Sherman ISD
Sherman High School
Course Guide

2025-2026

SHERMAN
INDEPENDENT SCHOOL DISTRICT

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Administration Message:

Dear Students and Parents,

The information provided in this Course Selection Guide is designed to assist students and parents in planning and making decisions regarding your high school career. This guide includes a description of each course, as well as information about graduation requirements, career pathways and programs of study, college admission processes, and postsecondary college and career readiness requirements. Selecting courses is extremely important and you are encouraged to study the descriptions in this catalog when deciding your academic program of study. When selecting your courses, take time to consider your individual interests, graduation requirements, and expectations for college or a career. The secondary curriculum offers a full range of courses, including advanced academics, an array of Career and Technology Education programs, fine arts, and a comprehensive selection of elective courses. In addition to the core academic programs, there are a variety of extra-curricular and co-curricular programs, as well as numerous clubs and organizations available. If you have any questions, or need more information about the various resources, services, and programs available, please contact your campus counselor.

Sherman High School Administration Team

Non-Discrimination Statement

Sherman Independent School District does not discriminate on the basis of race, religion, color, national origin, sex or disability in providing education or providing access to benefits of education services, activities, and programs, including career and technology programs, in accordance with Title VI of the Civil Rights Act of 1964 as amended; Title IX of the Education Amendments of 1972; Section 504 of the Rehabilitation Act of 1973, as amended; and Title II of the Americans with Disabilities Act.

GENERAL INFORMATION

This guide is a comprehensive list of courses and information. Students should talk with counselors, parents, and teachers to ensure they are selecting appropriate courses that are challenging, align with any pathways they have chosen, and meet their specific graduation plan requirements.

COURSE DESCRIPTIONS

Students and parents should work together to explore SISD's course offerings. Course descriptions are arranged by subject and begin on page 15. Each course description will feature information about the grade level and the required and recommended prerequisites that must be satisfied prior to enrollment in the course. Some courses will require an application, a fee, and/or instructor approval.

COURSE SELECTION PROCESS

Each year, students will review their personal graduation or Four Year Plan progress with a counselor. The Four Year Plan is an embedded course selection document. It will enable the student and parent to review academic progress toward graduation, verify the desired coursework for the upcoming year, and provide the information needed should a student want different choices for courses. Students will complete a course verification form (Spring) should the student want different electives than are indicated on the Four Year Plan. Students should select courses based on their Four Year Plan **requirements**, desired **college** and **career** outcomes, and their **interests and abilities**. Student course selection submissions will be due to your campus counselor according to the schedule provided by the campus. Please be aware of any specific program and application deadlines as well as your campus registration deadlines. In March and April of each year, students will have an opportunity, through the course verification process, to indicate any desired changes. The window to request any final schedule changes for the 24-25 school year until May 24th. Please see the counseling office for more details.

SCHEDULE CHANGE GUIDELINES

In order to provide course continuity, enhance student learning, and allow for accurate projections of course offerings and class size; schedule changes after the first ten(10) days of school are limited to when the student:

- Failed a required course and must repeat the necessary course
- Is erroneously enrolled in a specific course for which they have already earned credit
- Is a senior and needs to drop a course in order to enroll in a course needed for graduation
- Has not completed the necessary prerequisite course to proceed in the enrolled course
- Desires to repeat a failed course in the classroom of a different teacher than they had during the first attempt
- WEIGHTED COURSES - students may request or be required to exit certain courses per the Advanced Academics Course Agreement. It can be found in the Academic Planning Guide

Requests for schedule changes meeting the criteria above must be initiated ONLY during the first five days of each semester. Schedule changes will always be subject to course availability.

GRADING GUIDELINES

To review specific information on grading systems, grade calculation, weighted and unweighted course grading, grading policy and procedures, and other important information about grading; Please review the **GRADING GUIDELINES DOCUMENT LINK** found on the SHS Web Page.

ADVANCED ACADEMICS COURSES

Sherman High School students have the opportunity to participate in Advanced Academics classes in English, Reading, Math, Science, Social Studies, and certain elective courses. These courses use an advanced academic curriculum, have a higher rigor level, faster pace, and more challenging assignments. The purpose is to challenge students academically and prepare them for the *College Board* Advanced Placement (AP) programs offered at Sherman High School. Students enrolled in Advanced Placement (AP) courses and Dual Credit (DC) courses are expected to do college level academic work, so taking an AA course before an AP or DC course can be very beneficial. Although it is helpful to begin taking Advanced Academics (AA) courses in middle school, taking these courses in middle school is not required for a student to enroll in Advanced Academics (AA), Dual Credit (DC), or *College Board* Advanced Placement (AP) courses in high school.

Advanced Placement AA/AP 4 year plan

Course	9th Grade	10th Grade	11th Grade	12th Grade	Additional Courses
English	AA English 1	AA English 2	English AP Language	English AP Literature	
Math	AA Algebra 1 AA Geometry	AA Geometry AA Algebra 2	AA Algebra 2 AP Pre Calculus	AP Pre Calculus AP Calculus AB/BC	AP Stats*
Science	AA Biology	AA Chemistry	AP Physics*	AP Chemistry*	AP Biology* AP Environmental Science*
Social Studies	AA World Geography AP Human Geography	AP World History	AP US History	AP Govt / AP Macro Econ	AP European History* AP Psychology*
LOTE		AA French 2 AA Latin 2 AA Spanish 2	AA French 3 AA Latin 3 AA Spanish 3	AP French 4 AP Latin 4 AP Spanish 4	AP Spanish 5
Fine Arts	AA Art 1	AA Art 2 AP Drawing	AA Art 3 AP 2D	AA Art 4 AP 3D	AP Music Theory*
Computer Science	AP Computer Science Principles*	AP Computer Science A*			

*These courses may be taken in different grades than what is listed.

*Jr/Sr level AP Science courses can be taken in any sequence.

GRADUATION/CREDIT REQUIREMENTS

FOUNDATION + ENDORSEMENT = 26 CREDITS

- **4 Credits ENGLISH** - English I,II,III, Advanced English
- **4 Credits MATH** - Algebra 1, Geometry, two credits in any advance Math course
- **4 Credits SCIENCE*** - One credit must be Biology, one credit in IPC/Chemistry/or Physics, and two credits in any advanced science course **subject to prerequisites*
- **3 Credits in Social Studies –** US History, World History, World Geography, Government, Economics
- **2 Credits of Languages Other Than English**
- **1 Credit of Physical Education**
- **1 Credit of Fine Arts**
- **7 Credit Electives –** at least 2 credits must be within chosen endorsement

(Required for general admission to a Texas public college or university)

DISTINGUISHED LEVEL OF ACHIEVEMENT = 26 CREDITS

- **4 Credits ENGLISH –** English I, II, III, IV or higher
- **4 Credits MATH -** Algebra I, Geometry, Algebra II, and 1 credit in any advanced Math course
- **4 Credits SCIENCE* -** One credit must be Biology, one credit in IPC/Chemistry/or Physics, and two credits in any advanced science course **subject to prerequisites*
- **3 Credits in Social Studies –** US History, World History, World Geography, Government, Economics
- **2 Credits of Languages Other Than English**
- **1 Credit of Physical Education**
- **1 Credit of Fine Arts**
- **7 Credit Electives –** at least 2 credits must be within chosen endorsement

(Required to be eligible for automatic admission to a Texas public college or university)

ENDORSEMENT OPTIONS

STEM*	Business & Industry	Public Services	Arts & Humanities	Multidisciplinary
*Must have Algebra II, Chemistry & Physics **CTE:** • Computer Science • Science, Engineering, Technology and Math (STEM) **NON-CTE:** • Courses • Adv. Math • Adv. Science	**CTE:** • Agriculture • Architecture & Construction • Arts, Audio/Visual Technology • Business-Finance Entrepreneurship • Transportation **NON-CTE:** • 4 additional English classes	**CTE:** • Health Services • Education & Training • Human Services • Law, Public Safety, Corrections & Security	**Additional Courses In:** • Social Studies • Languages Other than English • Fine Arts	Select courses from the curriculum of each of the other endorsement areas; Credits in a variety of ADVANCED COURSES from multiple content areas sufficient to complete the Distinguished Level of Achievement Plan.

Course Selection Information

Course Selection occurs throughout the school year by grade level.

Students earn credits for each individual course by successfully meeting the requirements of the course and meeting the attendance requirements of the state of Texas. The state of Texas requires a student to be present in a course for at least 90% of the total number of days the course meets to be eligible to earn credit.

Course Selection Guidelines:

1. Review your Four Year Plan
    - Make sure you know that you passed all of your classes this year so you are eligible for next year's classes
    - Decide what Level of classes you want (On Level, Advanced Academic, Dual Credit, Advanced Placement)
    - Review your Endorsement and/or Career Pathway requirements and make sure you are choosing the courses that you need
2. Select your courses
    - Students MUST select a minimum of 8 courses for Sherman High School each year.

      four core academic courses (English, Math, Science, and Social Studies)

      four elective courses (these could include additional academic courses)

Students who do NOT choose a complete schedule of 8 courses will be placed automatically into courses to develop a full schedule and meet graduation requirements.

- Some students may qualify for a reduced number of courses (typically seniors on track for graduation). If you are requesting fewer than 8 courses, please check with a counselor to be sure you qualify.

Students in high school are classified into grades based on earned credits. Students are reclassified at the beginning of each school year. High school credits earned in middle school are not used to advance a student's grade classification beyond their grade cohort. The number of credits required for grade classification is as follows:

- Freshmen - 9 0 - 4.5 Credits
- Sophomore - 10 5 Credits
- Junior - 11 12 Credits
- Senior - 12 18 Credits

ADVANCED PLACEMENT / DUAL CREDIT COURSE COMPARISON

	Advanced Placement®(AP®)	***Dual Credit(DC)***
Philosophy and Perspective	AP is a selection of college preparation courses offered in all academic areas, as well as foreign language and art. These courses are designed to be academically challenging and highly rigorous, exposing high school students to college-level instruction. College Board's mission is to increase college access for all students.	DC is a specific type of concurrent enrollment where a student receives both high school and college credit for the same class. The program provides students with the opportunity to establish an educational foundation that will enable them to continue their academic success at a college or university.
Curriculum	College Board provides the focus for all AP courses. Teachers must submit their syllabi to College Board for approval	DC courses will be equivalent to the corresponding course offered at the Grayson College main campus with respect to curriculum, materials, instruction, and course rigor. These standards are upheld regardless of the student composition of the class—whether entirely concurrently enrolled high school students or blended with full-time college students and high school students.
Learner Profile	AP students are: *Curious, Creative, Committed, Motivated, Organized* Students who are successful in AP courses tend to be strong readers, linear thinkers, and good writers, who are motivated and thrive in a rigorous classroom environment. They appreciate the flexibility of being able to enroll in individual AP courses based on their academic interests.	DC Students are: *Committed, Independent, Mature, Motivated, Organized Self-Starters* Students must meet Grayson College's requirements for admission. DC students tend to earn A's or B's in college preparatory high school classes. Students should possess advanced academic skills, and they should have the maturity level needed to be successful in college- level coursework.
Enrollment	Open enrollment for all 11th and 12th grade courses, with some courses specific to grade level: AP Human Geography (9th) AP World History (10th)	Open enrollment for high school students. Some courses require prerequisites.

	Advanced Placement®(AP®)	***Dual Credit(DC)***
Assessments	AP courses culminate in one final examination in May produced by College Board, which typically contain free-response and multiple choice portions. Registration for these examinations generally occurs in February. Students must be enrolled in the AP course to take the corresponding AP exam.	Before enrolling in DC, students must meet Grayson College's entrance requirements with a qualifying score on one of the following assessments: SAT, ACT, STAAR EOC, or TSI. The final course grade will be determined by the professor as stated in the course syllabus, including but not limited to, homework assignments, projects, essays, presentations, and/or quizzes/tests
College and University Admission	Students who take AP courses stand out in the college admissions process, due to the rigor and depth of coursework they have experienced.	Students who take DC courses stand out in the college admissions process, due to the rigor and depth of coursework they have experienced.
College and University Credit	Depending on the specific college/university, students who earn a qualifying score on an AP exam may receive college credit for that course. Students and parents should contact the college admissions counselor to verify the school's recognition policy.	Students who successfully complete a DC course with a passing grade are awarded both high school credit and college credit. Credit reflected on the student's Grayson College transcript may or may not be transferred to some colleges or universities, especially those outside of Texas. Students and parents should verify the school's recognition policy before attempting to transfer credit earned.
Financial Commitment	Average $20.00 for 1 examination. $40.00 for 2 or more examinations	Average $350 per course (3 credit hours), plus the cost of books or other supplies.
Grade Point Weighting	Tier I	Tier I

SHERMAN HIGH SCHOOL WEIGHTED COURSES

For students beginning with the graduating class of 2023

Courses will be designated as Tier I, Tier II, and Tier III. The Weighted Grade Conversion Table is located in the ***Grading Guidelines*** document on the district and campus website

Tier I Courses

These course earn grade point weighting - Eligible and designated Advanced Placement (AP) and Dual Credit (DC) courses

Tier II Courses

These courses earn grade point weighting - Eligible Advanced Academic courses and other courses locally designated as advanced, excluding AP and dual credit courses, shall be categorized and weighted as Tier II courses.

Tier III Courses

These courses do not earn grade point weighting - All other courses that do not carry the course label of AP, Dual Credit, or AA.

UIL Eligibility

UIL Eligibility and No Pass No Play - This is a state mandated program that requires students participating in school sanctioned extracurricular activities, governed by the University Interscholastic League (UIL), to have passing grades in all courses to maintain eligibility to participate.

Sherman ISD requires students to have a grade average of 70 or above in every class at each official UIL Eligibility Grade Check date in order to meet the requirement to participate. Students who have a grade of “I”, meaning an incomplete grade, at the time of an eligibility check are considered to be failing and therefore ineligible to participate under UIL guidelines.

There are certain courses that are approved for an exemption by the UIL due to their designation as an honors level course. These typically include Advanced Placement and International Baccalaureate courses or other courses locally designated that meet the requirements under Texas Administrative Code 74.30. In SISD, this includes all Advanced Academic, Dual Credit, and Advanced Placement Courses under the honors designation, resulting in an exemption from No Pass No Play guidelines. Exemption in honors designated courses in SISD does NOT mean that any failing grade results in an exemption. Specifically, students enrolled in an honors designated course who receive a reported grade of 60-69 at a UIL checkpoint may receive an exemption and be eligible to continue to participate in the UIL activity.

SHERMAN HIGH SCHOOL WEIGHTED COURSES

English	Math	Science	Social Studies	Fine Arts	LOTE	Electives
AA English 1	AA Algebra 1	AA Biology	AA World Geography	AA Art 1	AA Spanish 2	College PE
G/TAA English 1	AA Geometry	AP Biology	AP Human Geography/ GT AP Human Geography	AA Art 2 - Drawing & Painting	AA Spanish 3	Learning Frameworks (Dual Credit)
AA English 2	AA Algebra 2	College Biology/Lab	AP European History	AA Art 3 - Drawing & Painting	AP Spanish 4 - Language & Culture	Intro to Computing (Dual Credit)
G/TAA English 2	AP Pre-Calculus	AA Chemistry	AP World History	AA Art 4 - Drawing & Painting	AP Spanish 5 - Literature	College Psychology
AP English 3 - Lang. & Comp.	College Algebra	AP Chemistry	G/T AP World History	AP Studio Art - Drawing Portfolio	AA French 2	College Sociology
G/T AP English 3 - Lang. & Comp.	College Statistics	AP Physics 1	AP World History	AP Studio Art 2D - Design Portfolio	AA French 3	College Speech
College English 1301 & 1302	AP Statistics	AP Physics 2	AP U.S. History	AP Art 3D - Design Portfolio	AP French 4	College Humanities
AP English 4 - Lit. & Comp.	AP Calculus AB	AP Physics C - Mechanics	G/T AP U.S. History	AP Art History	AA Latin 2	College Philosophy
G/T AP English 4 - Lit. & Comp.	AP Calculus BC	AP Physics C - Elect. & Mag.	College History 1301 & 1302	AP Music Theory 1	AA Latin 3	AP Computer Science A
		AP Environment. Science	College Federal Government 2305		AA Spanish 2	AP Comp. Science - Principles
			AP U.S. Government & Politics		AA Spanish 3	
			College Economics		AP Spanish 4 - Language & Culture	
			AP Macroeconomics		College Music Appreciation	
			AP Psychology			
			College TX Government			

ENGLISH COURSES

ESOL I-II

I - LA1200
II - LA2200

GRADES: 9-12
1 Credit
PREREQUISITE: None

English for Speakers of Other Languages I/II (ESOL I/II) is designed for beginning to intermediate fluency level students coping with a new language and a new culture. Basic skills are introduced in a simple, easy to- understand framework helping to bridge the gap between ESOL and other academic subjects. ESOL provides opportunities for students to practice listening, speaking, reading and writing skills as they develop independence and confidence in the use of English. The course includes the study of phonics, vocabulary, grammar, reading, and writing. Speech requirements will be included in the curriculum of this course, in accordance with TEC 74.11.

ESL READING I-III

I - LA4910
II - LA4920
II - LA4930

GRADES: 9-12
1 Credit
PREREQUISITE: None

These courses are designed as academic support for students who are learning English as a Second Language. These courses focus specifically on the skills needed to read and write successfully in an academic setting. Students are placed in these courses based on an assessment of skills in reading and writing in English.

AA ENGLISH 1

LA1100

GRADE: 9
1 Credit
PREREQUISITE: None

AA English I engages students in learning all the essential knowledge and skills of English I while providing greater depth. This enhanced curriculum builds the tools necessary to succeed in AP Language and Literature classes. Summer reading is required. Independent reading in AA courses is structured to support students' interaction with a text through the application of close reading analysis with AA and AP reading strategies, leading to an ability to independently analyze any new text. Students will read both classic and contemporary literature. Students are challenged by complex writing tasks in persuasion, argumentation, literary analysis, and synthesis in order to build capacity to write effectively in these rhetorical modes. This course will require an End of Course Exam.

G/T AA ENGLISH 1

LA1150

GRADE: 9
1 Credit
PREREQUISITE: Identified as Gifted/Talented

This course emphasizes writing, analysis of literary texts for the author's meaning, intended effect on the reader, and the literary tools used to achieve that effect. This course will have required outside summer reading assignments/projects. It also requires an extensive commitment of time and energy in outside reading and research, note-taking and review, and meeting assignment deadlines. Differentiation for gifted students is offered through course design including depth and complexity. This course will require an End of Course Exam.

ENGLISH 1

LA1000

GRADE: 9
1 Credit
PREREQUISITE: None

This course focuses on the Texas Essential Knowledge and Skills which include: 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. In English I, students will engage in activities that build on their prior knowledge and skills in order to strengthen their reading, writing, and oral language skills. Students should read and write on a daily basis. This course will require an End of Course exam.

ENGLISH COURSES

ENGLISH 2

LA2000

GRADE: 10
1 Credit
PREREQUISITE: None

This course focuses on the Texas Essential Knowledge and Skills which include: 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. In English II, students will engage in activities that build on their prior knowledge and skills in order to strengthen their reading, writing, and oral language skills. Students should read and write on a daily basis. This course will require an End of Course exam.

AA ENGLISH 2

LA2100

GRADE: 10
1 Credit
PREREQUISITE: None

AA English 2 engages students in learning all the essential knowledge and skills of English 2 while providing greater depth. This enhanced curriculum continues to build the tools necessary to succeed in AP Language and Literature classes. Summer reading is required as it provides an avenue for AA students to both activate academic skills during the summer and to launch academic progress at the beginning of the school year. Independent reading in AA courses is structured to support students' interaction with a text through the application of close reading analysis with AA and AP reading strategies, leading to an ability to independently analyze any new text. Students are confronted with increasingly challenging texts, both classic and contemporary, fiction and nonfiction. Students are challenged by complex writing tasks in persuasion, argumentation, literary analysis, and synthesis in order to build capacity to write effectively in these rhetorical modes. With exposure to AP strategies, prompts, nonfiction texts, and varied writing tasks, students will

exit the program equipped with the kind of higher-order thinking skills, knowledge, and behaviors necessary to be successful in AP classes and post-secondary education. This course will require an End of Course Exam.

G/T AA ENGLISH 2

LA2150

GRADE: 10
1 Credit
PREREQUISITE: Identified as Gifted/Talented

This course emphasizes the skills of nonfiction, persuasive writing and the analysis of literary texts for the author's meaning, intended effect on the reader, and the literary tools used to achieve that effect. This course will have required outside summer reading assignments/projects. It also requires an extensive commitment of time and energy in outside reading and research, note-taking and review, and meeting assignment deadlines. Differentiation for gifted students is offered through course design including depth and complexity. This course will require an End of Course Exam.

ENGLISH 3

LA3000

GRADE: 11
1 Credit
PREREQUISITE: None

This course focuses on the Texas Essential Knowledge and Skills which include: 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. In English 3, students will engage in activities that build on their prior knowledge and skills in order to strengthen their reading, writing, and oral language skills. Students should read and write on a daily basis.

ENGLISH COURSES

AP ENGLISH 3 LANGUAGE AND COMPOSITION

LA3170

GRADE: 11
1 Credit
PREREQUISITE: None

The AP English Language and Composition course aligns to an introductory college level rhetoric and writing curriculum, which requires students to develop evidence-based analytical and argumentative essays that proceed through several stages or drafts. Students evaluate, synthesize, and cite research to support their arguments. Through the course, students develop a personal style by making appropriate grammatical, vocabulary, and syntactical choices. Additionally, students read and analyze the rhetorical elements and their effects in non-fiction texts, including graphic images as forms of text, from many disciplines and historical periods. This prepares students for the Advanced Placement Exam which may earn the student college credit.

