2642/2643/2644/2645/2646/2647/2648/2649/2650/2651/2652/2653/2654/2655/2656/2657/2658/2659/2660/2661/2662/2663/2664/2665/2666/2667/2668/2669/2670/2671/2672/2673/2674/2675/2676/2677/2678/2679/2680/2681/2682/2683/2684/2685/2686/2687/2688/2689/2690/2691/2692/2693/2694/2695/2696/2697/2698/2699/2700/2701/2702/2703/2704/2705/2706/2707/2708/2709/2710/2711/2712/2713/2714/2715/2716/2717/2718/2719/2720/2721/2722/2723/2724/2725/2726/2727/2728/2729/2730/2731/2732/2733/2734/2735/2736/2737/2738/2739/2740/2741/2742/2743/2744/2745/2746/2747/2748/2749/2750/2751/2752/2753/2754/2755/2756/2757/2758/2759/2760/2761/2762/2763/2764/2765/2766/2767/2768/2769/2770/2771/2772/2773/2774/2775/2776/2777/2778/2779/2780/2781/2782/2783/2784/2785/2786/2787/2788/2789/2790/2791/2792/2793/2794/2795/2796/2797/2798/2799/2800/2801/2802/2803/2804/2805/2806/2807/28





Agriculture, Food, and Natural Resources Career Cluster

Statewide Program of Study: Agricultural Technology and Mechanical Systems

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
Principles of Agriculture, Food, and Natural Resources* 13000200 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 3

Course	Prerequisites Corequisites	Career Clusters
Agricultural Structures Design and Fabrication 13002300 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Agricultural Mechanics and Metal Technologies Recommended Corequisites: None	
Agricultural Power Systems 13002400 (2 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: Principles of AFNR Recommended Corequisites: None	

Level 4

Course	Prerequisites Corequisites	Career Clusters
Agricultural Equipment Design and Fabrication 13002350 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Agricultural Mechanics and Metal Technologies Recommended Corequisites: None	
Practicum in Agriculture, Food, and Natural Resources* First Time Taken: 13002500 (2 credits) Second Time Taken: 13002510 (2 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: A minimum of one credit from the courses in the AFNR career cluster Recommended Corequisites: None	

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

Agricultural Technology and Mechanical Systems

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



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prepare for success, students need opportunities to learn, reinforce, apply and transfer their knowledge and skills in a variety of settings. Animal species to be addressed in this course may include, but are not limited to, beef cattle, dairy cattle, swine, sheep, goats, and poultry.

Industry Based Certification: Feedyard Technician in Cattle Care and Handling

VETERINARY MEDICAL APPLICATIONS (ADVANCED CTE COURSE) PEIMS#:13000600

Grade Placement: 11-12 1 Credit *Prerequisite: Livestock Production or Small Animal Management*

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

Industry Based Certification: Elanco Veterinary Medical Applications Certification

ADVANCED ANIMAL SCIENCE (ADVANCED CTE COURSE) PEIMS#:13000700 Grade Placement: 11 or 12
1 Credit *Prerequisite: Biology and Chemistry or IPC, Algebra I and Geometry, Livestock Production and Veterinary Medical Applications*

To be prepared for careers in the field of animal science, students need to attain academic skills and knowledge, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry standards. To prepare for success, students need opportunities to learn, reinforce, apply and transfer their knowledge and skills in a variety of settings. This course examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b) (2) (C) of this title (relating to Description of a Required Secondary Curriculum).

Industry Based Certification: Elanco Fundamentals of Animal Science Clarification

**PRACTICUM IN AGRICULTURE, FOOD, AND NATURAL RESOURCES (ADVANCED CTE COURSE)
PEIMS#:13002500**

Grade Placement: 11-12 2 Credits *Prerequisite: a minimum of one credit from the courses in Agriculture, Food, and Natural Resources cluster.*

The practicum is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internships, assistantships, mentorships or laboratories. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in Agriculture, Food, and Natural Resources cluster.



Agriculture, Food, and Natural Resources Career Cluster

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

Statewide Program of Study: Animal Science

The Animal Science program of study focuses on occupational and educational opportunities associated with the science, research, and business of animals and other living organisms. This program of study includes applying biology and life science to real-world life processes of animals and wildlife, either in laboratories or in the field, which could include a veterinary office, a farm or ranch, or any outdoor area harboring animal life. Students will research and analyze the growth and destruction of species and research or diagnose diseases and injuries of animals.

Secondary Courses for High School Credit



Level 1 • Introduction to Agriculture, Food, and Natural Resources

Level 3 • Livestock Production

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

Aligned Advanced Academic Courses

AP or IB

AP Biology
IB Biology SL
IB Biology HL

Dual Credit Dual credit offerings will vary by local education agency.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Shadow an animal scientist in a biology lab to learn about applying science to understand animals and wildlife
- Intern in a veterinary clinic, caring for animals and wildlife being treated in the clinic

Expanded Learning Opportunities

- Participate in an FFA career, leadership, and speaking contest like an agriscience fair
- Attend an agricultural industry seminar

Aligned Industry-Based Certifications

- Elanco Fundamentals of Animal Science Certification
- Elanco Veterinary Medical Applications Certification
- Feedyard Technician in Cattle Care and Handling

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



Example Postsecondary Opportunities

Apprenticeships

- Reproduction Technician

Associate Degrees

- Biological and Physical Sciences
- Entomology

Bachelor's Degrees

- Animal Science
- Zoology/Animal Biology

Master's, Doctoral, and Professional Degrees

- Marine Sciences
- Biotechnology

Additional Stackable IBCs/License

- Veterinarian
- Certified Veterinary Technician

Example Aligned Occupations



Veterinary Assistants and Laboratory Animal Caretakers

Median Wage: \$29,906

Annual Openings: 1,348

10-Year Growth: 24%

Veterinary Technologists and Technicians

Median Wage: \$33,679

Annual Openings: 1,217

10-Year Growth: 24%

Veterinarian

Median Wage: \$103,160

Annual Openings: 347

10-Year Growth: 26%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/23/2024

For more information visit:

<https://tea.texas.gov/data/employment/afnr/afnr-career-cluster-and-occupations-overview>





Agriculture, Food, and Natural Resources Career Cluster

Statewide Program of Study: Animal Science

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
Principles of Agriculture, Food, and Natural Resources* 13000200 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 3

Course	Prerequisites Corequisites	Career Clusters
Livestock Production 13000300 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 4

Course	Prerequisites Corequisites	Career Clusters
Advanced Animal Science 13000700 (1 credit)	Prerequisites: Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production Corequisites: None Recommended Prerequisites: Veterinary Medical Applications Recommended Corequisites: None	
Veterinary Medical Applications 13000600 (1 credit)	Prerequisites: Equine Science, Small Animal Management, or Livestock Production Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Practicum in Agriculture, Food, and Natural Resources* First Time Taken: 13002500 (2 credits) Second Time Taken: 13002510 (2 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: A minimum of one credit from the courses in the AFNR career cluster Recommended Corequisites: None	
Practicum in Agriculture, Food, and Natural Resources + Extended Practicum in Agriculture, Food, and Natural Resources* First Time Taken: 13002505 (3 credits) Second Time Taken: 13002515 (3 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: A minimum of one credit from the courses in the AFNR career cluster Recommended Corequisites: None	

Animal Science

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

Plant Science

FLORAL DESIGN (FINE ART CREDIT) PEIMS#:13001800 Grade Placement: 10-12 1 Credit

To be prepared for careers in floral design, students need to attain academic skills and knowledge as well as technical knowledge and skills related to horticultural systems and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply and transfer their knowledge and skills and technologies in a variety of settings. This course is designed to develop students' ability to identify and demonstrate the principles and techniques related to floral design as well as develop an understanding of the management of floral enterprises. Through the analysis of artistic floral styles and historical periods, students develop a respect for the traditions and contributions of diverse cultures. Students respond to and analyze floral designs, thus contributing to the development of lifelong skills of making informed judgments and evaluations. **Industry Based Certification: Texas State Florists Association Knowledge Based Floral Certification**

ADVANCE FLORAL DESIGN PEIMS#:N1300270 Grade Placement: 10-12 1 Credit *Prerequisite: Floral Design*

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

Industry Based Certification: Texas State Florists Association Level I Floral Certification or Benz School of Floral Design Principles of Floral Design

HORTICULTURE SCIENCE PEIMS#:13002000 Grade Placement: 10-12 1 Credit

To develop an understanding of common horticultural management practices as they relate to food and ornamental plant production. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticulture and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills in a variety of settings.

Industry Based Certification: BASF Plant Science Certification



Agriculture, Food, and Natural Resources Career Cluster

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

Statewide Program of Study: Plant Science

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



Secondary Courses for High School Credit

Level 1 - Introduction of Agriculture, Food, and Natural Resources

- | | |
|----------------|--|
| Level 3 | <ul style="list-style-type: none"> • Horticultural Science • Floral Design |
| Level 4 | <ul style="list-style-type: none"> • Advanced Floral Design • Career and Technical Education Project-Based Capstone • Practicum in Agriculture, Food, and Natural Resources • Practicum in Agriculture, Food, and Natural Resources + Extended Practicum in Agriculture, Food, and Natural Resources |

Aligned Advanced Academic Courses

AP or IB

- | | |
|--------------------------|-----------------|
| AP Biology | AP Chemistry |
| AP Environmental Science | IB Chemistry SL |
| IB Biology SL | IB Chemistry HL |
| IB Biology HL | |

Dual Credit Dual credit offerings will vary by local education agency.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Work in a part-time job at a landscaping company to learn about production and management of plants.
- Intern at an agricultural research company, working alongside a biological technician to learn about application of biology to plant production

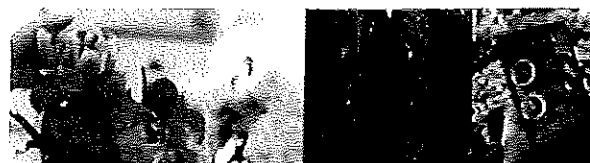
Expanded Learning Opportunities

- Participate in an FFA career, leadership, and speaking contest like an agriscience fair
- Participate in an industry-related competition like an agriscience fair

Aligned Industry-Based Certifications

- BASF Plant Science Certification
- Principles of Floral Design Certification
- Texas State Florists' Association Knowledge Based Floral Certification
- Texas State Florists' Association Level I Floral Certification

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



Example Postsecondary Opportunities

Apprenticeships

- Horticulturist

Associate Degrees

- Biology/Biological Sciences
- Biological and Physical Sciences

Bachelor's Degrees

- Horticulture
- Plant Pathology/Phytopathology

Master's, Doctoral, and Professional Degrees

- Plant Breeding
- Botany/Plant Biology

Additional Stackable IBCs/License

- Nursery Floral License
- Horticulturist Certification

Example Aligned Occupations

Pesticide Handlers, Sprayers, and Applicators, Vegetation
Median Wage: \$46,153

Annual Openings: 205
10-Year Growth: 17%

Biological Technicians

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

Farmers, Ranchers, and Other Agricultural Managers
Median Wage: \$65,490

Annual Openings: 28,020
10-Year Growth: 4%

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



For more information visit:

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



Agriculture, Food, and Natural Resources Career Cluster

Statewide Program of Study: Plant Science

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
Principles of Agriculture, Food, and Natural Resources* 13000200 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 3

Course	Prerequisites Corequisites	Career Clusters
Horticultural Science 13002000 (1 credit)	Prerequisites: At least one credit in a course from the AFNR career cluster Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Floral Design 13001800 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 4

Course	Prerequisites Corequisites	Career Clusters
Advanced Floral Design N1300270 (1 credit)	Prerequisites: Floral Design Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Practicum in Agriculture, Food, and Natural Resources* First Time Taken: 13002500 (2 credits) Second Time Taken: 13002510 (2 credits)	Prerequisites: A minimum of two credits with at least one course in a Level 2 or higher course from the AFNR career cluster Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Practicum in Agriculture, Food, and Natural Resources + Extended Practicum in Agriculture, Food, and Natural Resources* First Time Taken: 13002505 (3 credits) Second Time Taken: 13002515 (3 credits)	Prerequisites: A minimum of two credits with at least one course in a Level 2 or higher course from the AFNR career cluster Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

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

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



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ENGINEERING AND INDUSTRIAL TECHNOLOGY

CAREERS MANUFACTURING

Welding

INTRODUCTION TO WELDING PEIMS#:13032250 Grade Placement: 11-12 1 Credit

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

Industry Based Certification: NCCER Core

WELDING I PEIMS#:13032300 Grade Placement: 11-12 2 Credits

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

Industry Based Certification: NCCER Welding Level I

WELDING II LAB PEIMS#:13032410 Grade Placement: 11-12 3 Credits

Prerequisites: Welding I

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

Industry Based Certification: NCCER Welding Level II

The Manufacturing career cluster focuses on planning, managing, and performing the processing of materials into Intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and process engineering. This career cluster includes occupations ranging from welder and machinist to industrial engineering technician and semi-conductor processing technician.