GT/AP ENGLISH 3 LANGUAGE AND COMPOSITION

LA3200

GRADE: 11
1 Credit
PREREQUISITE: Identified as Gifted/Talented

GT/AP English is designed to link with GT/AP U.S. History; therefore, both classes should be taken. This college-level course will include a survey of American literature in chronological order focusing on major literary/historical periods and major works and authors. Readings will come from American literature, fiction and nonfiction, historical texts, and satirical essays. The class is intended to show the correlation of American history to American literature. Differentiation for gifted students is offered through course design including depth and complexity.

ENGLISH 4

LA4000

GRADE: 12
1 Credit
PREREQUISITE: None

This course focuses on the Texas Essential Knowledge and Skills which include: 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. In English 4, students will engage in activities that build on their prior knowledge and skills in order to strengthen their reading, writing, and oral language skills. Students should read and write on a daily basis.

COLLEGE ENGLISH 1 - 12th ENGL 1301 (FALL) & ENGL 1302 (SPRING)

LA4400

GRADE: 12
1 HS Credit and 3 COLLEGE CREDITS EACH SEMESTER
PREREQUISITE: Meet all requirements of Grayson College; must pay all tuition, fees, and books through Grayson

ENGL 1301 — Intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus on writing the academic essay as a vehicle for learning, communicating, and critical analysis.

ENGL 1302 —Intensive study of and practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions.

ENGLISH COURSES

AP ENGLISH 4 LITERATURE AND COMPOSITION

LA4200

GRADE: 12
1 Credit
PREREQUISITE: None

Advanced Placement English 4 is an introductory college-level course with an emphasis on English literature and composition. Only students planning to take the test should enroll, as extensive reading and writing is required in relation to the tests. Reading will be from American, English, and world literature with emphasis also placed on work completed in class under strict time limits. Students will produce a binder of reference materials for all college-level writing.

G/T AP ENGLISH 4 LITERATURE AND COMPOSITION

LA4250

GRADE: 12
1 Credit
PREREQUISITE: Identified as Gifted/Talented

This college-level course will include an in-depth survey of British literature focusing on major literary/historical periods and major works and authors. The chronological study will involve self-directed learning and choices within the parameters of the course content. Students will do intense test preparation for the AP English Literature and Composition test. College level analysis, writing techniques, and a detailed study of advanced literary elements will be covered.

READING 1, 2, 3

LA4710, 4720, 4730

GRADES: 9–12
1 Credit
PREREQUISITE: Counselor or Administrative Recommendation

Reading is a one or two semester course for those students who struggle with basic reading competencies. Emphasis is placed on using specific reading strategies to increase skills in comprehension, vocabulary development, fluency, and reference usage. Instruction is differentiated and tailored to the individual needs of each student. The model includes experiences in whole and small group instruction, independent reading, and technology based learning. This course is intended for remediation in reading.

DEBATE 1

LA5000

GRADES: 9-12
1 Credit
PREREQUISITE: None

Students will learn to research significant social and political questions and organize research into a meaningful persuasive presentation. Students will learn to defend a presentation against the attack of an opponent through critical listening and thinking.

DEBATE 2

LA5050

GRADES: 10-12
1 Credit
PREREQUISITE: Debate 1

Debate 2 is designed for students showing an advanced aptitude in sequential logic and problem-solving activities. Students should be committed to research and intrigued by politics. This class is designed for students interested in debate competition.

DEBATE 3

LA5070

GRADES: 11-12
1 Credit
Prerequisite: Debate 2

Debate 3 is designed for competitive students with an advanced aptitude in sequential logic and problem-solving activities. Students must be committed to in-depth research and debate competition.

JOURNALISM 1

LA5100

GRADES: 9-12
1 Credit
PREREQUISITE: None

Journalism 1 is an elective and may serve as a preliminary course for students interested in serving as a member of the newspaper staff. The course will cover all aspects of journalism, including media law, ethics and responsibilities, writing, photography, layout design, headline writing, investigation and research. Students taking this course should have a strong interest in magazine or newspaper production or a desire to investigate a broad range of skills involved in journalism. This course is writing intensive and requires a basic understanding of sentence structure, grammar and spelling.

ATHENIAN - ADVANCED JOURNALISM/YEARBOOK PRODUCTION 1, 2, 3

LA5610, 5620, 5630

GRADES: 10-12
1 Credit
PREREQUISITE: Journalism 1 or Photojournalism 1 & 2

Advanced Journalism/Yearbook Production is for the Athenian staff members and editors who have completed Photojournalism 1. Students are responsible for designing, producing, marketing and financing the Athenian. Students are expected to know basic computer skills, which includes using a word processor, spreadsheet, database and completing desktop publishing assignments. Students are expected to devote time outside of class to covering school events and completing deadlines.

ENGLISH COURSES

PROFESSIONAL COMMUNICATIONS

LA4600

GRADES: 9-12
.5 Credit
PREREQUISITE: None

Students will understand and develop skills in oral communication, which is fundamental to all other learning and to all levels of human interaction. Students will understand concepts and processes involved in sending and receiving oral messages, evaluating, and using nonverbal communication and listening for a variety of purposes.

MATHEMATICS COURSES

STRATEGIC LEARNING for HIGH SCHOOL MATH

MT1050

GRADE: 9
1 Credit (Elective Credit Only)
PREREQUISITE: 8th Grade Math or demonstrated equivalent completion

This course is intended to create strategic mathematical learners from underprepared mathematics students. The basic understandings will stimulate students to think about their approach to mathematical learning. **Students DO NOT register for this course. They will be placed into this course based on STAAR end of 8th grade and MAP beginning of 9th grade assessment performance.**

ALGEBRA 1

MT1000

GRADE: 9
1 Credit
PREREQUISITE: 8th Grade Math or demonstrated equivalent knowledge

In Algebra 1, 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. Students will build the foundation and necessary skills for future mathematics classes. This course will require an End of Course Exam.

AA ALGEBRA 1

MT1100

GRADE: 9
1 Credit
PREREQUISITE: 8th Grade Math or demonstrated equivalent knowledge

AA Algebra 1 students will expand on concepts covered in regular Algebra 1 with an intense focus on high level application, problem solving, and higher order thinking processes. 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. Students will build the foundation and necessary skills for future mathematics classes. This course will require an End of Course Exam.

GEOMETRY

MT5000

GRADES: 10-12
1 Credit
PREREQUISITE: Algebra 1 or AA Algebra 1

In Geometry, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra 1 to strengthen their mathematical reasoning skills in geometric contexts. Within the course, students will begin to focus on more precise terminology, symbolic representations, and the development of proofs. Students will explore concepts covering coordinate and transformational geometry; logical argument and constructions. Students will connect previous knowledge from Algebra I to Geometry. Students are expected

to create formal constructions using a straightedge and compass. Though this course is primarily Euclidean geometry, students should complete the course with an understanding that non-Euclidean geometries exist. Students will use their proportional reasoning skills to prove and apply theorems and solve problems in this strand. The two- and three-dimensional figure strand focuses on the application of formulas in multi-step situations since students have developed background knowledge in two- and three-dimensional figures. Due to the emphasis of probability and statistics in the college and career readiness standards, standards dealing with probability have been added to the geometry curriculum to ensure students have proper exposure to these topics before pursuing their post-secondary education.

MATHEMATICS COURSES

AA GEOMETRY

MT5100

GRADES: 9-11
1 Credit
PREREQUISITE: Algebra 1 or AA Algebra 1

AA Geometry students will expand on concepts covered in regular Geometry with an intense focus on high level application, problem solving, and higher order thinking processes. In Geometry, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra 1 to strengthen their mathematical reasoning skills in geometric contexts. Within the course, students will begin to focus on more precise terminology, symbolic representations, and the development of proofs. Students will explore concepts covering coordinate and transformational geometry; logical argument and constructions; proof and congruence; similarity, proof, and trigonometry; two- and three-dimensional figures; circles; and probability. Students will connect previous knowledge from Algebra 1 to Geometry through the coordinate and transformational geometry strand. In the logical arguments and constructions strand, students are expected to create formal constructions using a straightedge and compass. Though this course is primarily Euclidean geometry, students should complete the course with an understanding that non-Euclidean geometries exist. In proof and congruence, students will use deductive reasoning to justify, prove and apply theorems about geometric figures. Throughout the standards, the term "prove" means a formal proof to be shown in a paragraph, a flow chart, or two-column formats. Proportionality is the unifying component of the similarity, proof, and trigonometry strand. Students will use their proportional reasoning skills to prove and apply theorems and solve problems in this strand. The two- and three-dimensional figure strand focuses on the application of formulas in multi-step situations since students have developed background knowledge in two- and three-dimensional figures. Using patterns to identify geometric properties, students will apply theorems about circles to determine relationships between special segments and angles in circles. Due to the emphasis of probability and statistics in the college and career readiness standards, standards dealing with probability have been added to the geometry curriculum to ensure students have proper exposure to these topics before pursuing their post-secondary education.

ALGEBRA 2

MT1400

GRADES: 10-12
1 Credit
PREREQUISITE: Algebra 1

In Algebra 2, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra 1. Students will broaden their knowledge of quadratic functions, exponential functions, and systems of equations. Students will study logarithmic, square root, cubic, cube root, absolute value, rational functions, and their related equations. Students will connect functions to their inverses and associated equations and solutions in both mathematical and real-world situations. In addition, students will extend their knowledge of data analysis and numeric and algebraic methods.

AA ALGEBRA 2

MT1500

GRADES: 10-12
1 Credit
PREREQUISITE: Algebra 1

AA Algebra 2 expands on the concepts covered in regular Algebra 2 with an intense focus on high level application, problem solving, and higher order thinking processes. In Algebra II, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra 1. Students will broaden their knowledge of quadratic functions, exponential functions, and systems of equations. Students will study logarithmic, square root, cubic, cube root, absolute value, rational functions, and their related equations. Students will connect functions to their inverses and associated equations and solutions in both mathematical and real-world situations. In addition, students will extend their knowledge of data analysis and numeric and algebraic methods. Students will build the foundation and necessary skills for future mathematics classes.

MATHEMATICS COURSES

MATHEMATICAL MODELS WITH APPLICATIONS

MT4000

GRADE: 10-11
1 Credit
PREREQUISITE: Algebra 1 (Math Models and Algebra 2 may not be taken concurrently.)

Mathematical Models with Applications is designed to build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra 1. This mathematics course provides a path for students to succeed in Algebra 2 and prepares them for various post-secondary choices. Students learn to apply mathematics through experiences in personal finance, science, engineering, fine arts, and social sciences. Students use algebraic, graphical, and geometric reasoning to recognize patterns and structure, model information, solve problems, and communicate solutions. Students will select from tools such as physical objects; manipulatives; technology, including graphing calculators, data collection devices, and computers; and paper and pencil and from methods such as algebraic techniques, geometric reasoning, patterns, and mental math to solve problems. This course is recommended for students who may benefit from more support prior to taking Algebra 2.

ALGEBRAIC REASONING

MT9100

GRADES: 11-12
1 Credit
PREREQUISITE: Algebra 1

In Algebraic Reasoning, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra 1, continue with the development of mathematical reasoning related to algebraic understandings and processes, and deepen a foundation for studies in subsequent mathematics courses. Students will broaden their knowledge of functions and relationships, including linear, quadratic, square root, rational, cubic, cube root, exponential, absolute value, and logarithmic functions. Students will study these functions through analysis and application that includes explorations of patterns and structure, number and algebraic methods, and modeling from data using tools that build workforce and college readiness such as probes, measurement tools, and software tools, including spreadsheets.

AP PRE-CALCULUS

MT8100

GRADES: 11-12
1 Credit
PREREQUISITE: Algebra 2

AA Pre-Calculus expands on the concepts covered in regular Pre-Calculus with an intense focus on high level application, problem solving, and higher order thinking processes. Pre-calculus 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 Pre-calculus 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.

MATHEMATICS COURSES

COLLEGE ALGEBRA (FALL) & COLLEGE STATISTICS (SPRING)
MATH 1314 (FALL) & MATH 1342 (SPRING)
MT3000 and MT3100

GRADES: 11-12
1 HS Credit and 3 COLLEGE CREDITS EACH SEMESTER
PREREQUISITE: Algebra 2 and all requirements of Grayson College; must pay all tuition, fees, and books through Grayson

MATH 1314: In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included.

MATH 1342: Elementary Statistical Methods. (3-0-3). Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended.

FINANCIAL MATH
MT7610

GRADE: 11-12
1 Credit
PREREQUISITE: Algebra 1

Financial Mathematics is a course about personal money management. Students will apply critical-thinking skills to analyze personal financial decisions based on current and projected economic factors. This course will integrate career and postsecondary education planning into financial decision making. Students will select appropriate tools such as real objects, manipulatives, paper and pencil, and technology and techniques such as mental math, estimation, and number sense to solve problems. Students will effectively communicate mathematical ideas, reasoning, and their implications using multiple representations such as symbols, diagrams, graphs, and language. Students will use mathematical relationships to generate solutions and make connections and predictions. Students will analyze mathematical relationships to connect and communicate mathematical ideas. Students will display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

AP STATISTICS
MT8200

GRADES: 11-12
1 Credit
PREREQUISITE: Algebra 2

In Statistics, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra 1. Students will broaden their knowledge of variability and statistical processes. Students will study sampling and experimentation, categorical and quantitative data, probability and random variables, inference, and bivariate data. Students will connect data and statistical processes to real-world situations. In addition, students will extend their knowledge of data analysis.

ADVANCED QUANTITATIVE REASONING (AQR)
MT9000

GRADE: 11-12
1 Credit
PREREQUISITE: Algebra 1, Geometry and Algebra 2

In Advanced Quantitative Reasoning, students will develop and apply the skills necessary for college, careers, and life. Course content consists primarily of applications of high school mathematics concepts to prepare students to become well-educated and highly informed 21st century citizens. Students will develop and apply reasoning, planning, and communication to make decisions and solve problems in applied situations involving numerical reasoning, probability, statistical analysis, finance, mathematical selection, and modeling with algebra, geometry, trigonometry, and discrete mathematics.

MATHEMATICS COURSES

AP CALCULUS AB

MT2500

GRADE: 12
1 Credit
PREREQUISITE: Pre-Calculus or AA Pre-Calculus

AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.

AP CALCULUS BC

MT2600

GRADE: 12
1 Credit
PREREQUISITE: AA Pre-Calculus

AP Calculus BC is roughly equivalent to both first and second semester college calculus courses. It extends the content learned in AB to different types of equations (polar, parametric, vector-valued) and new topics (such as Euler's method, integration by parts, partial fraction decomposition, and improper integrals), and introduces the topic of sequences and series. The AP course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.

SCIENCE COURSES

BIOLOGY
SC1000
GRADES: 9-10
1 Credit
PREREQUISITE: None

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; cells, tissues, and organs; nucleic acids and genetics; biological evolution; taxonomy; metabolism and energy transfers in living organisms; living systems; homeostasis; and ecosystems and the environment. This course will require an End of Course exam.

AA BIOLOGY
SC1100
GRADES: 9-10
1 Credit
PREREQUISITE: None

AA Biology expands on the concepts covered in regular Biology with an intense focus on high level application, problem solving, and higher order thinking processes. 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; cells, tissues, and organs; nucleic acids and genetics; biological evolution; taxonomy; metabolism and energy transfers in living organisms; living systems; homeostasis; and ecosystems and the environment. This course will require an End of Course exam.

AP BIOLOGY
SC1150
GRADES: 10-12
1 Credit
PREREQUISITE: Biology and Chemistry

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes — energy and communication, genetics, information transfer, ecology, and interactions.

COLLEGE BIOLOGY BIOL 1406 (FALL) & BIOL 1407 (SPRING)
SC2100
GRADE: 12
1 Credit
PREREQUISITE: Biology, Chemistry, Physics and all requirements of Grayson College; must pay all tuition, fees, and books through Grayson; College Readiness in Reading

BIOL 1406: Fundamental principles of living organisms will be studied, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, 159 reproduction, genetics, ecology, and scientific reasoning are included. Laboratory activities will reinforce fundamental concepts learned in lecture.

BIOL 1407: The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals. Laboratory activities will reinforce fundamental concepts learned in lecture.

INTEGRATED PHYSICS and CHEMISTRY (IPC)
SC5100
GRADES: 9-10
1 Credit
PREREQUISITE: None

This class will provide an overview of the various forms of matter and energy and their relationships to one another and man. Among the basic concepts presented: structure of matter, properties of matter, changes in matter, measurement of matter and energy, how matter and energy are related, energy and motion, and an overview of technology and electronics. Many applications of the use of chemistry and physics in daily life are demonstrated. Students will use laboratory equipment and supplies to investigate basic physical chemical concepts. Lab notebooks may also be required as part of the student's grade.

CHEMISTRY
SC3000
GRADES: 10-12
1 Credit
PREREQUISITE: Biology and Algebra 1

In Chemistry, 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. Students will conduct lab and field investigations using critical thinking skills and scientific problem solving.

SCIENCE COURSES

AA CHEMISTRY

SC3100

GRADES: 10-12
1 Credit
PREREQUISITE: Biology and Algebra 1

AA Chemistry expands on the concepts covered in regular Chemistry with an intense focus on high level application, problem solving, and higher order thinking processes. In Chemistry, 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 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. Students will investigate how chemistry is an integral part of our daily lives.

AP CHEMISTRY

SC3150

GRADES: 11-12
1 Credit
PREREQUISITE: Chemistry, Algebra II

The AP Chemistry course provides students with a college-level foundation to support future advanced coursework in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore topics such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium.

PHYSICS

SC7000

GRADES: 9-12
1 Credit
PREREQUISITE: Algebra 1 (Biology and Chemistry recommended)

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, and work collaboratively with colleagues.

AP PHYSICS 1

SC8000

GRADES: 10-12
1 Credit
PREREQUISITE: Geometry and Algebra 2 (concurrently or completed)

AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through inquiry-based investigations as they explore these topics: kinematics; dynamics; circular motion and gravitation; energy; momentum; simple harmonic motion; torque and rotational motion; electric charge and electric force; DC circuits; and mechanical waves and sound.

EARTH and SPACE SCIENCE

SC8400

GRADES: 11-12
1 Credit
PREREQUISITE: 3 units of science AND 3 units of mathematics (concurrent enrollment is allowed)

Earth and Space Science is a capstone course designed to build on students' prior scientific and academic knowledge and skills to develop understanding of Earth's system in space and time. The themes of this course include concepts related to space and time, solid earth, and fluid earth. Strands used throughout this course include systems, energy, and relevance.

SCIENCE COURSES

ADVANCED ANIMAL SCIENCE
SC8200
GRADES: 11-12
1 Credit
PREREQUISITE: Biology and Chemistry; Algebra 1 and Geometry; and either Small Animal Management, Equine Science, or Livestock Production.

Advanced Animal Science examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences.

ANATOMY & PHYSIOLOGY OF HUMAN SYSTEMS
SC5500
GRADES: 10-12
1 Credit
PREREQUISITE: Biology and one additional science credit.

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.

ADVANCED PLANT AND SOIL SCIENCE (Not available for 23-23)
VO2020
GRADES: 11-12
1 Credit
PREREQUISITE: None
Recommended Prerequisites: Biology, Integrated Physics and Chemistry, Chemistry, or Physics and a minimum of one credit from the courses in the Agriculture, Food, and Natural Resources Career Cluster. Advanced Plant and Soil Science provides a way of learning about the natural world. Students should know how plant and soil science has influenced a vast body of knowledge, that there are still applications to be discovered, and that plant and soil science is the basis for many other 4 fields of science. To prepare for careers in plant and soil science, students must attain academic skills and knowledge, acquire technical knowledge and skills related to plant and soil science and the workplace. Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

ASTRONOMY
SC9000
GRADE: 11-12
1 Credit
PREREQUISITE: One science credit

In Astronomy, students conduct laboratory and field investigations, use scientific methods, and make informed decisions using critical thinking and scientific problem solving. Students study the following topics: astronomy in civilization, patterns and objects in the sky, our place in space, the moon, and reasons for the seasons, planets, the sun, stars, galaxies, cosmology, and space exploration. Students who successfully complete Astronomy will acquire knowledge within a conceptual framework, conduct observations of the sky, work collaboratively, and develop critical-thinking skills.

ENGINEERING DESIGN AND PROBLEM SOLVING
SC8300
GRADES: 11-12
1 Credit
PREREQUISITES: Algebra 1 and Geometry

The Engineering Design and Problem-Solving course is the creative process of solving problems by identifying needs and then devising solutions. The solution may be a product, technique, structure, or process depending on the problem. Science aims to understand the natural world, while engineering seeks to shape this world to meet human needs and wants. Engineering design takes into consideration limiting factors or "design under constraint." Various engineering disciplines address a broad spectrum of design problems using specific concepts from the sciences and mathematics to derive a solution. The design process and problem solving are inherent to all engineering disciplines.

ENVIRONMENTAL SYSTEMS
SC4500
GRADES: 11-12
1 Credit
PREREQUISITE: Biology recommended

In Environmental Systems, 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: biotic and abiotic factors in habitats, ecosystems and biomes, interrelationships among resources and an environmental system, sources and flow of energy through an environmental system, relationship between carrying capacity and changes in populations and ecosystems, and changes in environments.

SCIENCE COURSES

AP ENVIRONMENTAL SCIENCE

SC4000

GRADES: 11-12
1 Credit
PREREQUISITE: Biology, Chemistry and Algebra 1

The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science, through which students engage with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. The course requires that students identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving or preventing them. Environmental Science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography.

FOOD SCIENCE

SC8100

GRADES: 11-12
1 Credit
PREREQUISITE: Biology, Chemistry and one additional science credit

In Food Science students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Food Science is the study of the nature of foods, the causes of deterioration in food products, the principles underlying food processing, and the improvement of foods for the consuming public.

FORENSIC SCIENCE

SC8500

GRADE: 11-12
1 Credit
PREREQUISITE: Biology, Chemistry, & 1 Course from Law and Public Safety Career Cluster

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. Scientific methods of investigation can be experimental, descriptive, or comparative. The method chosen should be appropriate to the question being asked.

MEDICAL MICROBIOLOGY

SC8600

GRADES: 10-12
1 Credit
PREREQUISITE: Biology and Chemistry

Students in Medical Microbiology explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug resistant organisms, and emerging diseases.

SOCIAL STUDIES COURSES

WORLD GEOGRAPHY

SS8000

GRADE: 9—12
1 Credit
PREREQUISITE: None

In World Geography Studies, students examine people, places, and environments at local, regional, national, and international scales from the spatial and ecological perspectives of geography. Students describe the influence of geography on events of the past and present with emphasis on contemporary issues. A significant portion of the course centers around the physical processes that shape patterns in the physical environment; the characteristics of major landforms, climates, and ecosystems and their interrelationships; the political, economic, and social processes that shape cultural patterns of regions; types and patterns of settlement; the distribution and movement of the world population; relationships among people, places, and environments; and the concept of region. Students analyze how location affects economic activities in different economic systems. Students identify the processes that influence political divisions of the planet and analyze how different points of view affect the development of public policies. Students compare how components of culture shape the characteristics of regions and analyze the impact of technology and human modifications on the physical environment. Students use problem-solving and decision-making skills to ask and answer geographic questions.**(THIS COURSE IS NOT ONE OF THE REQUIRED SOCIAL STUDIES COURSES, but may be taken as an elective for the Arts and Humanities Endorsement or the Multidisciplinary Studies Endorsement.)**

AA WORLD GEOGRAPHY

SS8100

GRADE: 9—12
1 Credit
PREREQUISITE: None

AA World Geography engages students in learning all the essential knowledge and skills of World Geography while providing greater depth. This enhanced curriculum builds the tools necessary to succeed in AP Language and Literature classes. In World Geography Studies, students examine people, places, and environments at local, regional, national, and international scales from the spatial and ecological perspectives of geography. Students describe the influence of geography on events of the past and present with emphasis on contemporary issues. A significant portion of the course centers on the physical processes that shape patterns in the physical environment; the characteristics of major landforms, climates, and ecosystems and their interrelationships; the political, economic, and social processes that shape cultural patterns of regions; types and patterns of settlement; the distribution and movement of the world population; relationships among people, places, and environments; and the concept of region. Students analyze how location affects economic activities in different economic systems. Students identify the processes that influence political divisions of the planet and analyze how different points of view affect the development of public policies. Students compare how components of culture shape the characteristics of regions and analyze the impact of technology and human modifications on the physical environment. Students use problem-solving and decision-making skills to ask and answer geographic questions. **(THIS COURSE IS NOT ONE OF THE REQUIRED SOCIAL STUDIES COURSES, but may be taken as an elective for the Arts and Humanities Endorsement or the Multidisciplinary Studies Endorsement.)**

AP HUMAN GEOGRAPHY

SS2700

GRADES: 9-12
1 Credit
PREREQUISITE: None

The AP Human Geography course is equivalent to an introductory college-level course in human geography. This course is the recommended course for Freshmen wanting an advanced academic class. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. It focuses on the study of people and their communities, cultures, economies, and interactions with the environment. Students employ spatial concepts and landscape analysis to examine socio economic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards (2012). **(THIS COURSE IS NOT ONE OF THE REQUIRED SOCIAL STUDIES COURSES, but may be taken as an elective for the Arts and Humanities Endorsement or the Multidisciplinary Studies Endorsement.)**

SOCIAL STUDIES COURSES

G/T AP HUMAN GEOGRAPHY

SS2710

GRADES: 9-12
1 Credit
PREREQUISITE: None

This course is the same as the AP Human Geography course but is coded for cluster grouping of GT students. This course is equivalent to an introductory college-level course in human geography. This course is the recommended course for Freshmen wanting an advanced academic class. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. It focuses on the study of people and their communities, cultures, economies, and interactions with the environment. Students employ spatial concepts and landscape analysis to examine socio economic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards (2012). **(THIS COURSE IS NOT ONE OF THE REQUIRED SOCIAL STUDIES COURSES, but may be taken as an elective for the Arts and Humanities Endorsement or the Multidisciplinary Studies Endorsement.)**

AP EUROPEAN HISTORY

SS3500

GRADE: 11-12
1 Credit
PREREQUISITE: None

AP European History is designed to be the equivalent of a two-semester introductory college or university European history course. In AP European History students investigate significant events, individuals, developments, and processes in four historical periods from approximately 1450 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. The course also provides six themes that students explore throughout the course in order to make connections among historical developments in different times and places: interaction of Europe and the world; poverty and prosperity; objective knowledge and subjective visions; states and other institutions of power; individual and society; and national and European identity. **(THIS COURSE IS NOT ONE OF THE REQUIRED SOCIAL STUDIES COURSES, but may be taken as an elective for the Arts and Humanities Endorsement or the Multidisciplinary Studies Endorsement.)**

WORLD HISTORY

SS9000

GRADE: 10-12
1 Credit
PREREQUISITE: None

World History Studies is a survey of the history of humankind. The major emphasis is on the study of significant people, events, and issues from the earliest times to the present. Traditional historical points of reference in world history are identified as students analyze important events and issues in western civilization as well as in civilizations in other parts of the world. Students evaluate the causes and effects of political and economic imperialism and of major political revolutions since the 17th century. Students examine the impact of geographic factors on major historical events and identify the historical origins of contemporary economic systems. Students analyze the process by which constitutional governments evolved as well as the ideas from historic documents that influenced that process. Students trace the historical development of important legal and political concepts. Students examine the history and impact of major religious and philosophical traditions. Students analyze the connections between major developments in science and technology and the growth of industrial economies, and they use the process of historical inquiry to research, interpret, and use multiple sources of evidence.

AP WORLD HISTORY

SS9150

GRADE: 10
1 Credit
PREREQUISITE: None

AP World History is designed to be the equivalent of a two semester introductory college or university world history course. In AP World History students investigate significant events, individuals, developments, and processes in six historical periods from approximately 8000 B.C.E. to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. The course provides five themes that students explore throughout the course in order to make connections among historical developments in different times and places: interaction between humans and the environment; development and interaction of cultures; state building, expansion, and conflict; creation, expansion, and interaction of economic systems; and development and transformation of social structures.

SOCIAL STUDIES COURSES

G/T AP WORLD HISTORY

SS9200

GRADE: 10
1 Credit
PREREQUISITE: Identified as Gifted/Talented

This is the equivalent course of AP World History. GT/AP World History is divided into six major sections, covering the interactions of global civilizations. The course provides five themes that students explore throughout the course in order to make connections among historical developments in different times and places: interaction between humans and the environment; development and interaction of cultures; state building, expansion, and conflict; creation, expansion, and interaction of economic systems; and development and transformation of social structures.This course requires an extensive commitment of time and energy in outside reading and research, note-taking and review, and meeting assignment deadlines.

SOCIAL STUDIES COURSES

U.S. HISTORY

SS7000

GRADE: 11
1 Credit
PREREQUISITE: None

The course content is based on the founding documents of the U.S. government, which provide a framework for its heritage. Historical content focuses on the political, economic, and social events and issues related to industrialization and urbanization, major wars, domestic and foreign policies, and reform movements including civil rights. Students examine the impact of geographic factors on major events and eras and analyze their causes and effects. Students examine the impact of constitutional issues on American society, evaluate the dynamic relationship of the three branches of the federal government, and analyze efforts to expand the democratic process. Students describe the relationship between the arts and popular culture and the times during which they were created. Students analyze the impact of technological innovations on American life. Students use critical-thinking skills and a variety of primary and secondary source material to explain and apply different methods that historians use to understand and interpret the past, including multiple points of view and historical context. This course will require an End of Course exam.

AP U.S. HISTORY

SS7300

GRADE: 11
1 Credit
PREREQUISITE: None

AP U.S. History is designed to be the equivalent of a two-semester introductory college or university U.S. History course. In AP U.S. History students investigate significant events, individuals, developments, and processes in nine historical periods from approximately 1491 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. The course also provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: American and national identity; migration and settlement; politics and power; work, exchange, and technology; America in the world; geography and the environment; and culture and society.

G/T AP U.S. HISTORY

SS7200

GRADE: 11
1 Credit
PREREQUISITE: Identified as Gifted/Talented

AP U.S. History is designed to be the equivalent of a two-semester introductory college or university U.S. history course. In AP U.S. History students investigate significant events, individuals, developments, and processes in nine historical periods from approximately 1491 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. The course also provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: American and national identity; migration and settlement; politics and power; work, exchange, and technology; America in the world; geography and the environment; and culture and society.

SOCIAL STUDIES COURSES

COLLEGE U.S. HISTORY HIST 1301 (FALL) & HIST 1302 (SPRING)

SS7400

GRADE: 11
1 HS Credit and 3 COLLEGE CREDITS EACH SEMESTER
PREREQUISITE: Meet all requirements of Grayson College; must pay all tuition, fees, and books through Grayson

HIST 1301: A survey of the social, political, economic, cultural, and intellectual history of the United States from the pre-Columbian era to the Civil War/Reconstruction period. United States History I includes the study of pre-Columbian, colonial, revolutionary, early national, slavery and sectionalism, and the Civil War/Reconstruction eras. Themes that may be addressed in United States History I include: American settlement and diversity, American culture, religion, civil and human rights, technological change, economic change, immigration and migration, and creation of the federal government.

HIST 1302: A survey of the social, political, economic, cultural, and intellectual history of the United States from the Civil War/Reconstruction era to the present. United States History II examines industrialization, immigration, world wars, the Great Depression, the Cold War and post-Cold War eras. Themes that may be addressed in United States History II include: American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government, and the study of U.S. foreign policy.

GOVERNMENT

SS6000

GRADE: 12
.5 Credit
PREREQUISITE: None

This course is the culmination of the civic and governmental content and concepts studied from Kindergarten through required secondary courses. 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 republic, 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.

ECONOMICS

(Includes Personal Finance - EverFi)

SS3000

GRADE: 12
.5 Credit
PREREQUISITE: None

The focus is 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 using a curriculum called *EverFi*. Students apply critical-thinking skills using economic concepts to evaluate the costs and benefits of economic issues.

COLLEGE GOVERNMENT-GOVT 2305

SS2200

GRADE: 12
.5 Credit
PREREQUISITE: Must meet Grayson College entrance requirements and pay all tuition, fees, and books through Grayson

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.

SOCIAL STUDIES COURSES

COLLEGE ECONOMICS-ECON 2301

SS2000

GRADE: 12
.5 Credit
PREREQUISITE: Must meet Grayson College entrance requirements and pay all tuition, fees, and books through Grayson

An analysis of the economy as a whole including measurement and determination of Aggregate Demand and Aggregate Supply, national income, inflation, and unemployment. Other topics include international trade, economic growth, business cycles, and fiscal policy and monetary policy.

AP MACROECONOMICS

SS2500

GRADE: 12
.5 Credit
PREREQUISITE: None

AP Macroeconomics is an introductory college-level course that focuses on the principles that apply to an economic system as a whole. The course places particular emphasis on the study of national income and price-level determination; it also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts

AP U.S. GOVERNMENT AND POLITICS

SS5900

GRADE: 12
.5 Credit
PREREQUISITE: None

AP United States Government and Politics introduces students to key political ideas, institutions, policies, interactions, roles, and behaviors that characterize the political culture of the United States. The course examines politically significant concepts and themes, through which students learn to apply disciplinary reasoning, assess causes and consequences of political events, and interpret data to develop evidence-based arguments.

PSYCHOLOGY

SS4000

GRADES: 11-12
.5 Credit
PREREQUISITE: None

In Psychology, students study the science of behavior and mental processes. Students examine the full scope of the science of psychology such as the historical framework, methodologies, human development, motivation, emotion, sensation, perception, personality development, cognition, learning, intelligence, biological foundations, mental health, and social psychology.

COLLEGE PSYCHOLOGY PSYC2301- Bearcat Collegiate Program

DC5000

GRADES: 11-12
.5 Credit
PREREQUISITE: Acceptance into the BCP

General Psychology is a survey of the major psychological topics, theories and approaches to the scientific study of behavior and mental processes.

AP PSYCHOLOGY

SS4210

GRADES: 11-12
.5 Credit
PREREQUISITE: None

The AP Psychology course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, evaluate claims and evidence, and effectively communicate ideas.

COLLEGE PHILOSOPHY PHIL1301 - Bearcat Collegiate Program

DC6000

GRADES: 11-12
.5 Credit
PREREQUISITE: Acceptance into the BCP

A study of major issues in philosophy and/or the work of major philosophical figures in philosophy. Topics in philosophy may include theories of reality, theories of knowledge, theories of value, and their practical applications.

SOCIOLOGY

SS4600

GRADES: 11-12
.5 Credit
PREREQUISITE: None

Sociology is an introductory study in social behavior and organization of human society. This course will describe the development of the field as a social science by identifying methods and strategies of research leading to an understanding of how the individual relates to society and the ever changing world. Students will also learn the importance and role of culture, social structure, socialization, and social change in today's society.

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COLLEGE SOCIOLOGY -

DC8000-Introduction to Sociology

GRADES: 11-12
.5 Credit
PREREQUISITE: None

This course is a collegiate level social sciences course that introduces students to the concepts and principles used in the study of group life, social institutions, and social processes. As with all introductory sociology courses, students will also learn the importance and role of culture, social structure, socialization, and social change in today's society

FINE ARTS COURSES

ART 1/INTRODUCTION TO ART

FA1000

GRADES: 9-12
1 Credit
PREREQUISITE: None

Art I is the first course in the high school art sequence and is predominantly a studio course. The art elements and principles of design are emphasized through a variety of projects in both two-dimensional and three-dimensional design, drawing, painting, and other art media. Art I offers experiences in the study of works of artists from the past and present along with career opportunities in the art field. Students develop skills in observing, problem-solving, manipulating art media and evaluating art works.
Preparation of a portfolio and use of a Sketchbook is required. Students are expected to provide some of the basic supplies and materials

AA ART 1

FA1050

GRADES: 9-12
1 Credit
PREREQUISITE: None

This course is designed for students with advanced skills. Students will be provided the opportunity to develop their art-making skills in order to express their own ideas, thoughts, and feelings. This course goes beyond the regular Art I class. Focus is on developing an ongoing collection of artworks in a portfolio that demonstrates the student's proficiency in using a variety of art media in order to display their knowledge and ability in using the elements of art and principles of design. The portfolio development is intended to be in preparation for the AP Studio Art course or college entrance portfolio work. The AA Art I curriculum follows the College Board directive of the AP Studio requirements. Students are expected to provide some of the basic supplies and materials.

AA ART 2 DRAWING/PAINTING

FA1100

GRADES: 10-12
1 Credit
PREREQUISITE: Art 1 or AA Art 1

This course provides students the opportunity to further develop their drawing and painting skills. Higher -level thinking skills are challenged with design and composition projects that use a variety of drawing and painting media, techniques and themes. Students will investigate selected historical periods and styles from accomplished artists. They will critique, evaluate and interpret their own work and the work of others. Students will collect work from a personal portfolio as a record of growth and as the basis of future planning, along with sketchbook work. Students are expected to provide some of the basic supplies and materials

AA ART 3 DRAWING/PAINTING

FA1200

GRADES: 11-12
1 Credit
PREREQUISITE: Art I or AA Art I, AA Art II

This third year course is an in-depth study of drawing and painting and provides projects on an advanced level. Students will develop a personal style and demonstrate effective use of selected drawing and painting media in solving visual problems and assignments. The study of artists and their artworks, art in other cultures and strategies for evaluating artworks are integral to the course. A portfolio and sketchbook are required. Students are expected to provide some of the basic supplies and materials.

AA ART 4 DRAWING/PAINTING

FA1300

GRADES: 12
1 Credit
PREREQUISITE: AA Art 3

The experiences given and skills developed in Art 1 or AA Art 1, 2, or 3 prepare students for in-depth study of special problems based on drawing and painting media. They will produce a body of work and develop evaluative criteria for selecting artworks to include in a portfolio. A senior exhibition will demonstrate their level of creativity and expertise. Students continue the study of artists and their artworks, art in other cultures, evaluation of artworks, and justification for decisions. The use of sketchbooks and preparation of a college entrance portfolio is required. Students are expected to provide some of the basic supplies and materials.

FINE ARTS COURSES

AP STUDIO ART DRAWING PORTFOLIO

FA1600

GRADES: 11-12
1 Credit
PREREQUISITE: Art 1 or AA Art 1, 2 and Advisor Approval

The drawing portfolio is designed to address a very broad interpretation of drawing issues. Light, shade, line quality, rendering of form, composition, surface manipulation and illusion of depth will be explored through a variety of media. This portfolio allows for a more specific course of study that parallels specialized drawing curriculums and programs in college and university art departments as well as art schools. In order to meet the goals of this program students will be expected to work at least 5 hours a week outside of class. All students are expected to submit a portfolio for Advanced Placement review. Summer Assignments will be given. Students are expected to provide some of the basic supplies and materials.

AP ART 2D DESIGN PORTFOLIO

FA1610

GRADES: 11-12
1 Credit
PREREQUISITE: Art 1 or Pre AP Art 1, 2 and Advisor Approval

The Two-dimensional design AP portfolio is intended to address a very broad interpretation of two dimensional design issues. This type of design involves purposeful decision-making about how to use the elements and principles of art in an integrated way. Students will demonstrate a proficiency in 2-D design using a variety of art forms. These may include, but are not limited to graphic design, digital imaging, photography, collage, illustration, printmaking, painting, etc. In order to meet the goals of this program students will be expected to work at least 5 hours a week outside of class. This course is designed to prepare the student to submit an AP portfolio. All students are expected to submit a portfolio for Advanced Placement review. Summer Assignments will be given. Students are expected to provide some of the basic supplies and materials.

AP ART 3D DESIGN PORTFOLIO

FA1620

GRADES: 11-12
1 Credit
PREREQUISITE: Art 1 or AA Art 1, 2 and Advisor Approval

This course is designed for students who are seriously interested in exploring 3D design issues. Students will complete a broad interpretation of sculptural issues in depth and space. Students will demonstrate a proficiency in 3-D design using a variety of art forms. These may include, but are not limited to clay, wood, plaster, mold making, found objects, paper-mache, metals jewelry glass, plastics and cardboard and fibers. This course is designed to prepare students to submit an AP Portfolio. All Students are expected to submit a portfolio for Advanced Placement review. Summer Assignments will be given. Students are expected to provide some of the basic supplies and materials

AP ART HISTORY

FA1500

GRADES: 11-12
1 Credit
PREREQUISITE: None

The AP Art History course is designed as an introductory college course in art history: an understanding and knowledge of architecture, sculpture, painting and other art forms within diverse historical and cultural contexts. By investigating a specific image set of works of art characterized by diverse artistic traditions from prehistory to the present, the course fosters in-depth, holistic understanding of the history of art from a global perspective. Students become active participants in the art as they experience, research, discuss, read, and write about art, artists, art making and responses to and interpretations of art. In order to meet the goals of this course, students will be expected to work outside of class. College-level writing is a feature of the course because two-thirds of the AP exam is a free response essay. Summer Assignments will be given.

FINE ARTS COURSES

AP MUSIC THEORY 1

FA1800

GRADES: 11-12
1 Credit
PREREQUISITE: Demonstrated ability to read music

The AP Music Theory course corresponds to one or two semesters of a typical introductory college music theory course that covers topics such as musicianship, theory, musical materials, and procedures. Musicianship skills, including dictation and other listening skills, sight singing, and harmony, are considered an important part of the course. Through the course, students develop the ability to recognize, understand, and describe basic materials and processes of tonal music that are heard or presented in a score. Development of aural skills is a primary objective. Performance is also part of the curriculum through the practice of sight singing. Students understand basic concepts and terminology by listening to and performing a wide variety of music. Notational skills, speed, and fluency with basic materials are also emphasized.

BAND—WIND ENSEMBLE MARCHING BAND

FA2001-2004

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

Wind Ensemble Band consists of approximately the 50 best instrumental wind and percussion musicians in the school. It can be considered the honors group of the band program. The band performs at various concerts, concert festivals, and UIL contests. Performance at selected events is mandated for credit. This band forms a portion of the Bearcat Marching Band, which rehearses after school Monday through Friday. Attendance at all football games and marching contests is required. There are equipment and fee requirements.