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



Level 1	Principles of Manufacturing
	Introduction to Welding
Level 2	• Welding I
Level 3	• Welding II+ Welding II Lab
Level 4	<ul style="list-style-type: none"> • Practicum in Entrepreneurship • Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship

Dual Credit Dual credit offerings will vary by local education agency.

Work-Based Learning Activities

- Job shadow a welder
- Intern for a local welding company

- Tour a welding shop
- Participate in SkillsUSA or TSA
- Participate in a welding project that benefits the community

- NCCER Core
- NCCER Welding Level I
- NCCER Welding Level II

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



Apprenticeships

- Welding



Associate Degrees

- Welding Technology
- Building/Construction Site Management
- Operations Management and Supervision

Bachelor's Degrees

- Welding Technology
- Construction Management
- Project Management
- Building/Construction Site Management

Master's, Doctoral, and Professional Degrees

- Engineering
- Engineering/Industrial Management
- Manufacturing Engineering
- Construction Engineering



*Welders, Cutters, Solderers,
and Brozers*

Median Wage: \$48,177

Annual Openings: 6,792

10-Year Growth: 23%

*First-Line Supervisors of
Production and Operating
Workers*

Median Wage: \$62,584

Annual Openings: 5.926

10-Year Growth: 17%

**Industrial Production
Managers**

Median Wage: \$119,691

Annual Openings: 1,296

10-Year Growth: 19%

Date Source: TexasVigil, Texas Vigil/Source Contribution Page, red 1/3/2014



For more information visit:

highly effective and efficient in the use of space and materials, and technical education programs of space and land resources.

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



Manufacturing Career Cluster

Statewide Program of Study: Welding

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
Principles of Manufacturing* 13032200 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Algebra I or Geometry Recommended Corequisites: None	
Introduction to Welding* 13032250 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Algebra I Recommended Corequisites: None	

Level 2

Course	Prerequisites Corequisites	Career Clusters
Welding I* 13032300 (2 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: Algebra I, Principles of Manufacturing, Introduction to Precision Metal Manufacturing, or Introduction to Welding Recommended Corequisites: None	

Level 3

Course	Prerequisites Corequisites	Career Clusters
Welding II + Welding II Lab 13032410 (3 credits)	Prerequisites: Welding I Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 4

Course	Prerequisites Corequisites	Career Clusters
Practicum In Manufacturing + Extended Practicum in Manufacturing* First Time Taken: 13033005 (3 credits) Second Time Taken: 13033015 (3 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Practicum In Entrepreneurship* First Time Taken: 13011111 (2 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: Entrepreneurship I and II or successful completion of at least two courses in a CTE program of study Recommended Corequisites: None	
Practicum In Entrepreneurship + Extended Practicum in Entrepreneurship* First Time Taken: 13011121 (3 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: Entrepreneurship I and II or successful completion of at least two courses in a CTE program of study Recommended Corequisites: None	

Welding

Instrumentation

PRINCIPLES OF MANUFACTURING PEIMS# 13032200 Grade Placement: 11-12 1 Credit

Recommended Prerequisite: Algebra I and Geometry

In Principles of Manufacturing, students are introduced to knowledge and skills used in the proper application of principles of manufacturing. The study of manufacturing technology allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities. Students will gain an understanding of what employers require to gain and maintain employment in manufacturing careers.

PRACTICUM IN MANUFACTURING PEIMS# 1303300 Grade Placement: 11-12 2 Credits

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

Industry Based Certification: NCCER Core

PRACTICUM IN MANUFACTURING / EXTENDED PRACTICUM IN MANUFACTURING

PEIMS# 13033005

Grade Placement: 11-12

3 Credits

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

Industry Based Certification: NCCER Welding I



Manufacturing Career Cluster

The Manufacturing career cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and process engineering. This career cluster includes occupations ranging from welder and machinist to industrial engineering technician and semiconductor processing technician.

Statewide Program of Study: Manufacturing Technology

The Manufacturing Technology program of study focuses on occupational and educational opportunities associated with the development and use of automatic and computer-controlled machines, tools, and robots that perform work on metal or plastic. It includes exploration of a variety of machine tools that are used to produce precision parts and instruments. This program of study addresses how to modify parts to make or repair machine tools or maintain individual machines, and how to use hand-welding or flame-cutting equipment.



Secondary Courses for High School Credit

Principles of Manufacturing

Level 4

- Practicum in Manufacturing
- Practicum in Manufacturing + Extended Practicum in Manufacturing

Aligned Advanced Academic Courses

Dual Credit Dual credit offerings will vary by local education agency.

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

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

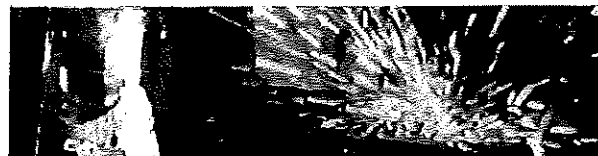
- Shadow a metallurgist working at a refinery, steel mill, or aircraft manufacturing company
- Intern at a manufacturing plant using CNC machines

Expanded Learning Opportunities

- Tour a manufacturing facility
- Participate in SkillsUSA or TSA

Aligned Industry-Based Certifications

- NCCER Core
- NCCER Welding Level 1



Example Postsecondary Opportunities

Associate Degrees

- Industrial Technology
- Instrumentation Technology
- Manufacturing Engineering Technology
- Machine Shop Technology



Bachelor's Degrees

- Engineering/Industrial Management
- Industrial Engineering
- Mechanical Engineering Technology
- Manufacturing Engineering

Master's, Doctoral, and Professional Degrees

- Mechanical Engineering
- Engineering/Industrial Management
- Industrial Engineering
- Engineering



Example Aligned Occupations

Machinists

Median Wage: \$48,732
Annual Openings: 3,385
10-Year Growth: 23%

Industrial Engineering Technologists and Technicians

Median Wage: \$62,096
Annual Openings: 787
10-Year Growth: 17%

Mechanical Engineers

Median Wage: \$99,937
Annual Openings: 1,755
10-Year Growth: 19%

Manufacturing Technology





Manufacturing Career Cluster

Statewide Program of Study: Manufacturing Technology

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
Principles of Manufacturing* 13032200 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Algebra I or Geometry Recommended Corequisites: None	

Level 4

Course	Prerequisites Corequisites	Career Clusters
Practicum in Manufacturing* First Time Taken: 13033000 (2 credits) Second Time Taken: 13033010 (2 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Practicum in Manufacturing + Extended Practicum in Manufacturing* First Time Taken: 13033005 (3 credits) Second Time Taken: 13033015 (3 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

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

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



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Manufacturing Technology

ARCHITECTURE AND CONSTRUCTION

Electrical

PRINCIPLES OF CONSTRUCTION (Taken with Electrical Level 1) PEIMS#:13004220 Grade Placement: 11-12 1 Credit Principles of Construction is intended to provide an introduction and lay a solid foundation for those students entering the construction or craft skilled areas. The course provides a strong knowledge of construction safety, construction mathematics, and common hand and power tools. For safety and liability considerations, limiting course enrollment to 15 students is recommended. This course also provides communication and occupation skills to assist the student in obtaining and maintaining employment.
Industry Based Certification: NCCER Core

PRINCIPLES OF ARCHITECTURE: (Taken with Electrical Level 2) PEIMS#:13004210 Grade Placement: 12 1 Credit
Principles of Architecture provides an overview of the various fields of architecture, interior design, and construction management. Achieving proficiency in decision making and problem solving is an essential skill for career planning and lifelong learning. Students use self-knowledge, education, and career information to set and achieve realistic career and educational goals. Job specific training can be provided through training modules that identify career goals in trade and industry areas. Classroom studies include topics such as safety, work ethics, communication, information technology applications, systems, health, environment, leadership, teamwork, ethical and legal responsibility, employability, and career development and include skills such as problem solving, critical thinking, and reading technical drawings.

ELECTRICAL Level 1 - (Year 1) PEIMS#:13005600 Grade Placement: 11-12 2 Credits *Upon successful completion of ALL written and performance modules, the student will be awarded NCCER Electrical Level 1 and Core Completion Certificates*
This NCCER Electrical Level One course is combined with the Core Curriculum and takes the new electrical craft worker through the first level of electrical training. Topics include: Electrical Safety; Hand Bending; Fasteners and Anchors; Electrical Theory One and Two; Electrical Test Equipment; Introduction to the National Electrical Code; Raceways; Boxes and Fittings; Conductors; Electrical Blueprints; Commercial, Industrial and Residential Wiring. Core Curriculum topics include: Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Blueprints; Basic Rigging; Basic Communication Skills; Basic Employability Skills.
Industry Based Certification: NCCER Electrical Level I

ELECTRICAL LEVEL 2 - (Year 2) PEIMS#:13005700 Grade Placement: 12 2 Credits *Upon successful completion of all written and performance modules, the student will be awarded an Instrumentation Level 1 and Core Completion Certificates from the NCCER.*
This NCCER course is combined with the Core Curriculum and takes the student through the first level of training. Topics include: Hand Tools for Instrumentation; Electrical Safety; Power Tools for Instrumentation; Electrical Systems for Instrumentation; Metallurgy for Instrumentation; Fasteners; Instrument Drawings & Documentations – Part One; Gaskets and Packing; Lubricants, Sealants & Cleaners; Flow, Pressure, Level & Temperature; Tubing; Piping – 2" & Under; Hoses. Core curriculum topics include Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Blueprints; Basic Rigging; Basic Communication Skills; Basic Employability Skills.



Architecture and Construction Career Cluster

The Architecture and Construction career cluster focuses on designing, planning, managing, building, and maintaining the built environment. This career cluster includes occupations ranging from architect, carpenter, and construction manager to electrician, plumber and heating, air conditioning and refrigeration technician.

Statewide Program of Study: Electrical

The Electrical program of study focuses on occupational and educational opportunities associated with installing, maintaining, and repairing electrical wiring, equipment, and fixtures. The program of study also addresses installing and repairing telecommunications cable including fiber optics.