BAND—SYMPHONIC MARCHING BAND

FA2101-2104

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

Symphonic Band is a performing organization incorporating the same curriculum and performance goals as the Wind Ensemble Band, though at a less advanced level. Performance at selected events is mandated for credit. This band forms a portion of the Bearcat Marching Band, which rehearses after school Monday through Friday. Attendance at all football games and marching contests is required. There are equipment and fee requirements.

CONCERT MARCHING BAND

FA2401-2404

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

Concert Band is a performing organization incorporating the same curriculum and performance goals as the Symphonic Band, though at a less advanced level. Performance at selected events is required for credit. This band forms a portion of the Bearcat Marching Band, which rehearses after school Monday through Friday. Attendance at all football games and marching contests is required. There are equipment and fee requirements.

BAND—JAZZ BAND

FA2301-2304

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

Students will study the performance and literature of jazz music. The course is performance-oriented with participation at concerts, selected athletic events, and contests. There are equipment and fee requirements.

FINE ARTS COURSES

BAND—COLOR GUARD

FA2201-2204

GRADES: 9-12
1 Credit (Full Year PE credit)
PREREQUISITE: Audition

This course teaches the techniques of color guard including flag, rifle, and sabre technique. The emphasis of this group is on public performance utilizing discipline, uniformity, precision marching, and flag control. Performance at football games, marching contests, and parades is required. The color guard performs as part of the marching band. There are equipment and fee requirements.

BAND - PERCUSSION METHODS

FA2561-2564

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

This is a beginning percussion course for students wishing to be a part of the Bearcat Band percussion section. This is the first step for students wishing to perform with a drumline. This course teaches basic techniques to perform as a part of a marching band and frontline percussion. The emphasis of this course is percussion skill development and public performance including uniformity, precision marching, and playing. Students in this course are required to participate in all activities and event performances of the Bearcat Band. There are equipment and fee requirements.

BAND - PERCUSSION ENSEMBLE

FA2551-2554

GRADES: 9-12
1 Credit
PREREQUISITE: Percussion Ensemble and/orAudition

This is an intermediate percussion course for students wishing to improve their skills as a musician. Students are still a part of the Bearcat Band and expected to meet all expectations of performance, including marching contests and parades. In addition this course targets skills such as proper hand and body position for more advanced musical pieces, instrument specific technical skills, and a higher level of public performance. There are equipment and fee requirements.

BAND—DRUMLINE

FA2501-2504

1 Credit
PREREQUISITE: Audition

The Drum Line is an auxiliary group of percussionists that form an integral part of the Bearcat Marching Band. This course teaches the techniques of marching and front line percussion. The emphasis of this group is on public performance utilizing discipline, uniformity, precision marching, and playing. Participation at all football games, marching contests, and performances of the Bearcat Band is required for credit. There are equipment and fee requirements.

BAND - ADVANCED PERCUSSION ENSEMBLE

FA2571-2574

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

This is an advanced percussion course that focuses on a high level of skill development, complex musical scores, and performance that is both independent and part of a larger band or orchestra. Students are expected to be independently motivated, have advanced musical skills, and are able to collaborate with other musicians for public performances and or competitions. There are practice and performance requirements for this course as well as equipment and fee requirements.

FINE ARTS COURSES

MEN'S CHORALE

FA3301-3304

GRADES: 9-12
1 Credit
PREREQUISITE: None

The Men's Chorale is a training choir for male voices. Class activities include proper singing habits, performance skills, vocalization, building and developing of voice, theory and sight reading skills, music history and literature, and learning songs representative of various choral styles and historical periods. Choir members will develop solo and ensemble skills as well as a passion for music. Rehearsals and performances are required.

BEGINNER WOMEN'S CHOIR

FA3401-3404

GRADES: 9-12
1 Credit
PREREQUISITE: None

This ensemble is for women who have never taken a choir class before. Class activities include proper singing habits, performance skills, vocalization, building and developing of voice, theory and sight reading skills, music history and literature, and learning songs representative of various choral styles and historical periods. Choir members will develop solo and ensemble skills as well as a passion for music. Rehearsals and performances are required.

JV WOMEN'S CHOIR

FA3221-3224

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

Selection for this choir is on the basis of an audition consisting of a solo performance and sight reading capability. Class activities include proper singing habits, performance skills, vocalization, building and developing of voice, theory and sight reading skills, music history and literature, and learning songs representative of various choral styles and historical periods. Choir members will develop solo and ensemble skills as well as a passion for music. Rehearsals and performances are required.

WOMEN'S VARSITY CHOIR

FA3231-3234

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

Women's varsity choir is an advanced performing group of female voices. Selection for this choir is on the basis of an audition consisting of a solo performance and sight reading capability. Class activities include proper singing habits, performance skills, vocalization, building and developing of voice, theory and sight reading skills, music history and literature, and learning songs representative of various choral styles and historical periods. Choir members will develop solo and ensemble skills as well as a passion for music. Rehearsals, performances, and competitions are required. Students in this ensemble must also compete in either All Region Solo Auditions or perform a solo at UIL Solo and Ensemble.

FINE ARTS COURSES

MIXED VARSITY CHOIR

FA3451-3454

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

Mixed Varsity Choir is an advanced performing group of mixed voices. Selection for this choir is on the basis of an audition consisting of a solo performance and sight reading capability. Class activities include proper singing habits, performance skills, vocalization, building and developing of voice, theory and sight reading skills, music history and literature, and learning songs representative of various choral styles and historical periods. Choir members will develop solo and ensemble skills as well as a passion for music. Rehearsals, performances, and competitions are required. Students in this ensemble must also compete in either All Region Solo Auditions or perform a solo at UIL Solo and Ensemble.

SINFONIA ORCHESTRA

FA4001-4004

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

String Orchestra is a performing group with the same goals as Chamber, but at a less rigorous pace, and will compete as a non-varsity UIL group. Members will meet in weekly mandatory after-school rehearsals and will be required to perform in concerts, festivals, gigs and UIL activities throughout the school year, as well as have the opportunity for voluntary performances in the community. This class has equipment and fee requirements.

CHAMBER ORCHESTRA

FA4501-4504

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

Chamber Orchestra is an advanced performing group of select musicians and will be the string portion of the Philharmonic Orchestra (a full group of strings, winds and percussion). Chamber will meet in weekly mandatory after-school rehearsals. As members of Chamber, students are required to participate and perform in concerts, festivals, gigs and UIL activities throughout the school year, as well as have the opportunity for voluntary performances in the community. The class has equipment and fee requirements.

PHILHARMONIC ORCHESTRA

FA4601-4604

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

Techniques Orchestra is an opportunity for students to learn how to play a stringed instrument—violin, viola, cello, or double bass—as well as a course for intermediate-level string musicians to continue development of fundamental skills. Activities will include work on tone production, technical facility and ensemble playing. A small number of performances are required each year, with an opportunity for voluntary performances in the community. This class has equipment and fee requirements.

THEATER ARTS 1

FA5110

GRADES: 9-12
1 Credit
PREREQUISITE: None

Theater Arts 1 general areas of study include but are not exclusive to the following: performance skills of improvisation, pantomime, mime, voice and diction, stage movement and acting. Additional areas explored are history of the theater and careers in theater. Technical aspects discussed are design concepts of lighting, sound, scenery, props, makeup, costumes and publicity. All students will be involved in many performances, written and visual projects throughout the year.

THEATER ARTS 2

FA5120

GRADES: 10-12
1 Credit
PREREQUISITE: Theater Arts 1

Theater Arts 2 is a continuation of Theater Arts 1 with special emphasis on advanced acting styles and techniques and critical analysis of scripts and characters. Students will also continue their study of improvisation as it enhances character analysis, pantomime, mime, voice and diction, audition techniques and production techniques. All students will be involved in many performances, written and visual projects throughout the year.

FINE ARTS COURSES

THEATER ARTS 3

FA5130

GRADES: 10-12
1 Credit
PREREQUISITE: Theater Arts 2

Theater Arts 3 is a continuation of Theater Arts 2 and will include topics such as contemporary and classical acting styles and techniques, exploration and analysis of representative plays from each period of history, history of film, puppetry, dance and masked theater, playwriting and other specialized production techniques. All students will be involved in many performances, written and visual projects throughout the year.

THEATER ARTS 4

FA5140

GRADES: 10-12
1 Credit
PREREQUISITE: Theater Arts 3

Theatre Arts 4 is a continuation of Theater Arts 3 and will explore topics such as contemporary and classical acting styles and techniques, exploration and analysis of representative plays from each period of history, history of film, puppetry, dance and masked theater, playwriting and other specialized production techniques at a much greater depth. All students will be involved in many performances, written and visual projects throughout the year.

TECHNICAL THEATER 1

FA5410

GRADES: 9-12
1 Credit
PREREQUISITE: None

Technical Theater 1 general areas of study include, but are not exclusive to the following: principles of costume, make-up, scenery, lighting and sound design and application, and general stagecraft skills. Additional areas explored are the history of the theater and careers in the theater. Students will be involved in many design projects in each grading period and written projects and tests throughout the year. Students in Technical Theater 1 are also required to attend all campus theater productions.

TECHNICAL THEATER 2

FA5420

GRADES: 9-12
1 Credit
PREREQUISITE: Technical Theater 1 and teacher approval

Technical Theater 2 is a continuation of Technical Theater 1 with special emphasis on advanced theater design, moderate to advanced stagecraft skills, and stage management. Students will also continue their study of script analysis and begin working on period styles and architecture of specific time periods. Students will begin creating a portfolio of their design work. Students in Technical Theater 2 are also required to attend all campus theater productions.

TECHNICAL THEATER 3

FA5430

GRADES: 9-12
1 Credit
PREREQUISITE: Technical Theater 2 and teacher approval

Areas of study in Technical Theater 3 include stagecraft and design implementation. Emphasis will be placed on lab work, creation of technical theater portfolio, leadership skills and exploration and analysis of play styles and history of architecture and costuming. All students will be involved in many projects, both written and visual, throughout the year. This class is designed for the student who wishes to seriously study and apply the theory of stage design. Students in Technical Theater 3 are also required to attend all campus theater productions.

TECHNICAL THEATER 4

FA5440

GRADES: 9-12
1 Credit
PREREQUISITE: Technical Theater 3 and teacher approval

Areas of study in Technical Theater 4 include advanced stagecraft and design implementation. Emphasis will be placed on lab work, creation of technical theater portfolio, leadership skills and exploration and analysis of play styles and history of architecture and costuming. All students will be involved in many projects, both written and visual, throughout the year. This class is designed for the student who wishes to seriously study and apply the theory of stage design. Technical Theater 4 students are also required to attend all campus theater productions.

FINE ARTS COURSES

MUSICAL THEATER 1

FA5610

GRADES: 9-12
1 Credit
PREREQUISITE: Audition

Musical Theater will expose students to a wide range of on-stage performance disciplines, including acting performance, vocal performance, and dance performance. The course will also provide an atmosphere in which students benefit from a teaching and learning experience in these performance disciplines of musical theater. Students will receive comprehensive and rigorous instruction so that they may make informed choices about the craft, college, and the profession. The course will enhance and cultivate the creative gifts of each student while encouraging a sense of self-confidence. The course will enable students to study and perform the varied styles of musical theater with special attention to the history and art of musical theater performance. Students will be required to participate in the spring musical.

MUSICAL THEATER 2

FA5620

GRADES: 10-12
1 Credit
PREREQUISITE: Musical Theater 1 and Audition

Musical Theater 2 is a continuation of Musical Theater 1. The course will provide an atmosphere in which students benefit from a teaching and learning experience through performance disciplines of musical theater. Students will receive comprehensive and rigorous instruction so that they may make informed choices about the craft, college, and the profession. The course will enhance and cultivate the creative gifts of each student while encouraging a sense of self-confidence. The course will enable students to study and perform the varied styles of musical theater with special attention to the history and art of musical theater performance. Students will be required to participate in the spring musical.

MUSICAL THEATER 3

FA5630

GRADES: 11-12
1 Credit
PREREQUISITE: Musical Theater 2/3 and Audition

Musical Theater 2 is a continuation of Musical Theater 1. The course will provide an atmosphere in which students benefit from a teaching and learning experience through performance disciplines of musical theater. Students will receive comprehensive and rigorous instruction so that they may make informed choices about the craft, college, and the profession. The course will enhance and cultivate the creative gifts of each student while encouraging a sense of self-confidence. The course will enable students to study and perform the varied styles of musical theater with special attention to the history and art of musical theater performance. Students will be required to participate in the spring musical.

MUSICAL THEATER 4

FA5640

GRADES: 12
1 Credit
PREREQUISITE: Musical Theater 2/3 and Audition

Musical Theater 2 is a continuation of Musical Theater 1. The course will provide an atmosphere in which students benefit from a teaching and learning experience through performance disciplines of musical theater. Students will receive comprehensive and rigorous instruction so that they may make informed choices about the craft, college, and the profession. The course will enhance and cultivate the creative gifts of each student while encouraging a sense of self-confidence. The course will enable students to study and perform the varied styles of musical theater with special attention to the history and art of musical theater performance. Students will be required to participate in the spring musical.

FLORAL DESIGN

FA1650

GRADES: 9-12
1 Credit
PREREQUISITE: None

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. To be prepared for careers in floral design, students need to attain academic skills and knowledge as well as technical knowledge and skills regarding career opportunities, entry requirements, and industry expectations. **Students will be working toward Floral Design certification.**

ADVANCED FLORAL DESIGN

VO2730

GRADES: 11-12
1 Credit
PREREQUISITE: Floral Design

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. To be prepared for careers in floral design, students need to attain academic skills and knowledge as well as technical knowledge and skills regarding career opportunities, entry requirements, and industry expectations. **Students will be working toward Floral Design certification.**

LANGUAGES OTHER THAN ENGLISH (LOTE) COURSES

FRENCH 1

OL1000

GRADES: 9-12
1 Credit
PREREQUISITE: None

Students in French 1 will be able to express meaning in simple contexts and understand sentence-length information. Students may be generally understood by people accustomed to dealing with language learners. Students will acquire and discover the target language through speaking, listening, reading, and writing activities. This course will lay the framework for continuing in the target language and will introduce students to the target language cultures. The majority of this course is conducted in the target language.

FRENCH 2

OL1100

GRADES: 10-12
1 Credit
PREREQUISITE: French 1

Students in French 2 will be able to express meaning in a straightforward and personal context and understand information from simple connected statements. Students are generally understood by people accustomed to dealing with language learners. Students will continue to acquire and discover the target language through speaking, listening, reading, and writing activities. This course allows the students to begin communicating in a target language environment. The majority of this course is conducted in the target language.

AA FRENCH 2

OL1150

GRADES: 10-12
1 Credit
PREREQUISITE: French 1

French 2 Pre-AP deepens and advances the curriculum of French II. Students will be able to express meaning in straightforward and personal contexts and understand information from simple connected statements. Students are generally understood by people accustomed to dealing with language learners. Students will continue to acquire and discover the target language through speaking, listening, reading, and writing activities. This course allows the students to begin communicating in a target language environment. The majority of this course is conducted in the target language.

AA FRENCH 3

OL1200

GRADES: 11-12
1 Credit
PREREQUISITE: French 2 or AA French 2

French 3 Pre-AP prepares students to take French 4 AP. This course focuses on the delivery of content through thematic units while expanding on relevant vocabulary and refining the accuracy of expression by knowing the components of language. This course begins to incorporate the 6 AP themes within the units of study and makes connections between the themes and real-world applications. The focus of this course is developing intermediate mid proficiency. This course is held in the target language.

AP FRENCH 4

OL1300

GRADES: 11-12
1 Credit
PREREQUISITE: AA French 3 or French 3

The AP French Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP French Language and Culture course strives not to overemphasize grammatical accuracy at the expense of communication. To best facilitate the study of language and culture, the course is taught almost exclusively in French. The AP French Language and Culture course engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions)

LANGUAGES OTHER THAN ENGLISH (LOTE) COURSES

LATIN 1

OL2000

GRADES: 9-12
1 Credit
PREREQUISITE: None

Students in Latin 1 will be able to express meaning in simple contexts and understand sentence-length information. Students may be generally understood by people accustomed to dealing with language learners. Students will acquire and discover the target language through speaking, listening, reading, and writing activities. This course will lay the framework for continuing in the target language and will introduce students to the target language cultures. The majority of this course is conducted in the target language.

LATIN 2

OL2100

GRADES: 9-12
1 Credit
PREREQUISITE: Latin 1

Students in Latin 2 will be able to express meaning in a straightforward and personal context and understand information from simple connected statements. Students are generally understood by people accustomed to dealing with language learners. Students will continue to acquire and discover the target language through speaking, listening, reading, and writing activities. This course allows the students to begin communicating in a target language environment. The majority of this course is conducted in the target language.

AA LATIN 2

OL2120

GRADES: 9-12
1 Credit
PREREQUISITE: Latin 1

Pre-AP Latin 2 engages students in learning all the essential knowledge and skills of Latin 2 while providing greater depth. Students in Latin 2 will be able to express meaning in a straightforward and personal context and understand information from simple connected statements. Students are generally understood by people accustomed to dealing with language learners. Students will continue to acquire and discover the target language through speaking, listening, reading, and writing activities. This course allows the students to begin communicating in a target language environment. The majority of this course is conducted in the target language.

AA LATIN 3

OL2150

GRADES: 10-12
1 Credit
PREREQUISITE: Latin 2 or AA Latin 2

Pre-AP Latin 3 engages students in learning all the essential knowledge and skills of Latin 3 while providing greater depth. Students in Latin 3 will be able to express meaning in a variety of contexts and understand information from connected statements. Students are generally understood by people accustomed to dealing with language learners. Students will continue to acquire and discover the target language through speaking, listening, reading, and writing activities. This course allows the students to communicate in the target language environment at an intermediate level. The teacher and the students will interact primarily in the target language.

AP LATIN 4

OL2200

GRADES: 11-12
1 Credit
PREREQUISITE: AA Latin 3

AP Latin 4 is equivalent to a second-year college Latin course. Latin grammar will be reviewed as encountered in reading, and advanced grammar topics will be further explored. Roman culture, history and mythology will be integrated as required by the AP syllabus. This course is designed to prepare students for the AP Latin exam. Scansion of poetry, figures of speech in Latin poetry and background to the readings will be included, particularly as topics for special projects. Both Vergil's Aeneid and Caesar's Gallic Wars will be covered in this course.

AMERICAN SIGN LANGUAGE 1

OL4000

GRADES: 9-12
1 Credit
PREREQUISITE: None

ASL 1 introduces students to the language and culture of the Deaf. In this course, students will build their receptive and expressive communicative foundation. The focus of this course is developing a novice-mid proficiency. This course is conducted in ASL (without voice) a significant amount of time.

LANGUAGES OTHER THAN ENGLISH (LOTE) COURSES

AMERICAN SIGN LANGUAGE 2

OL4100

GRADES: 10-12
1 Credit
PREREQUISITE: ASL 1

ASL 2 continues to introduce the language and culture of the Deaf. In this course, students continue to develop their expressive and receptive communicative abilities. Students will gain a deeper appreciation and understanding of American Deaf Culture. The focus of this course is developing a novice-high proficiency. This course is conducted in ASL (without voice) a significant amount of time.

AMERICAN SIGN LANGUAGE 3

OL4200

GRADES: 11-12
1 Credit
PREREQUISITE: ASL 2

American Sign Language 3 is an intermediate level class for students who have successfully completed ASL 1 and 2. Students will continue to build upon their expressive and receptive language and vocabulary skills. Learning to recognize and produce ASL sentences using grammatical features such as location classifiers, quantifiers, temporal aspect inflection, and spatial agreement will be emphasized. Students continue cultural exploration of the Deaf Community. The expected outcome of this course will be developing intermediate low-mid proficiency. This course is conducted in ASL (without voice) a significant amount of time.

AMERICAN SIGN LANGUAGE 4

OL4300

GRADES: 12
1 Credit
PREREQUISITE: ASL 3

ASL 4 is a continuation of ASL 3. The class will continue to focus on vocabulary expansion, idioms, manual and non-manual aspects of ASL, ASL linguistics, cross-cultural communication and cultural knowledge at an advanced level. Material covered in class will provide linguistic principles of American Sign Language at the advanced level and grammatical structures for complex sentences. The expected outcome of this course will be developing intermediate mid-high proficiency. This course is conducted in ASL (without voice) a significant amount of time.

SPANISH 1

OL3000

GRADES: 9-12
1 Credit
PREREQUISITE: None

Students in Spanish 1 will be able to express meaning in simple contexts and understand sentence-length information. Students may be generally understood by people accustomed to dealing with language learners. Students will acquire and discover the target language through speaking, listening, reading, and writing activities. This course will lay the framework for continuing in the target language and will introduce students to the target language cultures. The majority of this course is conducted in the target language

SPANISH 2

OL3100

GRADES: 9-12
1 Credit
PREREQUISITE: Spanish 1

Students in Spanish 2 will be able to express meaning in a straightforward and personal context and understand information from simple connected statements. Students are generally understood by people accustomed to dealing with language learners. Students will continue to acquire and discover the target language through speaking, listening, reading, and writing activities. This course allows the students to begin communicating in a target language environment. The majority of this course is conducted in the target language.

AA SPANISH 2

OL3110

GRADES: 9-12
1 Credit
PREREQUISITE: Spanish 1

Pre-AP Spanish 2 engages students in learning all the essential knowledge and skills of Spanish 2 while providing greater depth. Students will be able to express meaning in straightforward and personal contexts and understand information from simple connected statements. Students are generally understood by people accustomed to dealing with language learners. Students will continue to acquire and discover the target language through speaking, listening, reading, and writing activities. This course allows the students to begin communicating in a target language environment. The majority of this course is conducted in the target language.