Secondary Courses for High School Credit

- | | |
|---------|---|
| Level 2 | • Electrical Technology I |
| Level 3 | • Electrical Technology II |
| Level 4 | • Practicum in Entrepreneurship
• Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship |

Aligned Advanced Academic Courses

Dual Credit Dual credit offerings will vary by local education agency.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Participate in an internship with an electrical company to develop installation skills
- Join a pre-apprenticeship program that involves determining if electrical wiring is up to code
- Interview an electrician about their training and education

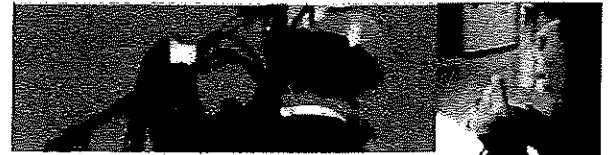
Expanded Learning Opportunities

- Participate in SkillsUSA
- Participate in trade competitions

Aligned Industry-Based Certifications

- NCCER Core
- NCCER Electrical Level I
- NCCER Electrical Level II

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



Example Postsecondary Opportunities

Apprenticeships

- Electrician

Associate Degrees

- Electrical and Power Transmission Installation
- Electrical Power and Controls
- Electromechanical Technology

Bachelor's Degrees

- Construction Engineering
- Electrical, Electronic, and Communications
- Engineering Electrical Engineering

Master's, Doctoral, and Professional Degrees

- Construction Engineering
- Construction Management

Additional Stackable IBCs/License

- Journeyman Electrician
- Master Electrician



Example Aligned Occupations

Electricians Helpers

Median Wage: \$38,140
Annual Openings: 1,632
10-Year Growth: 20%

Electricians

Median Wage: \$54,769
Annual Openings: 9,221
10-Year Growth: 27%

Construction Managers

Median Wage: \$95,072
Annual Openings: 6,325
10-Year Growth: 24%

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

For more information visit:

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



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






Architecture and Construction Career Cluster




Statewide Program of Study: Electrical

Course Information



Level 1

Course	Prerequisites Corequisites	Career Clusters
Principles of Architecture* 13004210 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	 
Principles of Construction* 13004220 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	











Level 2

Course	Prerequisites Corequisites	Career Clusters
Electrical Technology I 13005600 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Principles of Architecture or Principles of Construction Recommended Corequisites: None	  

Level 3

Course	Prerequisites Corequisites	Career Clusters
Electrical Technology II 13005700 (2 credits)	Prerequisites: Electrical Technology I Corequisites: None Recommended Prerequisites: Principles of Architecture or Principles of Construction Recommended Corequisites: None	 

Level 4

Course	Prerequisites Corequisites	Career Clusters
Practicum in Entrepreneurship* First Time Taken: 13011111 (2 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: Entrepreneurship I and Entrepreneurship II or successful completion of at least two courses in a CTE program of study Recommended Corequisites: None	
Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship* First Time Taken: 13011121 (3 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: Entrepreneurship I and Entrepreneurship II or successful completion of at least two courses in a CTE program of study Recommended Corequisites: None	         

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

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

ENGINEERING

Engineering Foundations

INTRODUCTION TO ENGINEERING DESIGN PEIMS#:N1303742 Grade Placement: 9–1

(non-weighted) 1 Credit Using 3D computer modeling software, students learn the design process and solve design problems for which they develop, analyze, and create product models. IED is an introductory course, which develops student problem solving skills, with emphasis placed upon the concept of developing a 3-D model or solid rendering of an object. Students focus on the application of visualization processes. The rigorous and relevant curriculum will help any student build strong study, teamwork, and communication skills, which create a solid foundation for success in any college major or career. A student may be awarded articulated credit and weighted GPA upon successful completion of the college level end of course exam.

Industry Based Certification: Autodesk Fusion

CIVIL ENGINEERING AND ARCHITECTURE (CEA) PEIMS#:N1303747 Grade Placement: 10-12

(non-weighted) 1 Credit *Prerequisite: IED*

Civil Engineering and Architecture (CEA) is the study of the design and construction of residential and commercial building projects. The course includes an introduction to building components and systems, structural design, stormwater management, site design, utilities and services, cost estimation, energy efficiency, and careers in the design and construction industry. Students will use industry standard 3-D architectural modelling software (REVIT) to **create 3-D drawings** that facilitate site and building design and technical documentation. The major focus of CEA is to expose students to the design and construction practices of residential and commercial building projects, design teams and teamwork, communication methods, building codes and ordinances, engineering design calculations, technical documentation and encourage students to become independent learners.

CEA is a high school level course that is appropriate for 10th- or 11th- grade students interested in careers related to civil engineering and architecture. Students should be concurrently enrolled in college preparatory mathematics and science courses.

ENGINEERING SCIENCE (POE) PEIMS#:N1303743 Grade Placement: 10-12 *non-weighted*) 1

Credit Prerequisite: IED, completion of or concurrently enrolled in Alg. II or higher level math

Principles of Engineering (POE) exposes students to some of the major concepts that one might encounter in a postsecondary engineering course of study. Students have an opportunity to investigate engineering and are introduced into the areas of mechanisms (simple machines, gears, pulley systems), thermal energy transfer, electrical circuits, machine control/robotics through programming with ROBOTC, fluid power (hydraulics/pneumatics), statics, material properties/testing, statistics and projectile motion. POE challenges students to continually hone their interpersonal skills, creative abilities, and problem-solving skills based upon engineering concepts. It also allows students to develop strategies to enable and direct their own learning, which is the ultimate goal of education.

ENGINEERING DESIGN AND DEVELOPMENT COURSE DESCRIPTION (EDD) PEIMS#:N1303749

Grade Placement: 11-12 *(specifically limited to seniors who have had all 3 previous engineering electives)* *Prerequisite: IED & CEA & POE (non-weighted)* 1 Credit

Engineering Design and Development (EDD) is the capstone course in the PLTW high school engineering program. Students will perform research to choose, validate, and justify a technical problem. After carefully defining the problem, students will design, build, and test their solution or prototype. Finally, students will present and defend their original solution to an outside panel. While progressing through the engineering design process, students will work closely with experts and will continually hone their organizational, communication and interpersonal skills, their creative and problem solving abilities, and their understanding of the design process. EDD is a high school level course that is appropriate for 12th grade studies.

SCIENTIFIC RESEARCH AND DESIGN (SRD) PEIMS#:1307200 Grade Placement: 12 (*specifically limited to seniors who have had all 3 previous engineering electives*) Prerequisite: IED & CEA & POE (*non-weighted*) 1 Credit Scientific Research and Design is a broad-based course designed to allow districts and schools considerable flexibility to develop local curriculum to supplement any program of study or coherent sequence. The course has the components of

any rigorous scientific or engineering program of study from the problem identification, investigation design, data collection, data analysis, formulation, and presentation of the conclusions. All of these components are integrated with the career and technical education emphasis of helping students gain entry-level employment in high-skill, high-wage jobs and/or continue their education. Students must meet the 40% laboratory and fieldwork requirement. This course satisfies a high school science graduation requirement. Students shall be awarded one credit for successful completion of this course. Students may take this course with different course content for a maximum of three credits.

Industry Based Certification: Autodesk Certified Professional in Revit for Structural Design

Engineering Career Cluster



The Engineering career cluster focuses on planning, designing, testing, building, and maintaining of machines, structures, materials, systems, and processes using empirical evidence and science, technology, and math principles. This career cluster includes occupations ranging from mechanical engineer and drafter to electrical engineer and to mapping technician.

Statewide Program of Study: Engineering Foundations

The Engineering Foundations program of study focuses on occupational and educational opportunities associated with a wide range of skills applied in the Engineering Industry. Students will design, test, and evaluate projects related to engines, machines, and structures. This program of study includes applying scientific, mathematical, and empirical evidence to solve problems through innovation, design, construction, operation, and maintenance of different engineering systems.

Secondary Courses for High School Credit



Introduction to Engineering Design (ETW)	
Level 1	
Level 2	<ul style="list-style-type: none"> • Civil Engineering and Architecture (ETW) • Engineering Design and Development (ETW)
Level 3	
Level 4	<ul style="list-style-type: none"> • Scientific Research and Design

Aligned Advanced Academic Courses

	AP Calculus AB	AP Physics 1	IB Physics SL
AP or IB	AP Computer Science A	AP Physics 2	IB Physics HL
		AP Statistics	IB Computer Science SL
			IB Computer Science HL

Dual Credit Dual credit offerings will vary by local education agency.

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

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> • Intern at an engineering, robotics, or aerospace company. • Visit an engineering firm and shadow multiple types of engineers.
Expanded Learning Opportunities	<ul style="list-style-type: none"> • Participate in SkillsUSA or TSA • Join a local engineering association and attend meetings.

Aligned Industry-Based Certifications

- Autodesk Certified Professional Fusion 360
- Autodesk Certified Professional in Revit for Structural Design



Example Postsecondary Opportunities

Apprenticeships

- Industrial Engineering Technician Apprenticeship



Associate Degrees

- Manufacturing Engineering Technology/Technician
- Robotics Technology/Technician

Bachelor's Degrees

- Electrical and Electronics Engineering
- Engineering, General

Master's, Doctoral, and Professional Degrees

- Electrical and Electronics Engineering
- Engineering, General

Additional Stackable IBCs/Licensures

- Professional Engineer (PE License)
- Engineer in Training Certification (EIT)

Example Aligned Occupations

Civil Engineering Technologists and Technicians

Median Wage: \$61,138
Annual Openings: 765
10-Year Growth: 11%

Aerospace Engineers

Median Wage: \$115,694
Annual Openings: 483
10-Year Growth: 18%

Mechanical Engineers

Median Wage: \$99,937
Annual Openings: 1,755
10-Year Growth: 19%

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




For more information visit:

<https://tea.texas.gov/education/secondary-education/industry-based-education/industry-based-education-program-of-study-additional-courses>





Engineering Career Cluster

Statewide Program of Study: Engineering Foundations







Course Information

Course	Prerequisites Corequisites	Career Clusters
Level 1 Introduction to Engineering Design (PLTW)* N1303742 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Course Information

Course	Prerequisites Corequisites	Career Clusters
Level 3 Civil Engineering and Architecture (PLTW)* N1303747 (1 credit)	Prerequisites: None Corequisites: College Prep Math and Science Recommended Prerequisites: Introduction to Engineering Design Recommended Corequisites: None	 
Engineering Design and Development (PLTW)* N1303749 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: At least two courses in engineering with at least one being a Level 2 or higher course Recommended Corequisites: None	 

Course Information

Course	Prerequisites Corequisites	Career Clusters
Level 4 Scientific Research and Design* 13037200 (1 credit)	Prerequisites: Biology, Chemistry, Integrated Physics and Chemistry (IPC), or Physics Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	     

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

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



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INFORMATION TECHNOLOGY

CYBERSECURITY

FOUNDATIONS OF CYBERSECURITY PEIMS#:03580850 Grade Placement: 9-12 1 Credit

In the Foundations of Cybersecurity course, students will develop the knowledge and skills needed to explore fundamental concepts related to the ethics, laws, and operations of cybersecurity. Students will examine trends and operations of cyberattacks, threats, and vulnerabilities. Students will review and explore security policies designed to mitigate risks. The skills obtained in this course prepare students for additional study in cybersecurity. A variety of courses are available to students interested in this field. Foundations of Cybersecurity may serve as an introductory course in this field of study.

Industry Based Certification:

DIGITAL FORENSICS PEIMS#:03580360 Grade Placement: 9-12 1 Credit

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

AP COMPUTER SCIENCE A PEIMS#:A3580110 (Math), A3580120 (LOTE) Grade Placement: 9-12 2 Credits *Recommended Prerequisites: Algebra I or a student should be comfortable with functions and the concepts found in the uses of functional notation such as $f(x) = x + 2$ and $f(x) = g(h(x))$.* Content requirements for Advanced Placement (AP) Computer Science A are prescribed in the College Board Publication Advanced Placement Course Description: Computer Science A, published by The College Board.

CYBERSECURITY CAPSTONE PEIMS#:03580855 Grade Placement: 11-12 1 Credit

In the Cybersecurity Capstone course, students will develop the knowledge and skills needed to explore advanced concepts related to the ethics, laws, and operations of cybersecurity. Students will examine trends and operations of cyberattacks, threats, and vulnerabilities. Students will develop security policies to mitigate risks. The skills obtained in this course prepare students for additional study toward industry certification. A variety of courses are available to students interested in the cybersecurity field. Cybersecurity Capstone may serve as a culminating course in this field of study.

Information Technology Career Cluster

The Information Technology (IT) career cluster focuses on the design, development, support, and management of hardware, software, multimedia, and systems integration services. This career cluster includes occupations ranging from Software Developer and Programmer to Cybersecurity Specialists and Network Analysts.

Statewide Program of Study: Cybersecurity

The Cybersecurity program of study focuses on occupational and educational opportunities associated with planning, implementing, upgrading, or monitoring security measures for the protection of computer networks and information. This program of study includes responding to computer security breaches and viruses and administering network security measures.



Secondary Courses for High School Credit

Level 1 Foundations of Cybersecurity

- Level 3
 - Digital Forensics
 - AP Computer Science A

- Level 4
 - Cybersecurity Capstone

Aligned Advanced Academic Courses

- AP or IB
 - AP Computer Science Principles
 - AP Computer Science A

- Dual Credit
 - Dual credit offerings will vary by local education agency.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Intern at a local bank, hospital, or government office to develop skills in implementing security measures
- Interview with an information security analyst to learn how they plan for, monitor, and upgrade security measures at their organization

Expanded Learning Opportunities

- Participate in a Hackathon
- Participate in TSA or SkillsUSA

Aligned Industry-Based Certifications

- Cybersecurity Fundamentals
- Cybersecurity Fundamentals: An ISACA Certificate
- Information Technology Specialist: Networking
- Information Technology Specialist: Java
- Information Technology Specialist: JavaScript
- Microsoft 365 Fundamentals
- Microsoft Security, Compliance, and Identity Fundamentals

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



Examples Postsecondary Opportunities

Associate Degrees

- Computer and Information Systems Security
- Computer Programming

Bachelor's Degrees

- Computer Science
- Computer Software Engineering

Master's, Doctoral, and Professional Degrees

- Computer and Information Systems Security/Auditing/Information Assurance
- Computer Software Engineering

Additional Stackable IBCs/License

- Certified Ethical Hacker (CEH)



Example Aligned Occupations

Computer User Support Specialists

Median Wage: \$51,411

Annual Openings: 5,757

10-Year Growth: 21%

Software Developers

Median Wage: \$111,705

Annual Openings: 15,324

10-Year Growth: 36%

Information Security Analysts

Median Wage: \$110,268

Annual Openings: 1,719

10-Year Growth: 49%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/2/2024.



For more information visit:

<https://teatexas.org/education/career-clusters-and-industry-credentials-and-technical-education/program-of-study-additional-resources>



Information Technology Career Cluster

Statewide Program of Study: Cybersecurity

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
Foundations of Cybersecurity 03580850 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 3

Course	Prerequisites Corequisites	Career Clusters
Digital Forensics 03580360 (1 credit)	Prerequisites: Foundations of Cybersecurity Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
AP Computer Science A* A3580110 (1 math credit) A3580120 (1 LOTE credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Algebra I or a student should be comfortable with functions and the concepts found in the uses of functional notation such as $f(x) = x + 2$ and $f(x) = g(h(x))$ Recommended Corequisites: None	

Level 4

Course	Prerequisites Corequisites	Career Clusters
Cybersecurity Capstone 03580855 (1 credit)	Prerequisites: Foundations of Cybersecurity Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

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

For additional information on the Information Technology career cluster,
contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Cybersecurity

ARTS. AUDIO VISUAL TECHNOLOGY. AND COMMUNICATIONS

Digital Communications

AUDIO/VIDEO PRODUCTION I PEIMS# 13008500 Grade Placement: 9-12 1 Credit

In addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the industry with a focus on pre-production, production, and post production audio and video products.

Industry Based Certifications: Adobe

AUDIO/VIDEO PRODUCTION II PEIMS#: 13008600 Grade Placement: 10-12 1 Credit

Building upon the concepts taught in Audio/Video Production, in addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an advanced understanding of the industry with a focus on pre-production, production, and post- production products. This course may be implemented in an audio format or a format with both audio and video..

Industry Based Certifications: Adobe

PRACTICUM OF AUDIO/VIDEO PRODUCTION PEIMS#: 13008700 Grade Placement: 11-12 2 Credits

Building upon the concepts taught in Audio/Video Production II and its corequisite Audio/Video Production II Lab, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an increasing understanding of the Industry with a focus on applying preproduction, production, and post-production audio and video products in a professional environment. This course may be implemented in an advanced audio/video or audio format. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.

Industry Based Certification



Arts, Audio Visual Technology, and Communication Career Cluster

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

Statewide Program of Study: Digital Communications

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



Secondary Courses for High School Credit

Level 2	• Audio/Video Production I
Level 3	• Audio/Video Production II
Level 4	• Practicum in Audio/Video Production

Aligned Advanced Academic Courses

AP or IB	IB Film SL IB Film HL
Dual Credit	Dual credit offerings will vary by local education agency.

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

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Shadow a sound designer to learn how sound and foley are created for movies or podcasts
- Intern with a technical director at a sports team, recording studio, or radio station
- Shadow a technician on a live news broadcast, concert, or other event

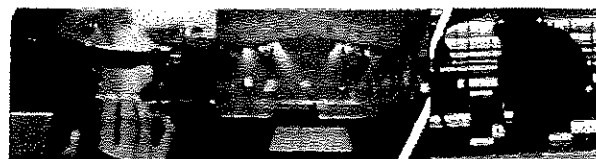
Expanded Learning Opportunities

- Participate in SkillsUSA or TSA
- Participate in Student Television Network
- Capture and edit film and audio for a podcast with a local community organization

Aligned Industry-Based Certifications

- Adobe Certified Professional in Digital Video Using Adobe Premiere Pro
- Adobe Certified Professional in Print and Digital Media Publication Using Adobe InDesign
- Adobe Certified Professional in Visual Design
- Adobe Certified Professional in Visual Design Using Adobe Photoshop

Successful completion of the Digital Communications program of study will fulfill requirements of the business and industry endorsement.



Example Postsecondary Opportunities

Apprenticeships

- Light Technician

Associate Degrees

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

Bachelor's Degrees

- Cinematography and Film/Video Production
- Recording Arts Technology

Master's, Doctoral, and Professional Degrees

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

Additional Stackable IBCs/License

- CompTIA Digital Media and Entertainment Professional Certification (DMEP)

Example Aligned Occupations

Camera Operators, Television, Video, and Film

Median Wage: \$48,422

Annual Openings: 155

10-Year Growth: 20%

Audio and Video Technicians

Median Wage: \$46,319

Annual Openings: 626

10-Year Growth: 30%

Producers and Directors

Median Wage: \$65,029

Annual Openings: 522

10-Year Growth: 12%

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

For more information visit:

<https://www.texasworkforce.com/education/career-and-college-preparation-and-technical-education/programs-of-study-and-certifications>





Arts, Audio Visual Technology, and Communication Career Cluster

Statewide Program of Study: Digital Communications

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
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Principles of Arts, Audio/Video Technology, and Communications*
13008200 (1 credit)

Prerequisites: None
Corequisites: None
Recommended Prerequisites: None
Recommended Corequisites: None



Level 2

Course	Prerequisites Corequisites	Career Clusters
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Audio/Video Production I
13008500 (1 credit)

Prerequisites: None
Corequisites: None
Recommended Prerequisites: Principles of AAVTC
Recommended Corequisites: None



Level 3

Course	Prerequisites Corequisites	Career Clusters
--------	------------------------------	-----------------

Audio/Video Production II
13008600 (1 credit)

Prerequisites: Audio/Video Production I
Corequisites: None
Recommended Prerequisites: None
Recommended Corequisites: None



Level 4

Course	Prerequisites Corequisites	Career Clusters
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Practicum in Audio/Video Production
First Time Taken:
13008700 (2 credits)
Second Time Taken:
13008710 (2 credits)

Prerequisites: Audio/Video Production II and Audio/Video Production II Lab
Corequisites: None
Recommended Prerequisites: None
Recommended Corequisites: None



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

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



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ENGLISH LANGUAGE ARTS

(4 credits needed for the Foundation Plan)

ENGLISH I (required EOC) PEIMS#:03220107

Grade Placement: 9 1 Credit

This course covers communication in reading, writing, speaking and listening. Students will study the various genres of literature, including short stories, novels, non-fiction prose, drama, and poetry. A major component of the English I curriculum is preparation for the End Of Course test administered in April each year. Students will begin a four-year vocabulary development program designed to strengthen skills and prepare students for college entrance exams. Students will develop stronger composition skills through the study of process writing, grammar, and a focus on mechanical skills.

ENGLISH I HONORS (required EOC) PEIMS#: 03220100

Grade Placement: 9 (weighted) 1 Credit

This is an accelerated, literature-based curriculum. Students will study the various genres of literature, including short stories, novels, biographies, autobiographies, drama, and poetry. Skills emphasized include independent reading and study, higher level thinking skills, and research skills. This course requires extensive out-of-class reading, writing, and preparation time. This course will serve the needs of the Gifted and Talented students and will prepare students for the Dual Credit classes taken during their junior and senior years.

ENGLISH II (required EOC) PEIMS#:03220200 Grade Placement: 10 1 Credit

This course covers communication in reading, writing, speaking and listening. A major component of English II is developing strong composition skills through the study of process writing in preparation for the English Language Arts End of Course test given in April each year. Students will study the various genres of literature, including short stories, novels, non fiction essays, drama, and poetry. Students will continue the four-year vocabulary development program designed to strengthen skills and prepare students for college entrance exams.

ENGLISH II HONORS (required EOC) PEIMS#:03220200 Grade Placement: 10 (weighted) 1 Credit

This is an accelerated, literature-based curriculum. Students will study the various genres of literature and read extensively in novels, short stories, poetry, drama, biography, and autobiography. Students will engage in independent reading and study, higher level thinking skills, and research skills. This course requires extensive out-of-class reading, writing, and preparation time. Students will write multiple expository, persuasive and argumentative essays. In this class, students are preparing for the Advanced Placement exams and Dual Credit classes taken during their junior and senior years. Summer reading is required. This course will serve the needs of Gifted and Talented students.

ENGLISH III PEIMS#: 03220300 Grade Placement: 11 1 Credit

This course covers organized communication in the following strands: reading, where students read and understand a wide variety of literary and informational texts; writing, where students compose a variety of written texts with a clear controlling idea, coherent organization, and sufficient detail; research, where students are expected to know how to locate a range of relevant sources and evaluate, synthesize, and present ideas and information; listening and speaking, where

students listen and respond to the ideas of others while contributing their own ideas in conversations and in groups; and oral and written conventions, where students learn how to use the oral and written conventions of the English language in speaking and writing. The course also focuses on the continuation of the four-year vocabulary development program designed to prepare students for college entrance exams.

ENGLISH III ADVANCED PLACEMENT LANGUAGE AND COMPOSITION PEIMS#: A3220100 Grade Placement: 11 (weighted) 1 Credit

This advanced placement class will emphasize college level analysis and composition skills in preparation for taking the College Board Advanced Placement test in Language and Composition offered by the College Board in May of each year. The course content includes the rhetorical analysis of prose passages from a variety of sources, with an emphasis on fiction, nonfiction, drama, and poetry written by American authors. Students will study rhetorical devices, language usage, and genre conventions. Students will write expository, argumentative, and synthesis essays in preparation for the AP test. This course requires extensive out-of-class reading, writing, and preparation time. Summer reading is required. This course will serve the needs of Gifted and Talented students.