LANGUAGES OTHER THAN ENGLISH (LOTE) COURSES

AA SPANISH 3

OL3200

GRADES: 9-12
1 Credit
PREREQUISITE: Spanish 2 or AA Spanish 2

Pre-AP Spanish 2 engages students in learning all the essential knowledge and skills of Spanish 2 while providing greater depth. Spanish 3 Pre-AP prepares students to take Spanish 4 AP. This course focuses on the delivery of content through thematic units while expanding on relevant vocabulary and refining the accuracy of expression by knowing the components of language. This course begins to incorporate the 6 AP themes within the units of study and makes connections between the themes and real-world applications. The focus of this course is developing intermediate-mid proficiency. This course is held in the target language.

AP SPANISH 4 LANGUAGE AND CULTURE

OL3300

GRADES: 10-12
1 Credit
PREREQUISITE: Spanish 3 or AA Spanish 3

The AP Spanish Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP Spanish Language and Culture course strives not to overemphasize grammatical accuracy at the expense of communication. To best facilitate the study of language and culture, the course is taught almost exclusively in Spanish. The AP Spanish Language and Culture course engages

students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions)

AP SPANISH 5 LITERATURE

OL3350

GRADES: 11-12
1 Credit
PREREQUISITE: AP Spanish 4 Language and Culture

The AP Spanish Literature and Culture course uses a thematic approach to introduce students to representative texts (short stories, novels, poetry, and essays) from Peninsular Spanish, Latin American, and United States Hispanic literature. Students develop proficiencies across the full range of communication modes (interpersonal, presentational, and interpretive), thereby honing their critical reading and analytical writing skills. Literature is examined within the context of its time and place, as students reflect on the many voices and cultures present in the required readings. The course also includes a strong focus on cultural connections and comparisons, including exploration of various media (e.g., art, film, articles, literary criticism).

SPANISH 1 AND 2 FOR SPANISH SPEAKERS

OL3400-3410

GRADES: 9-12
1 Credit
PREREQUISITE: Heritage Speaker recommended

This course is designed to help Hispanic students capitalize on the verbal skills they already possess. The student objectives will be to improve their reading and writing skills in Spanish, while refining existing listening and speaking skills. This course incorporates the study of the Spanish language and Hispanic culture to assist students in the understanding and appreciation of Hispanic culture. The main objective is to enrich the student's total language experience by building on the language proficiency they already possess. Their skills are enhanced in accordance with the level of language proficiency of the student. The focus is on increasing students' ability to use Spanish flexibly for both formal and informal situations and on developing their literacy skills. Students should possess Intermediate low proficiency at the beginning of the course and progress through Intermediate mid by the end.

PHYSICAL EDUCATION COURSES

Students may substitute certain physical activities for the required physical education credits for graduation. Such substitutions shall be based on the following:

1. **The fall semester in each of the following courses earning 0.5 of state credit in PE: *Marching Band and Color Guard***
    a. ***To complete the PE credit requirement for graduation, students must enroll in the fall semester of the above courses for 2 years.**
2. **Athletics**

PHYSICAL EDUCATION

GRADES: 9-12
.5 Credit
PREREQUISITE: None

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 will be required to dress out during Physical Education class. Students may take a combination of two semesters of the following courses to earn 1 full credit of PE.

COURSE OPTIONS FOR PHYSICAL EDUCATION:

Lifetime Fitness and Wellness Pursuits
PE1000

The Lifetime Fitness and Wellness Pursuits (LFWP) course offers current approaches for the foundation of personal fitness, physical literacy, lifetime wellness, and healthy living. Students in LFWP will apply the knowledge, skills, and value for demonstrating mastery of the concepts needed to achieve lifetime wellness. Course A during the Fall semester includes topics such as: physiological and biomechanical principles to improve health-related fitness; interval, HIIT, and functional fitness; various fitness-related activities to support lifelong participation and value for personal health-related fitness.

Lifetime Recreation and Outdoor Pursuits
PE1010

The Lifetime Recreation and Outdoor Pursuits (LROP) course Part A, during the Fall semester, provides opportunities for students to develop competency in 3 or more lifetime recreational and outdoor pursuits to include: adventure activities, backpacking, camping, hiking, and navigation sporting activities. Additionally, students enrolled in LROP will participate in activities that promote physical literacy while developing appreciation and respect for nature and enjoyment in the outdoors.

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PHYSICAL EDUCATION COURSES

Skill-based Lifetime Activities

PE1020

The Skill-Based Lifetime Activities (SBLA) course Part A, during the Fall semester, offers students the opportunity to demonstrate mastery in basic sport skills, sport knowledge, and health and fitness principles through non-traditional team and individual sports. Students will experience activities that promote physical literacy and lifetime wellness while participating in at least one activity from each of the following categories: target games; striking and fielding games; fitness activities; rhythmic fitness; and innovative/non-traditional games.

ATHLETIC COURSES

BASEBALL

PE1101-1104

GRADES: 9-12
1 Credit
PREREQUISITE: Tryouts

Baseball on a competitive interschool basis offers the student the opportunity to develop the individual skills of base running and hitting, catching, and throwing the ball. Since baseball is a team sport, students develop those qualities characteristic of good team membership. The varsity team is composed of eighteen to twenty-four players who compete in approximately twenty-five games a year. The ninth grade and the junior varsity teams play between 15 and 20 games a year.

BASKETBALL—GIRLS AND BOYS

PE1401-1404, PE1301-1304

GRADES: 9-12
1 Credit
PREREQUISITE: Tryouts

Basketball is an inter school activity that enables students to develop and test specific motor skills, such as dribbling, passing, and shooting the basketball. Total student development is stressed, and emphasis is placed on developing assets such as poise, respectable academic standing, and positive self-concept. There are three girls' and boys' teams-varsity, junior varsity, and freshman.

FOOTBALL

(Fall semester only for 12th grade)

PE1801-1804

GRADES: 9-12
1 Credit
PREREQUISITE: None

Football is a sport that helps the student develop individual physical skills such as blocking, tackling, running, kicking, catching, and throwing the football. Varsity, junior varsity, and two freshmen teams are fielded at the high school. A structured off-season program is provided for physical development during the second semester.

GOLF- GIRLS AND BOYS

PE1901-1904

GRADES: 9-12
1 Credit
PREREQUISITE: Students must provide their own transportation

Golf is an individual sport in which a student competes against other students for individual recognition. It is also a team sport in which a team competes on an interscholastic level. It provides a person with a life-long means for recreation. The varsity and junior varsity teams compete against other schools.

SOFTBALL

PE2151-2154

GRADES: 9-12
1 Credit
PREREQUISITE: Tryouts

Softball offers students the opportunity to develop the individual skills of base running and hitting, catching, and throwing the ball.

SOCCER-GIRLS AND BOYS

PE2101-2104, PE2001-2004

GRADES: 9-12
1 Credit
PREREQUISITE: Tryouts

The inter school soccer team provides students with the opportunity to learn a truly international game. The course requirements include learning the rules of play and the skills needed to play competitively. This involves the development of running ability, body coordination, conditioning, and strategy. Varsity and junior varsity teams play approximately ten games in scheduled competition.

ATHLETIC COURSES

SWIMMING-GIRLS AND BOYS

PE2301-2304

GRADES: 9-12
1 Credit
PREREQUISITE: Students must provide their own transportation

Swimming is a team and an individual sport which competes on an interscholastic level. During the year students will cover all aspects of competitive swimming. There is a junior varsity and a varsity team.

TENNIS-GIRLS AND BOYS

PE2401-2404

GRADES: 9-12
1 Credit
PREREQUISITE: Tryouts

Tennis on the high school level is a highly competitive program beginning in September and ending in May. During the school year, students cover all phases of the game, from basic fundamentals through competitive play.

VOLLEYBALL

(Fall semester only for 12th grade)

PE2501-2504

GRADES: 9-12
1 Credit
PREREQUISITE: Tryouts

Volleyball is an interschool sport following the rules and regulations of “power” volleyball. To play the game, a student must develop individual skills and must learn to work well in a team situation. There is a freshman team, a junior varsity team, and a varsity team. Workouts will begin before the school year starts.

CROSS COUNTRY

PE2451-2454

GRADES: 9-12
1 Credit
PREREQUISITE: Tryouts

CrossCountry running is a sport in which teams and individuals run races on outdoor courses over natural terrain. Total student development is stressed, and emphasis is placed on developing assets such as poise, respectable academic standing, and positive self-concept.

ATHLETIC COURSES

DRILL TEAM – HIGHSTEPPERS
PE1601-1604
GRADES: 9-12
.5 state credit & .5 local credit
PREREQUISITE: Spring Tryouts

The SHS Hi-Steppers Drill Team promotes school spirit and sportsmanship at athletic events and school activities. The Drill Team represents the high school in performances throughout the community, state, and nation and participates in various competitions. Performances may include pep rallies, football games, professional/semi-professional athletic events, competitions, community events, and stage shows. Areas of focus include: proper stretching, splits, and dance technique (kick, jazz, pom, hip-hop, lyrical, contemporary). Each student selected must be aware of the time commitment and be dedicated to individual and team improvement.****If taken concurrently with another Athletic designated course, a student earns state credit for only their Freshmen year. Subsequent years will earn local credit only.***

CHEERLEADING
PE 1530- Freshmen
PE 1521-1524- Junior Varsity
PE 1511-1514- Varsity
GRADES: 9-12
.5 state credit & .5 local credit
PREREQUISITE: Spring Tryouts

SHS cheerleading will emphasize curricular and extracurricular activities by promoting school spirit. Cheerleaders are involved in summer camps, pep rallies, games, community events and competitions. Membership is obtained through a tryout process during the spring and is based on skill, academics, discipline records, and the obtainment of current physical.

If taken concurrently with another Athletic designated course, a student earns state credit for only their Freshmen year. Subsequent years will earn local credit only.

HEALTH HL1000
GRADES: 9-12
.5 Credit
PREREQUISITE: None

This course includes instruction in environment and community health, consumer health, care of the human body, nutrition, mental health, substances that modify behavior, prevention of disease, chronic health conditions, accident prevention, first aid, emergency care, and family life education. **(This course does NOT satisfy the physical education credit required for graduation.)**

DANCE 1
PE6000 for PE credit
FA6000 for Fine Arts credit
GRADES: 9-12
1 Credit
PREREQUISITE: None

This course is an introduction to all basic dance techniques (tap, ballet, jazz, modern, contemporary and world dance) including vocabulary and principles of all dance forms. A supply fee may be required. Students may earn up to one P.E. and/or Fine Arts credit.

DANCE 2
PE6100 for PE credit
FA6100 for Fine Arts credit
GRADES: 9-12
1 Credit
PREREQUISITE: Dance 1

This course extends the basic dance techniques (tap, ballet, jazz, modern, contemporary and world dance) learned in Dance 1. A supply fee may be required. Students may earn up to one P.E. and/or Fine Arts credit.

DANCE 3
PE6300 for PE credit
FA6200 for Fine Arts credit
GRADES: 10-12
1 Credit
PREREQUISITE: Dance 1 & Dance 2

This course builds on skills learned in Dance 2. An emphasis is placed on improvement of technical skills and creative expression. A supply fee may be required. Students may earn up to one P.E. and/or Fine Arts credit.

DANCE 4
PE6300 for PE credit
FA6300 for Fine Arts credit
GRADES: 11-12
1 Credit
PREREQUISITE: Dance 1, Dance 2, and Dance 3

This course focuses on the advanced dancer. An emphasis is placed on style, technique, and choreography. A supply fee may be required. Students may earn up to one P.E. and/or Fine Arts credit.

OTHER ELECTIVES

DOLLARS AND SENSE

VO6550

GRADES: 9-12
.5 Credit
PREREQUISITE: None
Dollars and Sense focuses on consumer practices and responsibilities, the money management process, decision-making skills, the impact of technology, and preparation for human services careers. Students are encouraged to participate in career and technical student organizations and other leadership organizations.

PAL (PEER ASSISTANCE & LEADERSHIP)

EL5000

GRADE: 12
1 Credit
PREREQUISITE: Application, nomination, evaluation and interview

The PAL program is a peer helping program. Students are trained to work with other students, usually from middle schools or elementary schools. The course emphasizes the development of communication skills, leadership skills and self-esteem.

COLLEGE READINESS and STUDY SKILLS

LA5080

GRADES:9-12

.5 Credit

This course is designed for students wishing to improve their study skills and note-taking skills, **prepare for college and university admission exams such as the SAT and ACT**, and complete any work necessary for college applications and admissions.

STUDENT AIDE

LC4010

GRADE: 12
1 Local Credit (Not A State Graduation Credit)
An Office Aide may be placed in an office or in the library.

SPORTS MEDICINE 1

PE2220

GRADES: 9-11
.5 Credit
PREREQUISITE: None

This course provides an opportunity for the study and application of the components of sports medicine including, but not limited to, sports medicine related careers, organizational and administrative considerations, prevention of athletic injuries, recognition, evaluation, and immediate care of athletic injuries, rehabilitation and management skills, taping and wrapping techniques, first aid/CPR/AED, emergency procedures, nutrition, sports psychology, human anatomy and physiology, therapeutic modalities, and therapeutic exercise. Students will also have to complete a number of game observations during the semester. **(This course does NOT satisfy the physical education credit required for graduation.)**

SPORTS MEDICINE 2

PE2230

GRADES: 10-12
1 Credit
PREREQUISITE: Sports Medicine 1

This course is designed for athletic training students. It provides an in-depth study and application of the components of sports medicine including, but not limited to, basic rehabilitative techniques; therapeutic modalities; wound care, taping, and bandaging techniques, prevention, recognition, and care of musculoskeletal injuries; injuries to the young athlete; drugs in sports; modern issues in sports medicine. Individualized and independent assignments will be included in this course. This course will involve outside-of-class time homework and time required working with athletes and athletic teams. **(This course does NOT satisfy the physical education credit required for graduation.)**

SPORTS MEDICINE 3

PE2240

GRADES: 11-12
1 Credit
PREREQUISITE: Sports Medicine 1 and 2

This course is designed for experienced athletic training students that regularly work with athletes and programs at SHS. It provides regular application of the skills developed in sports medicine including rehabilitative techniques; therapeutic modalities; wound care, taping, and bandaging techniques, prevention, recognition, and care of musculoskeletal injuries due to athletics. This course will involve outside-of-class time homework and time required working with athletes and athletic teams. **(This course does NOT satisfy the physical education credit required for graduation.)**

OTHER ELECTIVES

BIBLE LITERACY

Bible's Hebrew Scriptures (Old Testament) and New Testament and Their Impact on the History and Literature of Western Civilization

SS2100 OLD TESTAMENT
SS3100 NEW TESTAMENT

GRADES: 9-12
1 Credit
PREREQUISITE: None

Bible Literacy focuses on the impact the Bible has had on history and literature. Students will gain knowledge of biblical content, characters, poetry, and narratives that increase their understanding of contemporary society and culture. The course will include content covering literature, art, music, mores, oratory, and public policy. This course follows all applicable law and federal and state guidelines in maintaining religious neutrality. This course does not endorse, favor, or promote, or disfavor or show hostility toward any particular religion or non religious faith or religious perspective.

STUDENT LEADERSHIP

EL6000 (STATE CREDIT) &
LC6200 (LOCAL CREDIT)

GRADE: 11-12
1 Credit
PREREQUISITE: Application, nomination, evaluation and interview

This course is designed to develop and improve the leadership skills each person possesses. Areas from goal setting to team building to personal relations to problem solving will be covered. Learn what leadership is all about by learning about your leadership style, developing goal setting skills, communication skills, decision making skills, teamwork and much more. You will develop your leadership skills further by studying time and stress management, parliamentary procedure, peer pressure, self-confidence, assertiveness and a positive attitude. Students will work with leadership projects within the school district and the community including an elementary student-mentoring program. Students must be an active member of the SHS Student Council.

TSI Prep (Math & English)

MT5950 MATH
LA4550 ENGLISH

GRADES: 11-12
1 Credit
PREREQUISITE: None

Each of these courses is a self-paced college prep course that allows teachers and students to work together to target individual skills needed to transition successfully into college.

Touch Systems Data

BU3500

GRADES: 11-12
.5 Credit
PREREQUISITE: None

In Touch System Data Entry, students apply technical skills to address business applications of emerging technologies. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students will need to apply touch system data entry skills for production of business documents. The Touch Systems Data Entry course falls under the High School Career Cluster: Business Management and Administration.

BEARCAT COLLEGIATE PROGRAM (BCP)

Associate Degree Program through Grayson College

Qualified students will be enrolled simultaneously in Sherman ISD and Grayson College to receive high school as well as college credit. They also must meet all Dual Credit expectations outlined in the Dual Credit Program Guidelines.

General Studies Associate of Science – Sherman HS

Arts & Humanities Endorsement

Course	9th Grade		10th Grade		11th Grade		12th Grade	
	1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester
English	English 1		English 2		English 3		**ENGL 1301**	**ENGL 1302**
Math	Algebra 1 or Geometry		Geometry or Algebra 2		Algebra 2 or Advanced Math Class		**MATH 1314**	**MATH 1342**
Science	Biology		Chemistry		**BIO 1306/ 1106**	**BIO 1307/ 1107**	Physics	
Social Studies	World Geography		World History		**HIST 1301**	**HIST 1302**	**GOVT 2305**	**ECON 2301**
Foreign Language	LOTE		LOTE					
Fine Arts				**MUSC 1306**			**SPCH 1311**	**GOVT 2306**
PE Credit			**PHED 1164**		**PYSC 2301**	**SOCI 1301**	**HUMA 1301**	**PHIL 1301**
Elective	**EDUC 1300**	**COSC 1301**	High School Elective (1)		High School Elective (1)		High School Elective (1)	
Elective	High School Elective (1)		High School Elective (1)		High School Elective (1)		High School Elective (1)	
Elective					High School Elective (1)		High School Elective (1)	

***TSI RW needs to be taken before 10th grade. TSI Math before 12th grade.**

***AA and AP courses are strongly encouraged.**

Electrical Engineering Technician Program of Study

Course	9th Grade		10th Grade		11th Grade		12th Grade	
	1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester
English	English 1		English 2		English 3		English 4	
Math	Algebra 1 or Geometry		Geometry or Algebra 2		Algebra 2 or Advanced Math Class		Senior Math (Pre Calc/AQR preferred)	
Science	Biology		Chemistry		**Digital Electronics (1.0)**		Senior Science (Eng Design & Pres preferred)	
Social Studies	World Geography		World History		US History		US Govt.	Econ
Foreign Language	LOTE		LOTE					
Fine Arts								
PE Credit			PE Credit (1)					
Elective	**Principles of Applied Engineering (1)**		**AC/DC Electronics (1)**		**Practicum in Engineering (2.0)**		**Practicum in Engineering (2.0)**	
Elective	High School Elective (1)		High School Elective (1)		High School Elective (1)		High School Elective (1)	
Elective					High School Elective (1)		High School Elective (1)	

***Students will receive Electronics Technology Level 1 Certificate at the end of the 1st semester of the senior year**

SISD Dual Credit Crosswalk

PEIMS ID	HIGH SCHOOL COURSE NAME/Course Code	HIGH SCHOOL CREDIT	COLLEGE COURSE NUMBER	COLLEGE COURSE NAME	COLLEGE CREDIT HOURS
03155400	Music Theory (DC3000)	1	MUSC1306	Music Appreciation	3
03380001	Social Studies Advanced Studies (DC1000)	1	EDUC1300	Learning Frameworks	3
PES00056	Skills-Based Lifetime Activities (DC4000)	1	PHED1164	Intro to Physical Fitness and Wellness	1
03580140	Fundamentals of Computer Science (DC2000)	0.5	COSC1301	Introduction to Computing	3
03221600	Humanities (DC7000)	0.5	HUMA1301	Introduction to Humanities	3
03370100	Sociology (DC8000)	0.5	SOCI1301	Introduction to Sociology	3
03350100	Psychology (DC5000)	0.5	PSYC2301	General Psychology	3
03380022	Special Topics in Social Studies (1st time taken) (DC6000)	0.5	PHIL1301	Introduction to Philosophy	3
03220400	English 4 (LA4400)	1	ENGL1301/1302	Composition 1/Composition 2	6
03340100	US History (SS7400)	1	HIST1301/1302	United States History 1 & 2	6
03330100	Government (SS2200)	0.5	GOVT2305	Federal Government	3
03380032	Special Topics in Social Studies (2nd time taken) (DC9000)	0.5	GOVT2306	Texas Government	3
03310300	Economics FE (SS2200)	0.5	ECON2301	Principles of Macroeconomics	3
03241200	Independent Study in Speech (1st time taken) (DC1010)	0.5	SPCH1311	Intro Speech Communications	3
03102500	Independent Study in Math (MT3000)	0.5	MATH1314	College Algebra	3
03102500	Independent Study in Math (MT3100)	0.5	MATH1342	College Statistics	3
13036300	Principles of BioScience (DC2100)	1.0	BIOL1306/1106 BIOL1307/1107	Biology for Science Majors 1&2	8

13003005	DC/Practicum in Manufacturing (VO3870)	3.0	OSHT1401 POFT1220 MCHN1320 MCHN1438	Intro to Safety and Health Job Search Skills Precision Tools and Measurement Basic Machine Shop 1	
13033015	DC/Practicum in Manufacturing 2 (VO3875)	3.0	MCHN1326 PTAC2346 INMT1419 MCHN1454	Intro to Computer Aided Manuf. Process Troubleshooting Manufacturing Processes Intermediate Machining	
13039810	DC/Practicum in Automotive	3.0	ABDR1519 ABDR1431 ABDR1411 ABDR2355	Basic Metal Repair Masic Refinishing Vehicle Measurement and Damage Collision Repair	
13039910	DC/Practicum in Automotive 2	3.0	ABDR1555 ABDR2502 ABDR1558 ABDR1449	Minor Metal Repair Mechanical & Electrical Systems Collision Repair Estimating Plastic and Composite Repair	
13032250	DC/Introduction to Welding (VO3860)	1.0	WLDG1421 WLDG1430	Welding Fundamentals Intro to Gas Metal Arc Welding	
13032300	DC/Welding 1 (VO4010)	2.0	WLDG1428 WLDG1457	Intro to Shielded Metal Arc Welding Intermediate Shielded Metal Arc Welding	
13032410	DC/Welding 2 (VO4020)	2.0	WLDG1434 WLDG2447 WLDG2406 WLDG2451	Intro to Gas Tungsten Arc Weld Adv Gas Metal Arc Welding Intermediate Pipe Welding Advanced Tungsten Arc Welding	
N1303684	DC/Blueprint Reading (VO4040)	1.0	DFTG1425	Blueprint Reading	
13025210	Cosmetology 1 & Lab (VO4000)	3.0	CSME1401 CSME1443 CSME1410 CSME1405	Orientation to Cosmetology Manicuring and Related Theory Intro to Haircutting & Related Theory Fundamentals of Cosmetology	
13025310	Cosmetology 2 & Lab (VO4004)	3.0	CSME2501 CSME1453 CSME1447 CSME1451	Principles of Hair Color & Related Theory Chemical Reformation and Related Theory Principles of Skin/Facial and Related Theory Artistry of hair, Theory and Practice	
13037405	Ext Practicum in STEM (VO4845)	3.0	ITNW1325 CPMT1345 ITNW1354 ITNW2355 CPMT1311 ITSY1300	Fund of Networking Technologies Computer Systems Maintenance Implementing & Supporting Servers Server Virtualization Intro to Computer Maintenance Fundamentals of Info Security	
03581500	Independent Study in Evolving/Emerging Technology (VO4855)	1.0	ITSC1316 ITSC2325	Linux Installation & Configuration Advanced Linux	
13037415	Ext Practicum in STEM	3.0	ITSE2317 ITSC1342 CPT2345	Java Programming Shell Programming Computer System Troubleshooting	
13030115	Ext Practicum in Law (VO4500)	3.0	EMSP1501 EMSP1160 EMSP2305	Emergency Medical Tech Clinical EMT EMS Operations	

“PREPARING TOMORROW’S WORKFORCE TODAY!”

Career and Technical Education (CTE) programs are designed to prepare our students for high-wage, high-skill, and high-demand careers after they graduate from high school. We want students to pursue their interests and discover the opportunities they may not have known about prior to taking their CTE courses.

Our CTE programs enable students to...

- **become certified or licensed in a particular skill**
- **gain entry-level employment, and/or**
- **continue their education in post-secondary study**

CTE COURSES AND INFORMATION

ARTICULATED COURSES WITH GRAYSON COLLEGE

What does it mean for a course to be articulated? **Sherman ISD and Grayson College have an agreement to honor a high school course as college credit, as long as the course meets certain requirements.**

What requirements must the course have to be articulated? **Grayson College analyzes the high school curriculum with the curriculum the college provides making sure the same standards are being taught at the same rigor. The college also reviews the high school teacher's education credentials to make sure he/she is skilled in the particular area/course.**

How do I obtain my college credit from the articulated course(s)? **You must first complete one semester at Grayson College after you graduate from Sherman HS. Upon completion of your first semester at GC, it is YOUR responsibility to check with your college advisor or registrar to make sure your articulated courses transfer over to college credit on your college transcript. It will be your responsibility to ask for these FREE credits.**

Can these articulated courses be transferred to a different school other than Grayson College? **No, unfortunately not. This is a special agreement and partnership the district has with Grayson College. You must attend Grayson College for at least one semester to obtain your free college credit.**

Which CTE courses are articulated at Sherman High School?

High School Course	College Abbreviated Course	Number of College Credits
Practicum in Business Management	BMGT 1327	3
Financial Mathematics	BUSG 1304	3
Accounting 1	ACNT 1303	3
Accounting 2	ACNT 1304	3
Business Information Management 1	ITSC 1309	3
Business Information Management 2	ITSC 2321	3
Culinary Arts	CHEF 1205	2
Practicum in Culinary Arts	CHEF 1301	3
Digital Media	IMED 1301	3
Animation 2	ARTC 1325	3
Practicum in Education and Training	CDEC 2264	3
Computer Science	ITSE 2317	3

Ag Structures and Design	**WLDG 1428**	**4**
Ag Equipment Design and Fab	**WLDG 1421**	**4**
Advanced Animal Science	**AGRI 1319**	**3**
Heating, Ventilation & Refrigeration Technology	**HART 1401**	**4**
Instructional Practices	**CDEC 2341**	**3**
Court Systems & Practices	**CRIJ 1306**	**3**
Law Enforcement 1	**CJSA 1327**	**3**
Criminal Investigations	**CRIJ 2314**	**3**
Medical Terminology	**HITT 1305**	**3**

DUAL CREDIT TECHNICAL PROGRAMS WITH GRAYSON COLLEGE

Juniors and seniors have the opportunity to partner with Grayson College by entering a CERTIFICATION program in one of the following areas:

Dual Credit Program	*Requirements*	*Certification Offerings*
Advanced Manufacturing Program (AMP)	• Pre-Req Course: Manufacturing Engineering Technology • Parent meeting • Complete summer internship after graduation	• Basic Manufacturing Level 1 Certification • Advanced Manufacturing Level 1 Certification
Cosmetology	• Supply kit expense	• Cosmetology License
Cybersecurity	• Recommended STEM pathway	• Cybersecurity Certificate • 48 College Credits towards a Cyber Security Associate's Degree
Emergency Medical Technician (EMT)	• Enroll in Practicum of Law or Practicum of HS • Seniors Only • Supply Expense	• Emergency Medical Technician Basic
Patient Care Technician (PCT)	• Pre-Req Course: Practicum of Health Science • Seniors Only	• EKG License • Phlebotomy License • Certified Nursing Assistant License • Patient Care Technician License
Welding	• Supply expense	• AWS D1.1 Structural Steel Certification
Electrical Engineering Technician (EET)	• 4 year commitment	• Electronic Technology Level 1 Certification
Computer Maintenance & Networking	• Recommended STEM pathway	• Computer Maintenance and Networking Technology Certificate • 48 hours towards Computer Maintenance Associate's Degree
Child Development	• Senior • Instructional Practices Pre-requisite	• Child Development Certificate • 9 hours towards Associate's/Bachelor's Degree

District transportation is available. HS credit will be awarded after successful completion of the courses. Attendance is a MUST and a PRIORITY to be successful!

INDUSTRY CERTIFICATIONS

Most CTE courses prepare students for various industry certifications that are currently recognized and accredited. Based on interests, work ethics, and level of academic achievement, some students may have the opportunity to take certification exams in current CTE courses. Students can potentially graduate with high school and college credit, a new skill, and an industry-recognized certification.

2025-2026 Certification Offerings	
VetMed Applications Certification	American Welding Society D9.1
American Welding Society D1.1	American Welding Society Certified Welder
American Welding Society SENSE Level 1: Entry Welder	GC Combination Welder Certificate
Texas State Floral Association Floral Certification	Accounting Foundations
Accounting Basics	Entrepreneurship and Small Business
Adobe Certified Professional Photoshop	Adobe Certified Professional in Digital Video using Adobe Premiere Pro
Adobe Certified Professional in Visual Effects and Motion Graphics using Adobe After Effects	Automotive Service Excellence - Entry Level Brakes
Leadership in Energy and Environmental Design (LEED) Green Associate	Grayson College Basic Manufacturing Certification
Advanced Manufacturing Technician Certificate	Food Safety Manager
Food Safety and Science	Cosmetology
Education Aide 1	Community Health Workers
Non-commissioned Security Officer Level II License	International Academies of Emergency Dispatch (IAED) Emergency Telecommunicator
EMT Basic	Medical Assistant
Pharmacy Technician	AutoCad for Design
C++	CyberSecurity Certificate
Computer Maintenance and Networking Certification	Child Development
Patient Care Technician	EKG
Phlebotomy	Certified Nursing Assistant
Electrical Technology Technician Level 1	

CTE COURSES FOR ACADEMIC CREDIT

SCIENCE
Advanced Animal Science
Anatomy and Physiology
Engineering Design & Problem Solving
Food Science
Forensic Science
Medical Microbiology
Horticulture Science
MATH
Financial Mathematics
Digital Electronics
Accounting II
FINE ARTS
Floral Design
SPEECH
Professional Communications

CTE Student Leadership Opportunities

Business Professionals of America (BPA)

BPA is a student organization that contributes to the advancement of leadership, citizenship, personal growth, as well as academic, and technological skills. Competitive events enhance career/job preparation, workplace competencies, self-confidence, and the instructional program.

Family, Career, and Community Leaders of America (FCCLA)

FCCLA is a student organization that provides opportunities for personal growth and leadership development through Family and Consumer Sciences Education. Focusing on the multiple roles of family member, wage earner, and community leader, FCCLA members develop skills for life through personal development, creative and critical thinking, interpersonal communications, practical knowledge, and career preparation.

Future Farmer's of America (FFA)

FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.

Health Occupations Students of America (HOSA)

HOSA is a student organization that provides opportunities for leadership development, knowledge and skill recognition through the competitive events program and community service projects. By networking with health care professionals, students receive guidance in selecting and pursuing a health career.

SkillsUSA

SkillsUSA is a national membership association serving high school, college and middle school students who are preparing for careers in trade, technical and skilled service occupations, including health occupations, and for further education. SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce.

Texas Assocation of Future Educators (TAFE)

TAFE is a statewide leadership organization that encourages students to learn about careers in education and assists them in exploring the teaching profession while promoting character, service and leadership skills necessary for becoming effective educators.

National Technical Honor Society

A nationally recognized and proven national honor organization with thousands of member schools and colleges. Students must meet membership standards and should be persons who have demonstrated scholastic achievement, skill development, leadership, honesty, responsibility, and good character

Business and Industries Endorsement			
	Agriculture & Natural Resources		
	Animal Science Kristi Sroka Julia Mcgrath	Introductory	Principles of Ag (VO2000)
		Concentrator	Small Animal/Equine Science (VO2630/VO2670)
		Concentrator	Veterinary Medicine (VO2680)
		Capstone	Advanced Animal Science (VO2690/SC8200)
			Practicum in Agriculture (VO2015) (2 cr)
	Applied Agricultural Engineering (Welding) London Jindra	Introductory	Principles of Ag (VO2000)
		Concentrator	Ag Mechanics (VO2900)
		Concentrator	Ag Structructures (VO2400)
		Capstone	Ag Equipment/Design (VO2410)
			Practicum in Agriculture (VO2010) (2 cr)
	Applied Agricultural Engineering (Welding Dual Credit) Jindra/Grayson	Introductory	Principles of Ag (VO2000)
		Concentrator	Ag Mechanics (VO2900)
		Capstone	Intro to Welding (VO3860) (DC)
			Welding 1 (VO4010) (2 cr) (DC)
			Welding 2 (VO4020) (3 cr) (DC)
	Plant Science Julie Pearcy	Introductory	Principles of Ag (VO2000)
		Concentrator	Floral Design (VO2720)
		Capstone	Horticulture Science (VO2220)
			Advanced Floral Design (VO2730) (2 cr)
			Practicum of Agriculture (2 cr)
	Business Marketing & Finance		
	Accounting & Financial Services Carlia Freeman	Introductory	BIM1 (BU1700)
		Concentrator	Accounting 1 (BU1000)
		Capstone	Accounting 2 (BU1500/MT9300)
			Practicum on Entrepreneurship (BU6100)
			Financial Math (BU4550)
	Business Management Cheryl Wroe Kim Grice	Introductory	BIM 1 (BU1700)
		Concentrator	Entrepreneurship 1 (BU5100)
			Entrepreneurship 2 (BU5105)
		Capstone	Practicum of Entrepreneurship (BU6100)
		Available Courses not in POS	Accounting 1 (BU1000)
			BIM2 (BU1800)
			Financial Math (BU4550)
	Graphic Design and Multimedia Arts		
	Animation Jeff Clements	Introductory	Principles of Arts, A/V, Technology and Communications (VO3290)
		Concentrator	Animation 1 (VO3100)
			Video Game Design (VO3550)

		Capstone	Animation 2 w/Lab (VO3105/VO3110) (2 cr)
			Practicum in Animation (VO3320) (2 cr)
	Audio/Video Production Kelly Walton	Introductory	Principles of Arts, A/V, Technology and Communications (VO3290)
		Concentrator	A/V Production 1 (VO3300)
		Capstone	A/V Production 2 w/Lab (VO3305/VO3310) (2 cr)
			Practicum in A/V (VO3320) (2 cr)
			Practicum in A/V 2 (VO3330) (2 cr)
	Commercial Photo John Wright	Introductory	Principles of Arts, A/V, Technology and Communications (VO3290)
		Concentrator	Commercial Photography 1 (VO3400)
			Video Game Design (VO3550)
		Capstone	Commercial Photography 2 w/Lab (VO3415) (2 cr)
			Practicum in Commercial Photography (VO3320) (2 cr)
	Graphic Design & Illustration Kenny Wilkerson	Introductory	Principles of Arts, A/V, Technology and Communications (VO3290)
		Concentrator	Graphic Design & Illustration 1 (VO3200)
			Video Game Design (VO3550)
		Capstone	Graphic Design & Illustration 2 w/Lab (VO3210) (2 cr)
			Practicum in Graphic Design & Illustration (VO3320) (2 cr)
	Transportation		
	Automotive (Dual Credit Option) James Townsley	Introductory	Principles of Transportation (VO9000)
		Concentrator	Auto Basics (VO8800)
		Capstone	Auto Technology 1 (VO8801) (2 cr)
			Auto Technology 2 (VO8802) (2 cr)
			Practicum of Transportation (2 cr)
	Construction Management and Inspection		
	Construction Management and Inspection Robert Jewell	Introductory	Principles of Construction (VO4675)
		Concentrator	Construction Technology 1 (VO4680) (2 cr)
		Capstone	Construction Technology 2 (VO4690) (2 cr)
			Practicum in Construction (VO4740)) (2 cr)
	Advanced Manufacturing Program (AMP)		
	AMP (Dual Credit Options) Abdel Haiber	Introductory	Principles of Applied Engineering (VO4820)
		Concentrator	Manufacturing Engineering Technology (VO3815)
			Engineering Design and Presentation 1 (VO4800)
			Robotics 1 (VO4825)
		Capstone	Robotics 2 (VO4826)
			Extended Practicum in Manufacturing (VO3870) (3 cr) (DC)
			Extended Practicum in Manufacturing 2 (VO3875) (3 cr) (DC)
	Hospitality and Tourism		
	Culinary Arts	Introductory	Intro to Culinary Arts (VO4900) or Principals Hosp and Tourism

	(Dual Credit Option) Deah Wade Amy Fonceca	Concentrator	Culinary Arts (VO4910) (2 cr)
			Restaurant Management (VO4915)
		Capstone	Advanced Culinary Arts (VO4920) (2 cr)
			Practicum of Culinary Arts (VO4930) (2 cr)
			Food Science (VO6500/SC8100)
			Dual Credit Culinary Arts (VO4940) (3 cr)
Public Services Endorsement	**Cosmetology**		
	Cosmetology Dual Credit Option Grayson Instructor	Capstone	Cosmetology 1 (VO4000)
			Cosmetology 2 (VO4004)
		Available Courses not in POS	Principles of Human Services (VO6600)
			Entrepreneurship 1 (BU5100)
	Education and Training		
	Teaching and Training Linda Dorsett	Introductory	Principles of Education and Training (VO7400)
			Principles of Human Services (VO6600)
		Concentrator	Human Growth and Development (VO7300)
		Capstone	Instructional Practices (VO7500) (2 cr)
			Practicum in Education and Training (VO7550) (2 cr)
		Available Courses not in POS	Counseling and Mental Health (VO6700)
	Family and Community Services		
	Family and Community Services Susie Tritch	Introductory	Principles of Human Services (Middle School)
			Professional Communications (LA4600)
		Concentrator	Human Growth and Development (VO7300)
		Capstone	Counseling and Mental Health (VO6700)
			Practicum in Human Services
	Law and Public Services		
	Law Enforcement Michelle Watson Audrey Baxter	Introductory	Principles of Law Enforcement (VO8100)
		Concentrator	Law Enforcement 1 (VO8200)
		Capstone	Law Enforcement 2 (VO8300)
			Criminal Investigations (VO8510)
			Counseling and Mental Health (VO6700)
			Forensic Science (VO8500/SC8500)
			Practicum in Law Enforcement (VO8150) (2 cr)
		Available Courses not in POS	Court Systems and Practices (VO8400)
	Emergency Services	Introductory	Principles of Law Enforcement (VO8100)
		Concentrator	Counseling and Mental Health (VO6700)

	(Dual Credit Option) Michelle Watson Audrey Baxter	Capstone	Extended Practicum in Law (EMT) (VO4500) (3 cr) (DC)
			Law Enforcement 1 (VO8200)
			Law Enforcement 2 (VO8300)
			Criminal Investigations (VO8510)
	Health Sciences		
	Health Care Diagnostics (Grayson Option) Kathleen Goff Teresa Johnson Sarah Birdwell	Introductory	Principles of Health Science (VO5300)
		Concentrator	Health Science Theory (VO5310)
		Capstone	Medical Terminology (VO5350)
			Medical Microbiology (VO5610/SC8600)
			Anatomy and Physiology (VO5500/SC5500)
			Practicum in Health Science 1 (VO5400) (2 cr)
			Practicum in Health Science 2 (VO5450) (2 cr)
			Extended Practicum in Health Science/PCT (VO5460) (3 cr)
		Available Courses not in POS	Human Growth and Development (VO7300)
			Pharmacology (VO5630)
			Counseling and Mental Health (VO6700)
	Health Care Therapeutic (Grayson Option) Kathleen Goff Teresa Johnson Sarah Birdwell	Introductory	Principles of Health Science (VO5300)
		Concentrator	Medical Terminology (VO5350)
		Capstone	Anatomy and Physiology (VO5500/SC5500)
			Health Science Theory (VO5310)
			Medical Microbiology (VO5610/SC8600)
			Pharmacology (VO5630)
			Practicum in Health Science 1 (VO5400) (2 cr)
			Practicum in Health Science 2 (VO5450) (2 cr)
			Extended Practicum in Health Science/PCT (VO5460) (3 cr)
		Available Courses not in POS	Human Growth and Development (VO7300)
			Counseling and Mental Health (VO6700)
	Nursing Science (Grayson Option) Kathleen Goff Teresa Johnson Sarah Birdwell	Introductory	Principles of Health Science (VO5300)
		Concentrator	Medical Terminology (VO5350)
		Capstone	Medical Microbiology (VO5610/SC8600)
			Anatomy and Physiology (VO5500/SC5500)
			Pharmacology (VO5630)
		Available Courses not in POS	Counseling and Mental Health (VO6700)
			Human Growth and Development (VO7300)
STEM Endorsement	**STEM**		
	Engineering Abdel Haiber	Introductory	Principles of Applied Engineering (VO4820)
		Concentrator	Engineering Design and Presentation 1 (VO4800)
		Capstone	Engineering Design and Presentation 2 (VO4800) (2 cr)
			Engineering Design and Problem Solving (VO4810/SC8300) (2 cr)

			Practicum in STEM (VO4840) (2 cr)
	Programing and Software Development James Godbey	**Introductory**	**AP Principles of Computer Science (TA2000)**
		Concentrator	**Computer Science 1 (VO5251)**
		Capstone	**Computer Science 2 (VO5252)**
			Computer Science 3 (VO5253)
			Extended Practicum in STEM - Cybersecurity (VO4845)(3 cr) (DC)
	Cybersecurity (Dual Credit Option) James Godbey	**Introductory**	**AP Principles of Computer Science (TA2000)**
		Concentrator	**Computer Science 1 (VO5251)**
		Capstone	**Networking (VO5010)**
			Extended Practicum in STEM - Cybersecurity (VO4845)(3 cr) (DC)

AGRICULTURE, FOOD & NATURAL RESOURCES CAREER CLUSTER

INTRODUCTION:

The Agriculture, Food and Natural Resources program provides students with coordinated group and individual instructional activities consisting of classroom and laboratory experiences, supervised agricultural experiences, and leadership activities. The program is designed to develop the skills needed for students to learn to enter agricultural, food, and natural resources careers. Students will learn using a variety of methods which may include classroom based instruction and hands-on learning. *Students may be required to purchase supplies for personal animal projects.*

CAREERS OPPORTUNITIES:

- **Agricultural Scientist**
- **Agricultural Engineer Technical Sales Rep.**
- **Cooperative Extension Agent**
- **Biological Scientist**
- **Fish and Game Warden**
- **Farmer/Farmer Manager**
- **Quality Control**
- **Landscape Architect**
- **Forester and Conservation Scientist**
- **Technician-Food**
- **Teacher, Career & Technical Education**
- **Range Manager**
- **Crop Protection**
- **Hazardous Material Technical Coordinator**
- **Veterinary Technician**
- **Veterinarian**