ENGLISH IV PEIMS#: 03220400 Grade Placement: 12 1 Credit

This course covers organized communication in the following strands: reading a wide variety of literary and informational texts; writing at the essay level using a clear controlling idea, coherent organization, sufficient detail, and the written conventions of the English language; listening and responding orally to the ideas of others while contributing their own ideas in conversations and in groups; and research using relevant sources and synthesizing and presenting ideas and information. This course is designed to prepare students for higher education either at a community college, a four-year university, or a technical school. During the first semester, students will complete college applications, prepare for college entrance exams, write several essays, prepare a resume, and write an MLA-formatted research paper focused on college and/or careers. The second semester of English IV is a survey of the major periods and works of British Literature. Students will study the history of the English language and continue the vocabulary development program designed to strengthen skills and prepare students for college entrance exams.

ENGL 1301: COMPOSITION I PEIMS#:03220300 Grade placement: 11 or 12 (weighted) ½ Credit First semester of English III credit. 3 hours of college credit.

Meet entrance requirements for Del Mar College (Assessment Levels: R3, E3, M0); Complete Del Mar College Application

This course provides students with an intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. The course places an emphasis on effective rhetorical choices, including audience, purpose, arrangement, and style. The course focuses on writing the multi page academic essay as a vehicle for learning, communicating, and critical analysis. In order to meet English III TEKS, the course also focuses on a study of American literature.

ENGL 1302: COMPOSITION II PEIMS#:03220300 Grade placement: 11 or 12 (weighted) ½ Credit Second semester of English III credit. 3 hours of college credit.

Prerequisite: Successful completion of ENGL 1301; Complete Del Mar application; Meet Del Mar College Assessment Levels: R3, E3, M0.

This course is a continuation of ENGL 1301. This course provides students with an intensive study of and practice in strategies and techniques for developing research-based expository and persuasive texts. The course places an emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; the critical reading of verbal, visual, and multimedia texts; the systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions. In order to meet English III TEKS, the course also focuses on a study of American literature.

ENGLISH IV ADVANCED PLACEMENT LITERATURE & COMPOSITION PEIMS#:A3220200 Grade Placement: 12 (weighted) 1 Credit

This advanced placement class will emphasize college level analysis and composition skills in preparation for taking the College Board Advanced Placement test in Literature and Composition offered by the College Board in May of each year. The course content will include a survey of British and World literature from various time periods. Students will write literary analytical and argumentative essays in preparation for the Advanced Placement test. This course requires extensive out-of-class reading, writing, and preparation time. Summer reading is required. This course will serve the needs of Gifted and Talented students.

ENGL 2332: WORLD LITERATURE I PEIMS#: 03220400 Grade Placement: 12 (weighted) ½ Credit First semester of English IV credit. 3 hours of college credit.

This course will be taught in the fall semester.

Prerequisite: Successful completion of ENGL 1301 and 1302 (complete Del Mar application; meet Del Mar College assessment levels R3, E3, M0)

This course focuses on a survey of world masterpieces from the ancient world through the sixteenth century. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions. Attention is given to writing about literature. Students will read extensively and write multipage research-based literary analysis essays, documenting both primary and secondary sources.

TSI Assessment Levels: R3, E3, M0

ENGL 2322: BRITISH LITERATURE I PEIMS#: 03220400 Grade Placement: 12 (weighted) ½ Credit Second semester of English IV credit. 3 hours of college credit.

This course will be taught in the spring semester.

Prerequisite: Successful completion of ENGL 1301 and 1302;complete Del Mar application; meet Del Mar College assessment levels R3, E3, M1).

This course focuses on a survey of the development of British literature from the Anglo-Saxon period to the eighteenth century. Students will study works of prose, poetry, drama and fiction in relation to their historical, linguistic, and cultural contexts. Texts will be selected from a diverse group of authors and traditions. Students will read extensively and write multipage research-based literary analysis essays, documenting both primary and secondary sources.

TSI Assessment Levels: R3, E3, M0

ENGLISH LANGUAGE ARTS ELECTIVES

JOURNALISM PEIMS#: 03230100 Grade Placement: 9-12 (fall semester only) Maximum students = 22 ½ Credit
Students enrolled in Journalism write in a variety of forms for a variety of audiences and purposes. They are expected to plan, draft, and complete written compositions on a regular basis, carefully examining their papers for clarity, engaging language, and the correct use of the conventions and mechanics of written English. Writing, technology, visual, and electronic media are used as tools for learning as students create, clarify, critique, write, and produce effective communications. Students enrolled in Journalism will learn journalistic traditions, research self-selected topics, write journalistic texts, and learn the principles of traditional and electronic publishing. This semester-long course is a prerequisite for Advanced Journalism and must be taken with photojournalism.

PHOTOJOURNALISM PEIMS#: 03230800 Grade Placement: 9-12 (spring semester only) Maximum students = 22 ½ Credit
Prerequisite: Must be enrolled in Journalism during the fall semester.

The course will cover camera use and care, camera techniques, photo composition, and the appropriate use of Adobe Photoshop to prepare images for publication and personal portfolios. Students enrolled in Photojournalism communicate in a variety of forms for a variety of audiences and purposes and are expected to plan, interpret, and critique visual representations, carefully examining their product for publication. Students will become analytical consumers of media and technology to enhance their communication skills. Students will study the laws and ethical considerations that impact photography. Technology, visual, and electronic media are used as tools for learning as students create, clarify, critique,

and produce effective visual representations. This semester-long course is a prerequisite for Advanced Journalism and must be taken with journalism.

ADVANCED JOURNALISM: YEARBOOK I, II & III PEIMS#: 03230110, 03230120, 03230130 Grade Placement: 10-12 1 Credit

Prerequisite: Journalism & Photojournalism OR Principles of Arts, A/V Technology and Communications, and/or approval by adviser.

Students enrolled in Advanced Journalism: Yearbook I, II & III communicate in a variety of forms for a variety of audiences and purposes. Students are expected to plan, draft, and complete written and/or visual communications on a regular basis, carefully examining their copy for clarity, engaging language, and the correct use of the conventions and mechanics of written English. In Advanced Journalism: Yearbook I, II & III, students are expected to become analytical consumers of media and technology to enhance their communication skills. In addition, students will learn journalistic ethics and standards. Writing, technology, and visual and electronic media are used as tools for learning as students create, clarify, critique, write, and produce effective communications. Students enrolled in Advanced Journalism: Yearbook I, II & III will refine and enhance their journalistic skills, research self-selected topics, and plan, organize, and prepare a project(s). In addition to planning and producing the Yearbook, Advanced Journalism students will also plan and produce a newsletter and an online newspaper.

DEBATE I, II, III, IV PEIMS#: 03240600, 03240700, 03240800, 03241200 Grade Placement: 9-12 1 Credit

Gaining a general understanding of the major forms of debate, studying logic and reasoning and learning to prepare and present actual debates, oratories, and extemporaneous speeches, are the objectives of this course in argumentation. Participation in competitive speech and debate events is encouraged for this class. Students will be required to assist with competition events. Debate II-III will build on the fundamentals and continue to develop speech and debate skills. Students must have the recommendation of the debate teacher to enroll in levels II and III. Courses must be taken in sequence.

MATHEMATICS

(3 credits needed for the Foundation Plan)

ALGEBRA I PEIMS#: 03100500 Grade Placement: 9 1 Credit *Prerequisite: Mathematics, Grade 8*

In Algebra I, students will build on the knowledge and skills for mathematics in Grades 6-8, which provide a foundation in linear relationships, number and operations, and proportionality. Students will study linear, quadratic, and exponential functions and their related transformations, equations, and associated solutions. Students will connect functions and their associated solutions in both mathematical and real-world situations. Students will use technology to collect and explore data and analyze statistical relationships. In addition, students will study polynomials of degree one and two, radical expressions, sequences, and laws of exponents. Students will generate and solve linear systems with two equations and two variables and will create new functions through transformations. Throughout the course, students learn to use basic algebraic tools to represent problem situations and to solve important classical problems. Students need to have a sound understanding of functions and their multiple representations that they gain from a strong Algebra course. **Algebra is an essential foundation for higher mathematics.** An important part of this course is the use of a TI-Nspire handheld device.

ALGEBRA I HONORS PEIMS#: 03100500

Grade Placement: 9 (weighted) 1 Credit

In Algebra I, students will build on the knowledge and skills for mathematics in Grades 6-8, which provide a foundation in linear relationships, number and operations, and proportionality. Students will study linear, quadratic, and exponential functions and their related transformations, equations, and associated solutions. Students will connect functions and their associated solutions in both mathematical and real-world situations. Students will use technology to collect and explore data and analyze statistical relationships. In addition, students will study polynomials of degree one and two, radical

expressions, sequences, and laws of exponents. Students will generate and solve linear systems with two equations and two variables and will create new functions through transformations. Throughout the course, students learn to use basic algebraic tools to represent problem situations and to solve important classical problems. Students need to have a sound understanding of functions and their multiple representations that they gain from a strong Algebra course. **Algebra is an essential foundation for higher mathematics.** Students are encouraged to use higher level thinking skills for application, analysis and synthesis of the mathematics concepts in a self-discovery approach. An important part of this course is the use of a TI-Nspire handheld device. Algebra I Honors will serve the needs of the Gifted and Talented students.

GEOMETRY PEIMS#: 03100700 Grade Placement: 9-12 1 Credit *Prerequisite: Algebra I*

Geometry is a course, which unifies plane geometry and coordinate geometry in a one-year course. The course includes the development of the nature of geometry, fundamental concepts and terminology of plane geometry, basic constructions, reasoning and limited proof. Topics include tools of geometry reasoning and proof; parallel and perpendicular lines, triangle properties, congruence & similarity of polygons, right triangles, including special and trigonometry, circles, polygons, polyhedrons, area, volume and logic. Technology is incorporated in the course through the TI-Nspire handheld devices and computers.

GEOMETRY HONORS PEIMS#: 03100700 Grade Placement: 9-12 (weighted) 1 Credit

Geometry is a course, which unifies plane geometry and coordinate geometry in a one-year course. The course includes the development of the nature of geometry, fundamental concepts and terminology of plane geometry, basic constructions, reasoning, and limited proof. Topics include tools of geometry reasoning and proof; parallel and perpendicular lines, triangle properties, congruence and similarity of polygons, right triangles, including special and trigonometry, circles, polygons, polyhedrons, area, volume and logic. Technology is incorporated in the course through TI-Nspire handheld devices and computers. Students are encouraged to use higher level thinking skills for application, analysis and synthesis of the mathematics concepts in a self-discovery approach. Algebra is used extensively in this course. Geometry Honors is an enriched course of study and will serve the needs of the Gifted & Talented student.

ALGEBRAIC REASONING PEIMS#:03102540 Grade Placement: 10-12 1 Credit *Prerequisite: Algebra 1*

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

ALGEBRA II PEIMS#:03100600 Grade Placement: 9-12 1 Credit *Prerequisite: Algebra I*

This course is a continuation of algebraic and geometric concepts developed in Algebra I and Geometry. Students will review solving equations, inequalities, and graphing functions. Students develop continued proficiency with algebraic expressions including linear, quadratic, exponential, logarithmic, and polynomial functions. The students will continue their foundation of functions, use symbol and manipulation to simplify and solve, connect algebra and geometry, study conic sections, work different methods for solving systems of equations, matrices, quadratic, square root, rational, exponential and logarithmic functions. Students will also focus on inverse functions, cubic and cube functions and describe their attributes as the functions are transformed on the coordinate plane. Students will continue to build on this foundation as they expand their understanding through other mathematical experiences. These are used as tools for understanding real-world applications of advanced mathematics.

ALGEBRA II HONORS PEIMS#:03100600 Grade Placement: 10-12 (weighted) 1 Credit

Algebra II Honors is an accelerated Algebra II class designed for more capable math students. This course is a continuation of algebraic and geometric concepts developed in Algebra I and Geometry. Students will review solving equations, inequalities, and graphing functions. Students develop continued proficiency with algebraic expressions

including linear, quadratic, exponential, logarithmic, and polynomial functions. The students will continue their foundation of functions, use symbol and manipulation to simplify and solve, connect algebra and geometry, study conic sections, work different methods for solving systems of equations, matrices, quadratic, square root, rational, exponential and logarithmic functions. Students will continue to build on this foundation as they expand their understanding through other mathematical experiences. These are used as tools for understanding real-world applications of advanced mathematics. Students planning to take Pre-Calculus, Dual Credit Algebra, or Calculus classes should enroll in this class.

PRECALCULUS PEIMS#:03101100 Grade Placement: 11-12 ½ -1 Credit

Precalculus is the preparation for calculus. The course approaches topics from a function point of view, where appropriate, and is designed to strengthen and enhance conceptual understanding and mathematical reasoning used when modeling and solving mathematical and real-world problems. Students systematically work with functions and their multiple representations. The study of Precalculus deepens students' mathematical understanding and fluency with algebra and trigonometry and extends their ability to make connections and apply concepts and procedures at higher levels. Students investigate and explore mathematical ideas, develop multiple strategies for analyzing complex situations, and use technology to build understanding, make connections between representations, and provide support in solving problems.

PRECALCULUS HONORS PEIMS#:03101100 Grade Placement: 11-12 (weighted) ½ -1 Credit

Precalculus is the preparation for calculus. The course approaches topics from a function point of view, where appropriate, and is designed to strengthen and enhance conceptual understanding and mathematical reasoning used when modeling and solving mathematical and real-world problems. Students systematically work with functions and their multiple representations. The study of Precalculus deepens students' mathematical understanding and fluency with algebra and trigonometry and extends their ability to make connections and apply concepts and procedures at higher levels. Students investigate and explore mathematical ideas, develop multiple strategies for analyzing complex situations, and use technology to build understanding, make connections between representations, and provide support in solving problems. Precalculus Honors will serve the needs of the Gifted and Talented students.

CALCULUS AB: ADVANCED PLACEMENT PEIMS#:A31000101 Grade Placement: 12 (weighted) 1 Credit

This advanced math course studies the concepts and skills associated with the following: functions and graphs, limits and continuity, differential calculus, and integral and calculus. Application of calculus to special functions is also addressed. Calculus will serve the needs of the Gifted and Talented students. Students enrolled in Honors Calculus may request that their course be counted as non-GPA.

COLLEGE PREPARATORY MATHEMATICS PEIMS#:CP111200 Grade Placement: 12 1 Credit *Prerequisites: To be eligible for course participation, students must demonstrate successful completion of Algebra I, Geometry, and one additional foundation mathematics credit and meet the passing standard on the Algebra I EOC. Algebra II is highly recommended. With principal approval, Grade 11 students who have met the above requirements may enroll in the course. Students must NOT have passed the Math TSI Assessment to be eligible for this course.*

College Preparatory Mathematics is a full credit course designed for students at the Grade 12 level whose performance on an end-of-course assessment instrument or coursework, a college entrance examination, or a Texas Success Initiative assessment instrument, indicate that the student is not ready to perform entry-level college coursework. In accordance with TAC, 74.26 and local district policies, students who are able to successfully complete only one semester of a two-semester course can be awarded credit proportionately. Consequently, a student may be awarded a half credit for successful completion of half of the college preparatory course. This half credit, when paired with another half credit from the list of allowable advanced mathematics courses, may satisfy the advanced mathematics requirement for students pursuing an endorsement. State credit will be awarded for students on foundation plan only. Local credit will be awarded for students on recommended or distinguished plan.

COLLEGE ALGEBRA MATH 1314 (DUAL CREDIT -- ONLINE) PEIMS#:03102500 Grade Placement: 11-12

Credit: High School credit for Independent Study in Math 1 Credit

Prerequisite: TSI Assessment Levels: R3, E3, M3; completed coursework in Algebra I, Algebra II, and Geometry

Fundamentals of algebra, including inequalities, functions, quadratic equations, exponential and logarithmic functions, systems of equations, determinants and instructor option of binomial theorem or progressions (or both).

MATH 1324 Mathematics for Business and Social Sciences I (DUAL CREDIT-ONLINE) PEIMS#:12259

Grade Placement: 10 - 12 (*weighted*) 3 college hour 1 Credit

TSI Assessment Levels: R3, E1, M3

A study of linear equations, systems of linear equations, systems of linear inequalities, linear programming, probability, logarithmic, exponential functions, and mathematics of finance.

MATH 1325 Mathematics for Business and Social Sciences II (DUAL CREDIT-ONLINE) PEIMS#: 12262

Grade Placement: 10 - 12 (*weighted*) 3 college hour 1 Credit

TSI Assessment Levels: R3, E1, M3

A study of functions, limits, differential calculus, integral calculus, and applications.

Prerequisite: MATH 1314 or 1324

ALGEBRA 1 EOC PEIMS#:84100EOC Grade Placement: 10-12 ½ - 1 Credit

Algebra 1 EOC is a fast-paced course with a high emphasis on both Algebra 1 and testing strategies. This course is designed to allow the student to focus and analyze their weaknesses in Algebra, and then create a plan of attack to address these areas.

SCIENCE

(3 credits needed for the Foundation Plan)

BIOLOGY PEIMS#:03010200 Grade Placement: 9-11 1 Credit In Biology, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Biology study a variety of topics that include: structures and functions of cells and viruses; growth and development of organisms; living systems; homeostasis; and ecosystems and the environment.

BIOLOGY HONORS PEIMS#:03010200 Grade Placement: 9-11 (*weighted*) 1 Credit

In Biology, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Biology study a variety of topics that include: structures and functions of cells and viruses; growth and development of organisms; living systems; homeostasis; and ecosystems and the environment. Biology I Honors is an enriched and accelerated course of study, will require extra commitment from the student and serves the needs of the Gifted and Talented students.

CHEMISTRY PEIMS#:03040000 Grade Placement: 10-12 1 Credit *Prerequisite: Biology and Algebra I (Suggested prerequisite: completion of or concurrent enrollment in a second year of math).*

In Chemistry, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Chemistry I Honors students study a variety of topics that include characteristics of matter, use of the Periodic Table, development of atomic theory and chemical bonding, chemical stoichiometry, gas laws, solution chemistry, thermochemistry, and nuclear chemistry.

CHEMISTRY HONORS PEIMS#:03040000 Grade Placement: 10-12 (*weighted*) 1 Credit

In Chemistry, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Chemistry I Honors students study a variety of topics that include characteristics of matter, use of the Periodic Table, development of atomic theory and chemical bonding, chemical stoichiometry, gas laws, solution chemistry, thermochemistry, and nuclear chemistry.

Chemistry Honors is an enriched and accelerated course of study, will require extra commitment from the student and serves as preparation for Chemistry Honors or a college chemistry course.

FORENSIC SCIENCE PEIMS#:13029500 Grade Placement: 11-12 1 Credit

Prerequisite: Biology, Chemistry

Forensic Science is a course that introduces students to the application of science to connect a violation of law to a

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

PHYSICS PEIMS#:03050000 Grade Placement: 11-12 1 Credit *Prerequisite: Algebra I and Geometry is suggested as a prerequisite or co-requisite*

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

PHYSICS HONORS PEIMS#:03050000 Grade Placement: 11-12 (weighted) 1 Credit

In Honors Physics, students conduct field and laboratory investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students study a variety of topics that include: laws of motion; changes within physical systems and conservation of energy and momentum; forces; thermodynamics; characteristics and behavior of waves; and atomic, nuclear, and quantum physics. Students in Honors Physics are in an enriched, accelerated course of study, which will require extra commitment and serves the needs of the Gifted and Talented students. Students who successfully complete Honors Physics will acquire factual knowledge within a conceptual framework, practice experimental design and interpretation, work collaboratively with colleagues, and develop critical thinking skills.

ENGINEERING SCIENCE (POE) PEIMS#:13037500 Grade Placement: 11-12 (*non weighted*)

Must be taken as 3rd or 4th year science 1 Credit *Prerequisite: IED, completed or concurrently enrolled in Alg. II or higher level math*

Principles of Engineering (POE) exposes students to some of the major concepts that one might encounter in a postsecondary engineering course of study. Students have an opportunity to investigate engineering and are introduced into the areas of mechanisms (simple machines, gears, pulley systems), thermal energy transfer, electrical circuits, machine control/robotics through programming with ROBOTC, fluid power (hydraulics/pneumatics), statics, material properties/testing, statistics and projectile motion. POE challenges students to continually hone their interpersonal skills, creative abilities, and problem-solving skills based upon engineering concepts. It also allows students to develop strategies to enable and direct their own learning, which is the ultimate goal of education.

AQUATIC SCIENCE PEIMS#:03030000 Grade Placement: 10-12 1 Credit *Prerequisite: Biology and suggested prerequisite of Chemistry or concurrent enrollment in Chemistry*

In Aquatic Science, students study the interactions of biotic and abiotic components in aquatic environments, including impacts on aquatic systems. Investigations and field work in this course may emphasize freshwater or marine aspects of aquatic science depending primarily upon the natural resources available for study near the school. Students who successfully complete Aquatic Science will acquire knowledge about a variety of aquatic systems, conduct investigations and observations of aquatic environments, work collaboratively with peers, and develop critical-thinking and problem-solving skills.

ANATOMY AND PHYSIOLOGY PEIMS#:13020600 Grade Placement: 11-12 1 Credit *Prerequisite: Biology and a second science credit*

This laboratory-oriented course deals with the structure and function of human body systems. The study of the 12 human body systems and their functions will be the main focus of the course. The course of study will include laboratory dissection of mammalian specimens along with lecture and discussion of the comparative anatomy of humans. Students will be introduced to fields and professions related to anatomy and science, such as nursing, athletic training, physical therapy, veterinary medicine, and human medicine. This will be done to encourage students to pursue a profession in science or a related medical field that would require some type of training and education after high school.

ANATOMY AND PHYSIOLOGY HONORS PEIMS#:13020600 Grade Placement: 11-12 1 Credit *Prerequisite: Biology*

and a second science credit

This laboratory-oriented course deals with the structure and function of human body systems. The study of the 12 human body systems and their functions will be the main focus of the course. The course of study will include laboratory dissection of mammalian specimens along with lecture and discussion of the comparative anatomy of humans. Students will be introduced to fields and professions related to anatomy and science, such as nursing, athletic training, physical therapy, veterinary medicine, and human medicine. This will be done to encourage students to pursue a profession in science or a related medical field that would require some type of training and education after high school.

EARTH SYSTEMS SCIENCE PEIMS#: 03060150 Grade Placement: 11-12 1 Credit

Prerequisite: three credits of science one of which can be taken concurrently and three units of math one of which can be taken concurrently;

The Earth Systems Science course is designed to build on students' prior scientific and academic knowledge and skills to develop their understanding of Earth's systems. These systems (the atmosphere, hydrosphere, geosphere, and biosphere) interact through time to produce the Earth's landscapes, climate, and resources. Students explore the geologic history of individual dynamic systems through the flow of energy and matter, their current states, and how these systems affect and are affected by human use.