CERTIFICATION OPPORTUNITIES:

- VetMed Applications Certification
- AWS D9.1
- AWS D1.1
- AWS Certified Welder
- AWS SENSE Level 1: Entry Welder
- GC Combination Welder Certificate
- Texas State Florist's Association Knowledge Based Floral Certification

STUDENT ORGANIZATION:

- Future Farmers of America (FFA)

Business & Industry Endorsement

AGRICULTURE PATHWAYS

Course Name	Credits	Grade Levels	Pre-Requisites
Applied Agricultural Engineering			
Principles of Agriculture, Food & Natural Resources	1	9-10	None
Agricultural Mechanics & Metal Technologies	1	10-12	*Recommended:* Principles of AFNR
Agricultural Structures, Design & Fabrication	1	11-12	*Recommended:* Ag. Mechanics
Agricultural Equipment, Design & Fabrication	1	11-12	*Recommended:* Ag. Mechanics
Practicum in AG	2	11-12	*Recommended:* Minimum of 1 Agricultural Pathway Course
Animal Science			
Principles of Agriculture, Food & Natural Resources	1	9-10	None
Small Animal Management & Equine Science	1	10-12	*Recommended:* Principles of AFNR
Veterinary Medical Applications	1	11-12	Equine Science, Small Animal Management, or Livestock Production
Advanced Animal Science	1	11-12	Biology & Chemistry or IPC; Algebra and Geometry; Equine Science, and either Livestock Production or Small Animal Mgt.
Practicum in AG	2	11-12	*Recommended:* Minimum of 1 Agricultural Pathway Course
Plant Science			
Principles of Agriculture, Food & Natural Resources	1	9-10	None
Floral Design	1	10-11	*Recommended:* Principles of Ag
Advanced Floral Design	1	11-12	Floral Design
Advanced Plant and Soil Science	1	11-12	*Recommended:* Principles of Ag AND Floral Design
Practicum in AG	2	12	*Recommended:* Principles of Ag AND Floral Design

Employment of veterinary technologists and technicians is projected to grow 6 percent from 2022-2032 with approximately 13,230 job opportunities. The average pay in Texas for a veterinary technologist is $33,650.00/year- Bureau of Labor Statistics

PRINCIPLES OF AGRICULTURE, FOOD, AND NATURAL RESOURCES

VO2000

GRADES: 9–10

1 Credit

PREREQUISITE: None

Prepares students for careers in agriculture, food, and natural resources. This course allows students to develop knowledge and skills regarding career opportunities, personal development, globalization, industry standards, details, practices and expectations. To prepare for success, students have opportunities to learn, reinforce experience, apply, and transfer their knowledge and skills in a variety of settings. *Students are strongly encouraged to enroll in a foundational class before moving on to other Agricultural classes.*

FLORAL DESIGN

VO2720

GRADES: 9–12

1 Credit

PREREQUISITE: None

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

ADVANCED FLORAL DESIGN

VO2730

GRADES: 10–12

1 Credit

PREREQUISITE: Floral Design

Advanced Floral Design is designed to further develop students' ability to demonstrate the principles and techniques related to floral design. This course also focuses on the business side of the plant science industry. Students will be responsible for project management including floral design contracts and business development.
Note: This course satisfies a FINE ARTS credit requirement.

ADVANCED PLANT AND SOIL SCIENCE

VO2020

GRADES: 11–12

1 Credit

PREREQUISITE: Floral Design

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

AGRICULTURAL MECHANICS AND METAL TECHNOLOGIES

VO2900

GRADES: 10–12

1 Credit

RECOMMENDED PREREQUISITE: Principles of Agriculture, Food, and Natural Resources

A basic course designed to develop proficiency in many welding skills. Students will be expected to use the cutting torch and MIG Welders. Welding is taught in several positions, which include flat, horizontal and vertical. The course develops an understanding of tool operation, electrical wiring, plumbing, carpentry, fencing, concrete and metal working techniques.

AGRICULTURAL STRUCTURES DESIGN AND FABRICATION

VO2400

GRADES: 11–12

1 Credit

RECOMMENDED PREREQUISITE: Agricultural Mechanics and Metal Technologies

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

VO2410

GRADES: 11–12

1 Credit

RECOMMENDED PREREQUISITE: Agricultural Mechanics and Metal Technologies

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

EQUINE SCIENCE

VO2670

GRADES: 10–12

Credit: .5

RECOMMENDED PREREQUISITE: Principles of Agriculture, Food, and Natural Resources

Co-Requisite: Small Animal Management

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

SMALL ANIMAL MANAGEMENT

VO2630

GRADES: 10–12

Credit: .5

RECOMMENDED PREREQUISITE: Principles of Agriculture, Food, and Natural Resources

Co-Requisite: Equine Science

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

VETERINARY MEDICAL APPLICATIONS

VO2680

GRADES: 11–12

1 Credit

PREREQUISITES: Equine Science, Small Animal Management, or Livestock Production

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

ADVANCED ANIMAL SCIENCE

VO2690

GRADES: 11–12

1 Credit

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

Advanced Animal Science examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences. NOTE: This course satisfies an ADVANCED SCIENCE credit requirement.

PRACTICUM IN AGRICULTURE, FOOD, AND NATURAL RESOURCES

VO2010

GRADES: 11–12

2-3 Credits

RECOMMENDED PREREQUISITE: A minimum of one credit from courses in the AFNR cluster

REQUIRED: Completed Practicum Student Information Packet

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.

NOTE: Students may sign up for Practicum if they are interested in completing an internship rotation at a veterinarian office, farm/ranch or plan to work on an AWS Welding certification.

Architecture and Construction Career Cluster

INTRODUCTION:

Architecture career fields include the creative and detailed drafting of architectural designs with a focus on an environmentally friendly outcome. Students learn how to create architectural and interior designs using hand drafting methods, prior to learning computerized methods such as AutoCAD and Autodesk Architectural Revit, for 2-dimensional and 3-dimensional designs.

CAREERS OPPORTUNITIES:

- **Architect**
- **Construction Manager**
- **Roofer**
- **Industrial Designer**
- **HVAC Technician**
- **Cabinet Maker**
- **Drafter**
- **Drywall Installer**
- **Tile Mason**
- **Landscape Architect**
- **Brick Mason**
- **Flooring Installer**
- **CTE Teacher**
- **Electrician**
- **Interior Designer**
- **Project Manager**
- **Plumber**
- **Painters**

CERTIFICATION OPPORTUNITIES:

- LEED Green Associate

STUDENT ORGANIZATION:

- SkillsUSA

Business & Industry Endorsement

ARCHITECTURE AND CONSTRUCTION PATHWAYS

Course Name	Credits	Grade Levels	Pre-Requisites
Construction Management and Inspection			
Principles of Construction	1	9-12	None
Construction Technology I	2	10-12	None
Construction Technology II	2	11-12	Construction Tech I
Practicum in Construction Technology	2	12	Construction Tech II

Overall employment of construction managers is projected to grow 3 percent from 2022-2032 with approximately 35,820 job opportunities in this field. The average pay for a construction manager in Texas is $103,810/year – Bureau of Labor Statistics

CONSTRUCTION COURSES

PRINCIPLES OF CONSTRUCTION

VO4675

GRADES: 9–10

1 Credit

PREREQUISITE: None

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.

CONSTRUCTION TECHNOLOGY I

VO4680

GRADES: 10–12

2 Credits

RECOMMENDED PREREQUISITE: Principles of Construction or Principles of Architecture

In Construction Technology I, students will gain knowledge and skills needed to enter the workforce as carpenters or building maintenance supervisors or to prepare for a postsecondary degree in construction management, architecture, or engineering. Students will acquire knowledge and skills in safety, tool usage, building materials, codes, and framing. For safety and liability considerations, limiting course enrollment to 15 students is recommended.

CONSTRUCTION TECHNOLOGY II

VO4690

GRADES: 11–12

2 Credits

PREREQUISITE: Construction Technology I

In Construction Technology II, students will gain advanced knowledge and skills needed to enter the workforce as carpenters, building maintenance technicians, or supervisors or to prepare for a postsecondary degree in construction management, architecture, or engineering. Students will build on the knowledge base from Construction Technology I and are introduced to exterior and interior finish out skills. For safety and liability considerations, limiting course enrollment to 15 students is recommended.

HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) & REFRIGERATION TECHNOLOGY I

VO6350

GRADES: 10–12

1 Credit

RECOMMENDED PREREQUISITE: Principles of Architecture, Principles of Construction, or Construction Technology I

In Heating, Ventilation, and Air Conditioning and Refrigeration Technology I, students will gain knowledge and skills needed to enter the industry as technicians in the HVAC and refrigeration industry or building maintenance industry, prepare for a postsecondary degree in a specified field of construction management, or pursue an approved apprenticeship program. The outlook for work in this field is very good, with an average pay of $43,000 a year when working for an HVAC company. You could eventually start your own business and make $90 an hour. This course will also give you college credit at Grayson College if you continue on with the HVAC program. Students can earn OSHA AND NCCER certifications.

Note: HVAC is offered every other year at SHS or as Dual Credit every year at Grayson College. See a counselor for appropriate scheduling.

MILL AND CABINETMAKING TECHNOLOGY

VO4695

GRADES: 11–12

2 Credits

RECOMMENDED PREREQUISITE: Principles of Architecture or Principles of Construction

In Mill and Cabinetmaking Technology, students will gain knowledge and skills needed to enter the workforce in millwork and cabinet manufacturing and installation. Students may also apply these skills to professions in carpentry or building maintenance supervision or use the skills as a foundation for a postsecondary degree in construction management, architecture, or engineering. Students will

acquire knowledge and skills in cabinet design, tool usage, jointing methods, finishes, and industry-level practices such as numerical and computer-control production methods.

PRACTICUM IN CONSTRUCTION TECHNOLOGY

VO4740

GRADE: 12

2 Credits

PREREQUISITE: Construction Technology ll

REQUIRED: Completed Practicum Student Information Packet

In Practicum in Construction Technology, students will be challenged with the application of gained knowledge and skills from Construction Technology I and II. In many cases students will be allowed to work at a job (paid or unpaid) outside of school or be involved in local projects the school has approved for this class.

ARTS, AUDIO/VIDEO TECHNOLOGY & COMMUNICATIONS (AAVTC) CAREER CLUSTER

INTRODUCTION:

The Arts, Audiovisual Technology and Communication career areas include the mastery and use of computer or other technology along with individual creativity. This area includes film production and editing, print media, animation journalism and photography as well as illustration in a wide range of careers. Students who mix their artistic talents with training in the latest design software will be able to find many good opportunities for employment.

CAREERS OPPORTUNITIES:

- **Sound Engineering Technicians**
- **Camera Operators, Television, Video, and Motion Picture**
- **Audio and Video Equipment Technicians**
- **Film and Video Editors**
- **Graphic Designer**
- **Multimedia Artists and Animators**

CERTIFICATION OPPORTUNITIES:

- Adobe Certified Professional in Digital Video Using Adobe Premiere Pro
- Adobe Certified Professional in Visual Effects and Motion Graphics using Adobe After Effects
- Adobe Certified Professional Photoshop

STUDENT ORGANIZATION:

- A/V Club
- SkillsUSA

Business & Industry Endorsement

DESIGN & MULTIMEDIA PATHWAYS

Course Name	Credits	Grade Levels	Pre-Requisites
Principles of Arts, A/V Technology, & Communications	1	9-12	None
Animation			
Animation I	1	10-12	None
Video Game Design *(offered every other year)*	1	9-12	*Recommended:* Animation 1
Animation II	1	11-12	*Recommended:* Animation 1
Practicum in Animation	2	11-12	Animation II
Commercial Photography			
Commercial Photography I	1	10-12	None
Commercial Photography II	1	11-12	*Recommended:* Commercial Photography I
Practicum in Photography	2	11-12	Commercial Photography I
Graphic Design & Illustration			
Graphic Design and Illustration I	1	10-12	None
Graphic Design and Illustration II	1	11-12	*Recommended:* Graphic Design and Illustration I
Practicum in Graphic Design and Illustration	2	11-12	Graphic Design and Illustration II
Audio/Video Production			
Audio/Video Production I	1	10-12	None
Audio/Video Production II	1	11-12	Audio/Video Production I
Practicum in Audio/Video Production	2	11-12	Audio/Video Production II

Employment of audio and video technicians is projected to grow 11 percent with approximately 3,940 jobs and an annual income of $48,050/year, multimedia artists by 24 percent with approximately 840 jobs and an annual income of $76,510/year and graphic designers are expected to grow 5 percent with approximately 13,680 jobs and an average annual income of $54,970.00/year from 2022 to 2032. - Bureau of Labor Statistics

ARTS, AUDIO/VIDEO TECHNOLOGY & COMMUNICATION COURSES

PRINCIPLES OF ARTS, AUDIO/VIDEOTtECHNOLOGY, and COMMUNICATIONS

VO3290

GRADES: 9–12

1 Credit

PREREQUISITE: None

In Principles of A/V Tech, students will learn about current trends in a/v technology platforms and communication systems. Students will design and create multimedia projects that address customer needs and resolve a problem. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students will enhance reading, writing, computing, communication, and critical thinking and apply them to the IT environment.

ANIMATION I

VO3100

GRADES: 10–12

1 Credit

RECOMMENDED PREREQUISITE: Art I or Principles of Art, Audio/Video Technology, and Communications

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 history and techniques of the animation industry.

ANIMATION II

VO3105

GRADES: 11–12

1 Credits

RECOMMENDED PREREQUISITE: Animation l

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 create two- and three-dimensional animations. The instruction also assists students seeking careers in the animation industry. Districts are encouraged to offer this lab in a consecutive block with Animation II to allow students sufficient time to master the content of both courses.

VIDEO GAME DESIGN

VO3550

GRADES: 9–12

1 Credit

RECOMMENDED PREREQUISITE: Principles of Art, Audio/Video Technology, and Communications

Video Game Design will allow students to explore one of the largest industries in the global marketplace and the new emerging careers it provides in the field of technology. Students will learn gaming, computerized gaming, evolution of gaming, artistic aspects of perspective, design, animation, technical concepts of collision theory, and programming logic. Students will participate in a simulation of a real video game design team while developing technical proficiency in constructing an original game design. *Note: Video Game Design is offered every other year. See a counselor for appropriate scheduling.*

PRACTICUM IN ANIMATION

VO3120

GRADES: 11–12

2 Credits

PREREQUISITES: Animation II

REQUIRED: Completed Practicum Student Information Packet

Building upon the concepts taught in Animation II Lab, in addition to developing advanced technical knowledge and skills needed for success, students will be expected to develop an increasing understanding of the industry with a focus on applying pre-production, production, and post-production animation products in a professional environment.

AUDIO/VIDEO PRODUCTION I

VO3300

GRADES: 9–12

1 Credit

RECOMMENDED PREREQUISITE: Principles of Arts, Audio/Video Technology, and Communications

In addition to developing technical knowledge and skills needed for success, 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

AUDIO/VIDEO PRODUCTION II

VO3305

GRADES: 10–12

1 Credits

PREREQUISITE: Audio/Video Production I

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 postproduction products. Through diverse forms of storytelling and production, students will exercise and develop creativity, intellectual curiosity, and critical-thinking, problem-solving, and collaborative skills. This course may be implemented in an audio format or a format with both audio and video. Requiring a lab requisite for the course affords necessary time devoted specifically to the production and post-production process.

PRACTICUM IN AUDIO/VIDEO PRODUCTION

VO3320

GRADES: 11–12

2 Credits

PREREQUISITES: Audio/Video Production II

REQUIRED: Completed Practicum Student Information Packet

Building upon the concepts taught in 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 pre-production, 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.

COMMERCIAL PHOTOGRAPHY I

VO3400

GRADES: 9–12

1 Credit

PREREQUISITE: None

In addition to developing 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 commercial photography industry with a focus on creating quality photographs.

COMMERCIAL PHOTOGRAPHY II

VO3410

GRADES: 10–12

1 Credits

RECOMMENDED PREREQUISITE: Commercial Photography I

In addition to developing advanced technical knowledge and skills needed for success, students will be expected to develop an advanced technical understanding of the commercial photography industry with a focus on producing, promoting, and presenting professional quality photographs.

PRACTICUM IN COMMERCIAL PHOTOGRAPHY

VO3320

GRADES: 10–12

2 Credits

PREREQUISITES: COMMERCIAL PHOTOGRAPHY I

REQUIRED: Completed Practicum Student Information Packet

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 a technical understanding of the industry with a focus on skill proficiency. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.

GRAPHIC DESIGN AND ILLUSTRATION I

VO3200

GRADES: 10–12

1 Credit

RECOMMENDED PREREQUISITE: Principles of Arts, Audio/Video Technology, and Communications

Within this context, in addition to developing 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 fundamental elements and principles of visual art and design.

GRAPHIC DESIGN AND ILLUSTRATION II

VO3205

GRADES: 10–12

1 Credits

RECOMMENDED PREREQUISITE: Graphic Design and Illustration I.

Within this context, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an advanced understanding of the industry with a focus on mastery of content knowledge and skills. Districts are encouraged to offer this lab in a consecutive block with Graphic Design and Illustration II to allow students sufficient time to master the content of both courses.

PRACTICUM IN GRAPHIC DESIGN AND ILLUSTRATION

VO3220

GRADES: 10–12

2 Credits

PREREQUISITES: Graphic Design and Illustration II

REQUIRED: Completed Practicum Student Information Packet

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 a technical understanding of the industry with a focus on skill proficiency. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.

Business, Marketing, and Finance Career Cluster

INTRODUCTION:

The Business, Marketing and Finance cluster provides students with meaningful instruction both for business and about business, while being flexible and adaptable to the needs of industry and society. Students will learn the principles necessary to begin and operate a business, understand the process of analyzing a business opportunity, preparing a business plan, determining feasibility of an idea using research, and developing a plan to organize and promote the business and its products and services.

CAREERS OPPORTUNITIES:

- **Accountant & Auditor**
- **Loan Officers**
- **Personal Financial Advisors**
- **Administrative Service Managers**
- **Insurance Underwriting**
- **Administrative Service Managers**
- **Management Analysts**
- **General and Operations Managers**
- **Supervisors of Administrative Support Workers**

CERTIFICATION OPPORTUNITIES:

- Accounting Foundations
- Accounting Basics
- Entrepreneurship and Small Business

STUDENT ORGANIZATION:

- Business Professionals of America (BPA)

Business & Industry Endorsement

Business & Finance Pathways

Course Name	Credits	Grade Levels	Pre-Requisites
Business Management			
Business Information Management I	1	9-12	None
Entrepreneurship I	1	10-12	None
Entrepreneurship II	1	11-12	*Recommended:* Entrepreneurship I
Practicum in Entrepreneurship	2	11-12	*Recommended:* Entrepreneurship II
Accounting & Financial Services			
Business Information Management I	1	9-12	None
Accounting I	1	10-12	None
Accounting II	1	11-12	Accounting I
Financial Mathematics	1	12	Algebra I
Practicum in Entrepreneurship	2	11-12	*Recommended:* Accounting II

Employment of accountants and auditors are projected to grow 3 percent from 2022-2032 with approximately 106,630 jobs in this field and an average annual income in Texas of $87,300/year. - Bureau of Labor Statistics

Accountants and Auditors are the #1 targeted occupations in Grayson County, according to the Texoma Workforce Solutions report (December 2023).

BUSINESS & FINANCE COURSES

BUSINESS INFORMATION MANAGEMENT I

BU1700

GRADES: 9–12

1 Credit

PREREQUISITE: None

In Business Information Management I, students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, creating word-processing documents, developing a spreadsheet, formulating a database, and making an electronic presentation using appropriate software. Students will have the opportunity to earn Microsoft Office Specialist Certifications in Word, Excel and PowerPoint.

BUSINESS INFORMATION MANAGEMENT II

BU1800

GRADES: 10–12

1 Credit

PREREQUISITE: Business Information Management I

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

ENTREPRENEURSHIP I

BU5100

GRADES: 10–12

1 Credit

PREREQUISITE: None

RECOMMENDED PREREQUISITE: Principles of Business, Marketing and Finance

Entrepreneurship is a course designed to introduce students to the process of establishing a small business. Concepts introduced will be applied and practiced. Students will design, develop, and implement a business plan. Using a virtual business simulation, they will manage all aspects of a business and integrate business practices.

ENTREPRENEURSHIP II

BU5105

GRADES: 11–12

1 Credit

PREREQUISITE: Entrepreneurship 1

Students will work in close cooperation with local industry leaders, community members, and educators to develop ideas and objectives, complete a business model canvas, pitch to potential investors, register with governmental agencies, and develop brand identity. The goal and outcome of the course is to have a business launched by the end of the course or have the tools necessary to launch and operate a business.

PRACTICUM IN ENTREPRENEURSHIP

BU6100

GRADES: 11–12

2 Credits

RECOMMENDED PREREQUISITES: Accounting II or Entrepreneurship I & Entrepreneurship II

The Practicum in Entrepreneurship provides students the opportunity to apply classroom experiences to real-world business problems and opportunities. Students will work as real or simulated business owners rather than employees. Additionally, practicum experiences occur in a paid or unpaid arrangement and a variety of locations appropriate to the specific student's need as well as their industry program of study.