BIOL 1408 General Biology: Fundamentals of Cell Biology(DUAL CREDIT-ONLINE) PEIMS#:12244 Grade Placement: 11 - 12 (*weighted*) 4 college hours 1 Credit

TSI Assessment Levels: R3, E3, M1

Scientific method, chemical properties of life, cells and organelles, metabolism, photosynthesis, respiration, cell division, genetics, molecular genetics and genetic engineering. Designed primarily to be the first biology course for nonscience majors.

BIOL 1409 General Biology: Diversity & Environment (DUAL CREDIT-ONLINE) PEIMS#:12245 Grade

Placement: 11-12 (*weighted*) 4 college hours 1 Credit TSI Assessment Levels: R3, E3, M1

Intended primarily for non science majors. Diversity, structure and life cycles of monerans, protists, fungi, plants, animals (including humans); population genetics, evolution, principles of ecology and global ecology. If a laboratory course is required, students should take either BIOL 1409 or BIOL 1309 accompanied by BIOL 1109 (Diversity and Environment Laboratory). Credit given for only one of BIOL 1309, BIOL 1407, or BIOL 1409

SOCIAL STUDIES

(3 credits needed for the Foundation Plan)

WORLD GEOGRAPHY PEIMS#: 03320100 Grade Placement: 9-12 1 Credit This course is a study of the characteristics of particular places in our contemporary world, things that make one place different from or similar to another and the meaning of likeness and differences among areas on the face of the earth. The course continues to help students become spatially oriented, develop their sense of time and understand the world is constantly changing.

WORLD GEOGRAPHY HONORS PEIMS#: 03320100 Grade Placement: 9-12 (*weighted*) 1 Credit

This course is a study of the characteristics of particular places in our contemporary world, things that make one place different from or similar to another and the meaning of likeness and differences among areas on the face of the earth. The course continues to help students become spatially oriented, develop the sense of time and understand the world is constantly changing. World Geography Honors is an enriched course of study and will serve the needs of the Gifted and Talented students.

WORLD HISTORY PEIMS#: 03340400 Grade Placement: 10-12 1 Credit This course is designed to give students an understanding of the changing world in which they live through an examination of cultures, their problems and achievements from earliest times.

2024 - 2025

ECON 2301 -Principles of Macroeconomics (DUAL CREDIT- ONLINE) PEIMS#:03310300 Grade Placement: 12 3 college hours (*weighted*) ½ Credit Assessment Levels: R3, E3, M3
Online course dual credit course.

Overview of the American economy, including structure and function of the economic system, and a comparison with alternative economic systems; study of the measurement and determination of national income in the U.S.; the nature and role of money in modern society; and the use of monetary and fiscal policy in the economy. This course will serve the needs of the Gifted and Talented students.

ECON 2302-Principles of Microeconomics(DUAL CREDIT-ONLINE) PEIMS#:03380022 Grade Placement: 12 (*weighted*) 3 college hour ½ Credit TSI Assessment Levels: R3, E3, M3

Analysis of the behavior of individual economic agents, including consumer behavior and demand, producer behavior and supply, price and output decisions by firms under various market structures, factor markets, market failures, and international trade.

This course will serve the needs of the Gifted and Talented students.

GOVT 2305- Federal Government: Federal Constitution and Topics(DUAL CREDIT-ONLINE) PEIMS#:03330100 Grade Placement: 12 (*weighted*) 3 college hour ½ Credit TSI Assessment Levels: R3, E3, M1

Origin and development of the U.S. Constitution, structure and powers of the national government including the legislative, executive and judicial branches, federalism, political participation, the national election process, public policy, civil liberties and civil rights. Note: GOVT 2305 will complete the Texas requirement in government for those who already have three semester hours in the U.S. Government and need three additional semester hours that include the government, history and constitution of Texas. This course will serve the needs of the Gifted and Talented students.

GOVT 2306- Texas Government: Texas Constitution and Topics(DUAL CREDIT-ONLINE) PEIMS#:03380001 Grade Placement: 12 (*weighted*) 3 college hour ½ Credit TSI Assessment Levels: R3, E3, M1

Origin and development of the Texas constitution, structure and powers of state and local government, federalism and intergovernmental relations, political participation, the election process, public policy, and the political culture of Texas. Students who have taken a government course at another college or university should contact an advisor or the Department of Social Sciences before enrolling in a Del Mar College government course.

This course will serve the needs of the Gifted and Talented students.

GENERAL PSYCHOLOGY (DUAL CREDIT-ONLINE) PEIMS#:03350100 Grade Placement: 11-12 ½ Credit Prerequisites: Assessment Levels: R3, E3, M1

Survey of major topics in psychology. Introduces the study of behavior and the factors that determine and affect behavior. This course is not exempt from "No pass – No play".

INTRO TO SOCIOLOGY (DUAL CREDIT-ONLINE) PEIMS#:03370100 Grade Placement: 11-12 ½ Credit Prerequisites: Assessment Levels: R3, E3, M1

Introduction to the concepts and principles used in the study of group life, social institutions, and social processes.

COMMUNITY CITIZENSHIP

Prerequisite: Eligible for LIFE placement/program by ARD.

This is a locally designed course that develops or improves the student's knowledge of civic rights, responsibilities within the school and community. Concepts such as voting, laws, unlawful behavior, volunteerism, rules, and regulations will be addressed individually as determined by the student's IEP.

ACTIVITIES OF DAILY LIVING

Grade Placement: 9-12

Prerequisite: Eligible for LIFE placement/program by ARD.

Coursework designed to develop or increase self-help skills necessary for success in life. Can be a suitable substitute for

WORLD HISTORY HONORS PEIMS#: 03340400 Grade Placement: 10-12 (*weighted*) 1 Credit This course is designed to give students an understanding of the changing world in which they live through an examination of cultures, their problems and achievements from earliest times. World History Honors offers an enriched and accelerated course of study. This will require extra commitment by the student and serves the needs of the Gifted and Talented students.

UNITED STATES HISTORY PEIMS#: 03340100 Grade Placement: 11 1 Credit The purpose of this course is to provide students an understanding of the problems that have grown out of events in the nation's history, of the forces that have helped to shape our political, social and economic institutions and of the ways each generation approached solutions to problems.

UNITED STATES HISTORY I (DUAL CREDIT-ONLINE) Spring PEIMS#: 033800002 Grade Placement: 11-12 (*weighted*) 3 college hours ½ Credit Credit: High School Special Topics in Social Studies

Assessment Levels: R3, E3, M1

Survey of the nation's colonial background, the struggle for independence, and the emergence of political parties; emphasis on individualism, westward expansion, social reform, and sectionalism. Both Spring and Fall U.S. History I Spring and U.S. History II Fall must be completed to receive a full credit.

U.S. History dual credit is an enriched course of study and will serve the needs of the Gifted and Talented students.

UNITED STATES HISTORY II (DUAL CREDIT-ONLINE) Fall PEIMS#: 03340100 Del Mar College (Online Instruction)

Grade Placement: 11-12 (*weighted*) 3 college hours 1 Credit Credit: High School US History

Assessment Levels: R3, E3, M1

Survey of Reconstruction; the impact of industrialization, urbanization, and immigration; the rise of America as a world power; the quest for economic security and for social justice. Both Spring and Fall U.S. History I Spring and U.S. History II Fall must be completed to receive a full credit.

U.S. History dual credit is an enriched course of study and will serve the needs of the Gifted and Talented students.

ECONOMICS-FREE ENTERPRISE PEIMS#: 03310300 Grade Placement: 12 ½ Credit Economics is a study of the American free enterprise system. The course focuses on the basic principles concerning production, consumption, and distribution of goods and services (the problem of scarcity) in the United States and a comparison with those in other countries around the world. Students analyze the interaction of supply, demand, and price. Students will investigate the concepts of specialization and international trade, economic growth, key economic measurements, and monetary and fiscal policy. Students will study the roles of the Federal Reserve System and other financial institutions, government, and businesses in a free enterprise system. Types of business ownership and market structures are discussed. The course also incorporates instruction in personal financial literacy. Students apply critical-thinking skills using economic concepts to evaluate the costs and benefits of economic issues.

US GOVERNMENT PEIMS#: 03330100 Grade Placement: 12 ½ Credit In the United States Government, the focus is on the principles and beliefs upon which the United States was founded and on the structure, functions, and powers of government at the national, state, and local levels. Students learn major political ideas and forms of government in history. A significant focus of the course is on the U.S. Constitution, its underlying principles and ideas, and the form of government it created. Students analyze major concepts of

republicanism, federalism, checks and balances, separation of powers, popular sovereignty, and individual rights and compare the U.S. system of government with other political systems. Students identify the role of government in the U.S. free enterprise system and examine the strategic importance of places to the United States. Students analyze the impact of individuals, political parties, interest groups, and the media on the American political system, evaluate the importance of voluntary individual participation in a constitutional democratic republic society, and analyze the rights guaranteed by the U.S. Constitution. Students examine the relationship between governmental policies and the culture of the United States. Students identify examples of government policies that encourage scientific research and use critical-thinking skills to create a product on a contemporary government issue.

technology requirements as determined by the ARD committee.

FINE ARTS

(1 credit needed for the Foundation Plan)

ART I PEIMS#: 03500100 Grade Placement: 9-12 1 Credit Art I will provide a foundation in four strands: perception; creative expression/ performance; historical/ cultural heritage; and critical evaluation. Art I provides opportunities in two and three dimensional processes including drawing, painting, printmaking, and sculpture. The Art I student will work from direct observation as well as their imagination. Sketch journals will be used in and out of class for concept notes, sketching and brainstorming. Art I also provides a broad overview of significant artists, styles and periods in art. Students will learn to use critical analysis by discussing and writing about art works of self and others. Students will also use criteria for evaluation of traditional and contemporary styles and periods in art. *Fall semester should be taken prior to the spring semester.*

DRAWING II, III, IV PEIMS#: 03500500, 03501300, 03502300 Grade Placement: 10-12 1 Credit *Prerequisite: One credit of Art I*

Drawing II, III, IV a student will continue developing drawing skills by the processes of observing, analyzing, interpreting visual references through practice. The student will use sketchbooks and journals to create exploratory studies and to process ideas; study structure in anatomy, organic and mechanical systems; Art II students will use purposeful decision-making to manipulate design concepts; and use a variety of drawing mediums. Students will study the impact of significant artists, discuss and write about the artworks of self and others. Students will use criteria for evaluation of traditional and contemporary styles. Students will use specific criteria to select and collect artworks for portfolios and student exhibitions.

PAINTING II, III, IV PEIMS#: 03500600, 03501400, 03502400 Grade Placement: 10-12 1 Credit *Prerequisite: One credit of Art I*

Painting students will use a variety of painting mediums to create works in a wide range of subjects, including still lifes, landscapes, portraits and conceptual paintings; use sketchbooks and journals to create exploratory studies and to process ideas; use purposeful decision making to manipulate design concepts and ideas. Students will study the impact of significant painters, discuss and write about the artworks of self and others. Painting students cultivate critical analysis by discussing and comparing criteria for evaluation of traditional and contemporary styles; emphasizes collaboration and use specific criteria to select and collect works for a portfolio and exhibition.

THEATRE ARTS I PEIMS#: 03250100 Grade Placement: 9-12 1 Credit This class provides an introduction to the fundamentals of acting. Emphasis is on performance, and every Theatre I student will participate in the cast or crew of the Fall Production. Students will also have the possibility to participate in Children's Theatre, Holiday-related programs and UIL contest preparations. Involvement with live performances helps build teamwork, problem-solving skills and social manners.

THEATRE ARTS II-IV PEIMS#: 03250200, 03250300, 03250400 Grade Placement: 10-12 1 Credit

These classes tackle more complicated material through scenes, monologues, prose and poetry studies. Advanced students will also have the opportunity to participate in any productions. Students must have the recommendation of the Theatre teacher to enroll in levels II and III. Some evening or weekend performances may be required.

THEATER PRODUCTION I-IV

Grade Placement: 10- 12

PEIMS#: 03250700, 03250800, 03250900, 03251000

1 Credit

This class will be cast & crew for the Spring Contest Production; and in UIL (University Interscholastic League) Academic Tournament. More than any other class, Theater Production focuses on ALL aspects of the Production process. Rehearsal attendance at school and after-school rehearsals is required. Attendance at all school, after-school, and contest

performances is mandatory. Students will travel to other schools, attend after-school rehearsals, and ultimately run the show backstage when the Director is not there. It is intense & highly rewarding. Students must have the recommendation of the Theatre teacher to enroll in Theatre Productions.

CHOIR I, CHOIR II, CHOIR III, CHOIR IV PEIMS#:03150900, 03151000, 03151100, 03151200 Grade Placement: 9-12 1 Credit High school choir is a course of study which develops musical concepts and skills related to choral music. Students learn to sing and perform music. No previous experience is required, however advanced choirs exist to continue to develop the students with experience from middle school. Instructional priorities include musicianship, critical listening, cultural growth, basic music theory, creative self expression, rehearsal and concert etiquette, self-discipline, responsible citizenship, effective communication, problem solving, and production of quality products. A variety of musical styles are performed. Concert season is ongoing and provides students an opportunity to continue musical growth and experience music literature. Individual, small, and large ensemble concepts and skills are emphasized. Three or more levels of performing choirs are offered at each school. Participation in a performing group offers the students the opportunity to experience a high level of teamwork, develop a high degree of personal responsibility, and acquire leadership skills

BAND I, BAND II, BAND III, BAND IV PEIMS#:03150100,03150200,03150300,03150400 Grade Placement: 9-12 ½ - 1 Credit *Prerequisite: Director's signature required.*

Instrumental music instruction is the primary purpose of Band I-IV. Full band rehearsals are supplemented by technical instructions, marching drills, winter guard competition and concert performances. Participation in band is designed to develop leadership and responsibility cooperation, self-discipline, diligence and cultural awareness.

APPLIED MUSIC/BAND I-IV PEIMS#:03152500,03152600,03152601,03152602 Grade Placement: 9-12 ½ - 1 Credit *Prerequisite: Band Director's signature*

This course is for students wanting to receive individual instrumental lessons.

ARTS 1301 Art Appreciation (Dual Credit- Online) PEIMS#:03500100 Grade Placement: 9 - 12 (*non-weighted*)

3 college hour 1 Credit TSI Assessment Levels: R3, E3, M1

Designed to help students develop an understanding of the visual arts through a basic survey of art mediums, visual elements such as line and color; a basic history of art.

HEALTH

(0.5 credits needed for the Foundation Plan)

HEALTH PEIMS#: 03810100 Grade Placement: 9-12 (Fall or Spring) ½ Credit The primary objectives of the health program are to provide opportunities for the student to acquire facts, develop proper attitudes and establish practices and habits that will contribute to personal and community health.

PERSONAL HEALTH & HYGIENE

Grade Placement: 9 - 13

Prerequisite: Eligible for LIFE placement/program by ARD.

This is a locally designed course that addresses basic skills necessary to maintain health and hygiene and determined by the ARD committee to be a suitable substitute for Health.

LANGUAGES OTHER THAN ENGLISH

(2 credits needed for the Foundation Plan)

SPANISH I PEIMS#:03440100 Grade Placement: 9-12 1 Credit This is an entry level course designed for the development of the four language skills: listening, speaking, reading and writing with an emphasis on oral proficiency and an understanding of Hispanic culture.

SPANISH II PEIMS#:03440200 Grade Placement: 9-12 1 Credit *Prerequisite: Spanish I*

Spanish II extends language competency in a proficiency-oriented curriculum through listening, speaking, reading, and writing. This course reviews and refines grammatical concepts and extends student knowledge of the culture and civilization associated with the Spanish language.

SPANISH III HONORS PEIMS#:03440300 Grade Placement: 11-12 (weighted) 1 Credit

Spanish III Honors promotes student understanding of the Spanish language at the intermediate proficiency level while sustaining more complex oral and written exchanges. Students are expected to read, write, present and interpret through the study of various themes. The students will continue their study of the culture and influences of the Spanish speaking countries as a way to gain an understanding of its people and language.

SPANISH IV ADVANCED PLACEMENT PEIMS#:A3440100 Grade placement 11-12 (weighted) 1 Credit

Spanish IV A.P. is designed to provide advanced high school students with a rich and rigorous opportunity to study the language and culture of the Spanish speaking world. This course is offered for the more highly motivated student who will commit the time to the study of the language in order to communicate at a more complex level through these forms of communication: interpersonal, presentational and interpretive. This course follows the A.P. curriculum and is the equivalent of an intermediate college or university Spanish course. Students will be required to take the Spanish Language and Composition A.P. exam in May.

COMMUNITY SKILLS PEIMS#:85000CS1 Grade Placement: 9-11

Prerequisite: Eligible for LIFE placement/program by ARD.

Coursework addresses speech (functional language skills) requirements that can be incorporated into a student's instructional program to develop or increase the ability to constructively communicate. This course is determined by the ARD committee to be a suitable substitute for a Language Other Than English requirement.

PHYSICAL EDUCATION
(1 credit needed for the Foundation Plan)

ATHLETICS I-IV/ P. E. Equivalent PEIMS#:PES00000,PES00001,PES00002, PES00003 SEE REGISTRATION FORM

Grade Placement: 9-12 1 Credit

Students participate in the school's various athletic programs. The purposes of these programs are to develop high moral character and leadership skills, to teach self-discipline, responsibility and to promote school spirit and sportsmanship. Students must be in the athletic period to participate in any sports. Boys must obtain a signature from the Athletic Director and girls must obtain a signature from the Girls' Coordinator.

CHEERLEADING I-IV PEIMS#: PES00013 Grade Placement: 9-12 (P.E. Equivalency) ½ - 1 Credit

Provides an opportunity to develop physical, behavioral, social, and creative skills in performance at athletic events. Attendance required at school functions other than athletics. Promotes the development of leadership, cooperation, self-confidence, self-discipline, responsibility, and poise.

AEROBIC ACTIVITIES PEIMS#: PES00051 Grade Placement: 9-12 1 Credit In Physical Education, students acquire the knowledge and skills for movement that provide the foundation for enjoyment, continued social development through physical activity, and access to a physically active lifestyle. The student exhibits a physically active lifestyle and understands the relationship between physical-activity and health throughout the lifespan. Students in aerobic activities are exposed to a variety of activities that promote health-related fitness. A major expectation of this course is for the student to design a personal fitness program that uses aerobic activities as a foundation.

GENERAL ELECTIVES

ACADEMIC DECATHLON I-IV PEIMS#:03221100,03221300, 03221600,03221610 Grade Placement: 9-12

Non-weighted 1 Credit A fall and/or spring semester elective course designed for students interested in competing in the academic decathlon. Studies in an interdisciplinary program fusing the essential element strands of language and literature, fine arts, social sciences and science will be offered.

APPLIED VOCATIONAL SKILLS

Grade Placement: 9

Prerequisite: Placement by ARD.

Students learn about the many different types of employment in this vocational exploration class. This class is intended to develop or improve functional application skills necessary to obtain and maintain employment.

APPLIED OCCUPATIONAL PREPARATION

Grade Placement: 10-13

Prerequisite: Eligible for LIFE placement/program by ARD.

Coursework includes the critical skills necessary for competitive employment. Students learn about the many types of employment settings through vocational exploration, assessment and training. This is campus/community based educational program (CBVE). CBVE may include unpaid work experiences conducted in various locations throughout the local community and on school campus.

PERSONAL SOCIAL SKILLS

Grade Placement: 9 -12

Prerequisite: Required and denoted by ARD.

This is a course used to help students learn self-control, interaction skills, and other personal/social skills necessary for success in school and community life.

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AVID I, II, III, & IV PEIMS#: N1290001, N1290002, N1290030, N1290033 Grade Placement 9-12 *Non-weighted* 10-12

1 Credit *Prerequisite: Interview-Application / Teacher Signature*

AVID (Advancement Via Individual Determination) is an elective designed to help support secondary growth and post secondary readiness. Through AVID, students will focus on gaining skills such as time management, organization, collaboration, test preparation, and study skills. Students will also participate in college and career research, college visits, service learning opportunities, and motivational and leadership activities. While gaining all these skills students will ultimately work towards college acceptance.

SPCH 1311 Introduction to Speech Communication (DUAL CREDIT-ONLINE) PEIMS#: 12265 Grade

Placement: 9 - 12 (*non-weighted*) 3 college hour ½ Credit TSI Assessment Levels: R3, E3, M1

Introductory course in theory and practice of speech communication behavior in personal relationships, small groups and public/professional communication situations. Introduces skills to communicate with others, participate effectively in groups and deliver researched public speeches.

SPCH 1315 Fundamentals of Public Speaking (DUAL CREDIT-ONLINE) PEIMS#:12264 Grade Placement: 10

- 12 (*Non-weighted*) 3 college hour ½ Credit TSI Assessment Levels: R3, E3, M1

Introductory course in theories and practices of speech communication behavior in public communication situations. Includes listener and audience analysis with an emphasis on research, organization and delivery of informative/persuasive presentations.

ACCT 2301 Principles of Financial Accounting (DUAL CREDIT-ONLINE) PEIMS#13016600 Grade Placement:

11- 12 (*non-weighted*) 3 college hour 1 credit TSI Assessment Levels: R3, E2, M0

An introduction to the fundamental concepts of financial accounting as prescribed U.S. generally accepted accounting principles (GAAP) as applied to transactions and events that affect business organizations. Students will examine the

procedures and systems to accumulate, analyze, measure, and record financial transactions. Students will use recorded financial information to prepare a balance sheet, income statement, statement of cash flows, and statement of shareholders' equity to communicate the business entity's results of operations and financial position to users of financial information who are external to the company. Students will study the nature of assets, liabilities, and owners' equity while learning to use reported financial information for purposes of making decisions about the company. Students will be exposed to International Financial Reporting Standards (IFRS).

LOCAL CREDIT COURSES

These courses are offered for local credit only. They may not count towards the required state credits. These classes can only be taken as a junior or senior --- with approval --- and the student enrollment is limited.

LIBRARY SCIENCE

Grade Placement: 11-12 ½ -1 Credit *Prerequisite: Passed EOC; "B" average; Librarian approval*

Develops library skills and the utilization of materials, resources, facilities, and services available in the library.

OFFICE AIDE

Grade Placement: 11-12 ½ -1 Credit *Prerequisite: Passed EOC; "B" average; Approval from the principal's office*

Enhances office etiquette, interpersonal relations, and communication. Offers training in clerical work and the use of office machines.

COUNSELOR OFFICE AIDE

Grade Placement: 11-12 ½ -1 Credit *Prerequisite: Passed EOC; "B" average; Approval from counselors' office*

Enhances office etiquette, interpersonal relations, and communication. Offers training in clerical work and the use of office machines.

Students following any of the above Career Clusters are eligible for the Sinton ISD P-TECH Academy.

An application must be completed and accepted.

P-TECH Academy Offers:

- Crosswalk aligning high school and college courses, grades 9-12 which enables a student to earn an associate degree or up to 60 college credit hours towards a baccalaureate degree.
- Summer Bridge Program focused on TSIA, College and Career Readiness
- Industry Based Certificates
- Level 1 Certificates
- Possibility of internships/apprenticeship, and or mentor
- Workbase learning opportunities

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<http://www.sintonisd.net/counselors/>

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Course Description Handbook***

2024-2025