SCHOOL STORE - "THE CLAW"

BU6000

GRADES: 11–12

2 Credits

RECOMMENDED PREREQUISITES: Business Management or Business Information Management II

REQUIRED: Completed Practicum Student Information Packet

Practicum in Business Management is designed to give students supervised practical application of previously studied knowledge and skills. Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and to make a successful transition to the workforce or postsecondary education. Along with the skills listed, students will be able to run the school store and practice consumerism, inventory management and accounting skills. *This course may be taken twice.*

ACCOUNTING I

BU1000

GRADES: 10–12

1 Credit

PREREQUISITE: None

RECOMMENDED PREREQUISITE: Principles of Business, Marketing, and Finance

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

ACCOUNTING II

BU1500/MT9300

GRADES: 11–12

1 Credit

PREREQUISITE: Accounting I

RECOMMENDED PREREQUISITE: Principles of Business, Marketing, and Finance

In Accounting II, students will continue the investigation of the field of accounting, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal, and ethical factors. Students will reflect on this knowledge as they engage in various managerial, financial, and operational accounting activities. Students will formulate, interpret, and communicate financial information for use in management decision making. Students will use equations, graphical representations, accounting tools, spreadsheet software, and accounting systems in real-world situations to maintain, monitor, control, and plan the use of financial resources.

FINANCIAL MATHEMATICS

BU4550

GRADES: 10–12

1 Credit

PREREQUISITE: Algebra I

Financial Mathematics is a course about personal money management. Students will apply critical-thinking skills to analyze personal financial decisions based on current and projected economic factors. This course will integrate career and postsecondary education planning into financial decision making. Students will select appropriate tools such as real objects, manipulatives, paper and pencil, and technology and techniques such as mental math, estimation, and number sense to solve problems. Students will effectively communicate mathematical ideas, reasoning, and their implications using multiple representations such as symbols, diagrams, graphs, and language. Students will use mathematical relationships to generate solutions and make connections and predictions. Students will analyze mathematical relationships to connect and communicate mathematical ideas. Students will display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication.
Note: This course satisfies a MATH credit requirement.

PRACTICUM OF ENTREPRENEURSHIP 2

BU6100

GRADES: 11–12

2 Credit

PREREQUISITE: Practicum of Entrepreneurship 1

The Practicum in Entrepreneurship provides students the opportunity to apply classroom learnings and experiences to real-world business problems and opportunities, while expanding their skill sets and professional relationships as a real or simulated business owner versus the experience one would have as an employee. Students will prepare for an entrepreneurial career in their area of interest in their career cluster and build on and apply the knowledge and skills gained from courses taken in an array of career areas. Practicum experiences occur in a paid or unpaid arrangement and a variety of locations appropriate to the nature and level of the student's need for work-based learning experience. Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and to make a successful transition to the workforce or postsecondary education. It is recommended that students are paired with local business owners or employers in their specific industry program of study.

TOUCH SYSTEM DATA ENTRY

BU3500

GRADES: 10-12

.5 Credit

PREREQUISITE: None

In Touch System Data Entry, students apply technical skills to address business applications of emerging technologies. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students will need to apply touch system data entry for production of business documents.

TEACHING & TRAINING CAREER CLUSTER

INTRODUCTION:

The Education and Training cluster includes the understanding of the developmental stages of children and preparing students for the experience of becoming teachers. The courses provide students the opportunity to observe students in actual classrooms and later assisting the teacher in preparing lessons for the class. These courses provide an opportunity for real-world experience prior to entering college.

CAREERS OPPORTUNITIES:

- **Pre-K Teacher**
- **Elementary Teacher**
- **Secondary Teacher**
- **College Professor**
- **Teacher Aide**
- **Child Care Director**
- **Child Care Worker**
- **Head Start Teacher**
- **Corporate Trainer**
- **Career Counselor**
- **Administrator**
- **Human Resource Personnel**
- **Counselor**
- **Child Psychologist**
- **Social Worker**

CERTIFICATION OPPORTUNITIES:

- Educational Aide I

STUDENT ORGANIZATION:

- Family, Career, Community Leaders of America (FCCLA)
- Texas Association of Future Educators (TAFE)

Public Service Endorsement

EDUCATION & TRAINING PATHWAYS

Course Name	Credits	Grade Levels	Pre-Requisites
Teaching & Training			
Principles of Education and Training	1	9-10	None
Principles of Human Services	1	9-10	None
Human Growth and Development	1	10-12	None
Instructional Practices	2	11-12	1 credit from Education and Training Career Cluster
Practicum in Education and Training	2	12	Instructional Practices

Employment of educators is projected to grow 9 percent from 2022-2032 with approximately 11,610 jobs in this field with an average annual income in Texas of $52,300/year. - Bureau of Labor Statistics

EDUCATION & TRAINING COURSES

PRINCIPLES OF EDUCATION & TRAINING

VO7400

GRADES: 9–10

1 Credit

PREREQUISITE: None

The Principles of Education and Training course is designed to introduce learners to the various careers available within the education and training cluster. Students use self-knowledge and educational and career information to analyze various careers within the education and training cluster. Students will also gain an understanding of the basic knowledge and skills essential to careers within the education and training cluster. Students will develop a graduation plan that leads to a specific career choice in the student's interest area. *The student will work as a Peer Tutor.*

PRINCIPLES OF HUMAN SERVICES

VO6600

GRADES: 9–10

1 Credit

PREREQUISITE: None

Principles of Human Services is a laboratory course that will enable students to investigate careers in the Human Services Career Cluster, including counseling and mental health, early childhood development, family and community, personal care, and consumer services. Each student is expected to complete the knowledge and skills essential for success in high-skill, high-wage, or high-demand human services careers. *Adequate time will be given to acquire supplies.*

HUMAN GROWTH & DEVELOPMENT

VO7300

GRADES: 10–12

1 Credit

RECOMMENDED PREREQUISITE: Principles of Education and Training

Human Growth and Development is an examination of human development across the lifespan with emphasis on research, theoretical perspective, and common physical, cognitive, emotional, and social development milestones. The course covers material that is generally taught in a college level, one-semester introductory course in developmental psychology or human development.

INSTRUCTIONAL PRACTICES

VO7500

GRADES: 11–12

2 Credits

PREREQUISITES: Principles of Education and Training or Human Growth and Development

Instructional Practices is a field-based internship that provides students with background knowledge of child and adolescent development as well as principles of effective teaching and training practices. Students work under the joint direction and supervision of both a teacher with knowledge of early childhood education and exemplary educators or trainers in direct instructional roles with elementary-, middle school-, and high school-aged students. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, and develop materials for educational environments. *Students will be working toward CPR/First Aid certifications.*

PRACTICUM IN EDUCATION & TRAINING

VO7550

GRADE: 12

2 Credits

PREREQUISITE: Instructional Practices

RECOMMENDED PREREQUISITES: Principles of Education and Training & Human Growth and Development

REQUIRED: Completed Practicum Student Information Packet

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

HEALTH SCIENCE CAREER CLUSTER

INTRODUCTION:

Health Science is a program for students who have an interest and desire to explore medical careers. Students gain the knowledge and skills to make realistic career choices in this field. Students enhance their academic foundation through a strong science and math based enriched curriculum. Industry partnerships provide students with valuable observation-based experience so students can visualize their potential roles in safe, effective, efficient, quality health care settings. Emphasis is placed on safety and technology used in health care.

HEALTH SCIENCES CAREERS OPPORTUNITIES:

- **Physician**
- **Nurse**
- **Pharmacy Services**
- **Dentist**
- **Emergency Medical Technician**
- **Therapist (i.e., Physical, Respiratory)**
- **Radiologist**
- **Lab Technician**
- **Psychologist**
- **Optometrist**
- **Hospital Administrator**
- **Nutritionist**
- **Sports Physician**

Certification Opportunities:

- Medical Assistant
- Phlebotomy Certification
- EKG Certification
- Personal Care Technician (PCT)
- Pharmacy Technician
- Certified Nursing Assistant

Student Organization:

- Health Occupations Students of America (HOSA)
- Skills USA

Public Service Endorsement

HEALTH SCIENCE PATHWAYS

Course Name	Credits	Grade Levels	Pre-Requisites
Healthcare Diagnostics			
Principles of Health Science	1	9-10	None
Medical Terminology	1	10-11	None
Health Science Theory	1	10-12	Biology
Medical Microbiology	1	11-12	Biology and Chemistry
Aphnatomy and Physiology	1	11-12	Biology and a second science credit
Practicum in Health Science I	2	11	Health Science Theory and Biology
Practicum in Health Science II	2	12	Practicum in Health Science I
Healthcare Therapeutic			
Principles of Health Science	1	9-10	None
Medical Terminology	1	10-11	None
Health Science Theory	1	10-12	Biology
Medical Microbiology	1	11-12	Biology and Chemistry
Anatomy and Physiology	1	11-12	Biology and a second science credit
Pharmacology	1	11-12	Biology and Chemistry
Practicum in Health Science I	2	11	Health Science Theory and Biology
Practicum in Health Science II	2	12	Practicum in Health Science I
Nursing Science			
Principles of Health Science	1	9-10	None
Medical Terminology	1	10-11	None
Medical Microbiology	1	11-12	Biology and Chemistry

Anatomy and Physiology	1	11-12	Biology and a second science credit
Pharmacology	1	11-12	Biology and Chemistry
Patient Care Technician (PCT) Dual Credit			
Principles of Health Science	1	9-10	None
Medical Terminology	1	11-12	None
Health Science Theory	1	10-12	Biology
Medical Microbiology	1	11-12	Biology and Chemistry
Anatomy and Physiology	1	11-12	Biology and a second science credit
Pharmacology	1	11-12	Biology and Chemistry
Ext Practicum in Health Science (PCT)	3	12	Health Science Theory and Biology

Employment of registered nurses is projected to grow 1 percent from 2022-2032 with approximately 231,060 jobs in this field with an average annual income in Texas of $84,320/year. Employment of medical records specialists is projected to grow 6 percent from 2022-2032 with approximately 19,750 jobs in this field with an average annual income in Texas of $44,680/year. - Bureau of Labor Statistics

HEALTH SCIENCE COURSES

PRINCIPLES OF HEALTH SCIENCE

VO5300

GRADES: 9–10

1 Credit

PREREQUISITE: None

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

HEALTH SCIENCE THEORY

VO5310

GRADES: 10–12

1 Credit

PREREQUISITES: Principles of Health Science and Biology

This course familiarizes the student with the multitude of careers in the healthcare system. Students receive instruction in anatomy, physiology, medical terminology, recognition of vital signs, and employability skills culminating in certification in first aid and cardiopulmonary resuscitation with the AED.

MEDICAL TERMINOLOGY

VO5350

GRADES: 9–12

1 Credit

PREREQUISITE: None

The Medical Terminology course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

ANATOMY & PHYSIOLOGY

VO5500

GRADES: 10–12

1 Credit

PREREQUISITE: Biology, a second science credit

RECOMMENDED PREREQUISITE: a course from the Health Science Career Cluster

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. *A lab book may be required for formal lab write-ups.*

Note: This course satisfies an ADVANCED SCIENCE credit requirement.

MEDICAL MICROBIOLOGY

VO5610

GRADES: 10–12

1 Credit

PREREQUISITES: Biology, Chemistry

RECOMMENDED PREREQUISITE: a course from the Health Science Career Cluster.

The Medical Microbiology course is designed to explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug resistant organisms, and emerging diseases. Students must meet the 40% laboratory and fieldwork requirement. This course satisfies a high school science graduation requirement.

PHARMACOLOGY

VO5630

GRADES: 11–12

1 Credit

PREREQUISITES: Biology, Chemistry

RECOMMENDED PREREQUISITE: a course from the Health Science Career Cluster

The Pharmacology course is designed to study how natural and synthetic chemical agents such as drugs affect biological systems. Knowledge of the properties of therapeutic agents is vital in providing quality health care. It is an ever-changing, growing body of information that continually demands greater amounts of time and education from health care workers.

PRACTICUM IN HEALTH SCIENCE (CLINICAL ROTATIONS) - On Campus

VO5400

GRADES: 11

2 Credits

PREREQUISITES: Principles of Health Science, Health Science Theory, Biology

REQUIRED: Completed Practicum Student Information Packet

This course is designed to provide for the development of multi-occupational knowledge and skills related to a variety of health careers. Students will have hands-on experiences in clinical settings for continued knowledge and skill development. Training in Professional CPR, Bloodborne Pathogens, Aseptic Technique, Home Hospice Volunteer Training and Certification, Sexual Harassment, Ethics, basic anatomy and physiology, Medical Terminology, meet the required TB Test and pass a urine analysis, with parental approval receive a flu vaccine before hospital assignments, receive volunteer training for a local hospital and pass an exam. Learn to take vitals and use proper protective equipment. This course may be taken twice with different learning experiences. *Some students will also receive training in Pharmacy Technician studies*

PRACTICUM IN HEALTH SCIENCE (CLINICAL ROTATIONS) - Off Campus

VO5410 AND VO5450

GRADES: 12

2 Credits

PREREQUISITES: Principles of Health Science, Health Science Theory, Biology

REQUIRED: Completed Practicum Student Information Packet

This course is designed to provide for the development of multi-occupational knowledge and skills related to a variety of health careers. Students will have hands-on experiences in clinical settings for continued knowledge and skill development. Training in Professional CPR, Bloodborne Pathogens, Aseptic Technique, Home Hospice Volunteer Training and Certification, Sexual Harassment, Ethics, basic anatomy and physiology, Medical Terminology, meet the required TB Test and pass a urine analysis, with parental approval receive a flu vaccine before hospital assignments, receive volunteer training for a local hospital and pass an exam. Learn to take vitals and use proper protective equipment. This course may be taken twice with different learning experiences. *Some students will also receive training in Pharmacy Technician studies*.

EXTENDED PRACTICUM IN HEALTH SCIENCE (PCT) at Grayson College

VO5460

GRADE: 12

3 Credits

PREREQUISITES: Practicum in Health Science

REQUIRED: Completed Practicum Student Information Packet

Extended Practicum in Health Science is a continuation of Practicum in Health Science. This course is designed to provide for the advancement of multi-occupational knowledge and skills related to a variety of health careers. Students will have hands-on experiences in clinical settings for continued knowledge and skill development. *Students will also have the opportunity to earn credentials at Grayson College as Certified Patient Care Technician, Phlebotomy and EKG certifications. Random drug testing will be required for internship placements.*

EXTENDED PRACTICUM IN HEALTH SCIENCE (CCMA) at Grayson College

VO5470

GRADE: 12

3 Credits

PREREQUISITES: Practicum in Health Science

REQUIRED: Completed Practicum Student Information Packet

Extended Practicum in Health Science is a continuation of Practicum in Health Science. This course is designed to provide for the advancement of multi-occupational knowledge and skills related to a variety of health careers. Students will have hands-on experiences in clinical settings for continued knowledge and skill development. *Students will also have the opportunity to earn credentials at Grayson College as Certified Patient Care Technician, Phlebotomy and EKG certifications. Random drug testing will be required for internship placements.*

HOSPITALITY & TOURISM CAREER CLUSTER

INTRODUCTION:

Culinary Arts Hospitality and Tourism is one of the fastest growing career fields in America due to more and more cities taking advantage of the opportunities for attracting tourist dollars. Real estate developers, corporations, and urban planners are all working to seek available monies from tourism. These efforts create jobs for thousands of people. Business professionals working away from home account for the majority of rented lodging rooms at many hotels across the country. Hotels and services that cater to travelers' needs are a thriving industry accounting for many of today's jobs.

CAREERS OPPORTUNITIES:

- **Executive Chef**
- **Sous Chef**
- **Baker**
- **Food/Beverage Manager**
- **Cook/Short Order Cook**
- **Hotel Manager**
- **Tour Guide**
- **Flight Attendant**
- **Reservation Agent**
- **Convention Sales**
- **Travel Agent**
- **Concierge**
- **Server**

Certification Opportunities:

- Food Safety Manager
- Food Safety and Science

Student Organization:

- FCCLA

Business & Industry Endorsement

HOSPITALITY & TOURISM PATHWAYS

Course Name	Credits	Grade Levels	Pre-Requisites
Culinary Arts			
Introduction to Culinary Arts	1	9-12	None
Foundations of Restaurant Management	1	10-12	None
Culinary Arts	2	10-12	None
Advanced Culinary Arts	2	11-12	Culinary Arts
Food Science	1	11-12	3 units of science, including Biology and Chemistry
Practicum in Culinary Arts	2	12	Culinary Arts
Extended Practicum in Culinary Arts	3	12	Advanced Culinary Arts

Employment of head chefs is projected to grow 8 percent from 2022-2032 with approximately 17,000 jobs in this field with an average annual income in Texas of $48,400/year. - Bureau of Labor Statistics

HOSPITALITY & TOURISM COURSES

INTRODUCTION TO CULINARY ARTS
VO4900
GRADES: 9–10
1 Credit
RECOMMENDED PREREQUISITE: Principles of Hospitality and Tourism
Introduction to Culinary Arts will emphasize the principles of planning, organizing, staffing, directing, and controlling the management of a variety of food service operations. The course will provide insight into the operation of a well-run restaurant. Introduction to Culinary Arts will provide insight into food production skills, various levels of industry management, and hospitality skills. This is an entry level course for students interested in pursuing a career in the foodservice industry.

CULINARY ARTS
VO4910
GRADES: 10–12
2 Credits
RECOMMENDED PREREQUISITES: Principles of Hospitality and Tourism and Introduction to Culinary Arts
Culinary Arts begins with the fundamentals and principles of the art of cooking and the science of baking and includes management and production skills and techniques. Students can pursue a national sanitation certification or other appropriate industry certifications. This course is offered as a laboratory-based course.

FOUNDATIONS OF RESTAURANT MANAGEMENT
VO4915
GRADES: 10–12
1 Credits
RECOMMENDED PREREQUISITE: Intro to Culinary Arts
Foundations of Restaurant Management will extend content and enhance skills introduced in Intro to Culinary Arts. Specifically this course focuses on “front of the house” restaurant management with an in-depth look at customer service, facility set up and management, financial analysis, industry marketing, and social media communication. This course teaches industry-driven standards to prepare students for success in higher education, certifications, and/or immediate employment.

ADVANCED CULINARY ARTS
VO4920
GRADES: 10–12
2 Credits
PREREQUISITE: Culinary Arts
Advanced Culinary Arts will extend content and enhance skills introduced in Culinary Arts by in-depth instruction of industry-driven standards to prepare students for success in higher education, certifications, and/or immediate employment.

FOOD SCIENCE
VO6500
GRADES: 11–12
1 Credit
PREREQUISITE: Biology, Chemistry and one additional science credit
In Food Science students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Food Science is the study of the nature of foods, the causes of deterioration in food products, the principles underlying food processing, and the improvement of foods for the consuming public. *NOTE: This course satisfies an ADVANCED SCIENCE credit requirement.*

PRACTICUM IN CULINARY ARTS

VO4930

GRADES: 11–12

2 Credits

PREREQUISITE: Culinary Arts

REQUIRED: Completed Practicum Student Information Packet

A unique practicum that provides occupationally specific opportunities for students to participate in a learning experience that combines classroom instruction with actual business and industry career experiences. Practicum in Culinary Arts students will be responsible for scheduling and operating the Bearcat Bistro for various school events.

EXTENDED PRACTICUM IN CULINARY ARTS

VO4940

GRADES: 12

3 Credits

PREREQUISITE: Advanced Culinary Arts

REQUIRED: Completed Practicum Student Information Packet

Extended Practicum in Culinary Arts is a unique practicum that provides occupationally specific opportunities for students to participate in a learning experience that combines classroom instruction with actual business and industry career experiences. Extended Practicum in Culinary Arts integrates academic and career and technical education; provides more interdisciplinary instruction; and supports strong partnerships among schools, businesses, and community institutions, with the goal of further enhancing the knowledge, skills, and industry based experiences that students receive through workplace application.

HUMAN SERVICES CAREER CLUSTER

INTRODUCTION:

The Human Services curriculum empowers individuals and families across the life span to manage the challenges of living and working in a diverse, global society. The relationship between work and family is the unique focus of Human Services. The department offers courses designed to prepare students for the world of work and life. These courses provide in-depth study for life as well as possible careers in child development, food science, and fashion design.

CAREERS OPPORTUNITIES:

- **Family, School or Career Counselor**
- **Child Psychologist**
- **Merchandise Display Artist**
- **Child Care Specialist**
- **Dietician Home**
- **Furnishings Buyer**
- **Manicurist**
- **Family and Consumer Sciences Teacher**
- **Cosmetologist**
- **Professional Educator**
- **Fashion Designer**
- **Social Worker**

CERTIFICATION OPPORTUNITIES:

- Cosmetologist License
- Community Health Worker

STUDENT ORGANIZATION:

- Family, Career, Community Leaders of America (FCCLA)

Public Service Endorsement

HUMAN SERVICES PATHWAYS

Course Name	Credits	Grade Levels	Pre-Requisites
Family and Community Services			
Principles of Human Services	1	9-12	None
Professional Communications	.5	9-12	None
Human Growth and Development	1	10-12	None
Counseling and Mental Health	1	11-12	None
Practicum in Human Services	2	11-12	*Recommended:* Counseling and Mental Health
Cosmetology - Dual Credit			
Principles of Human Services	1	9-12	None
Entrepreneurship	1	10-12	None
Intro to Cosmetology AND Cosmetology I	3	11	None
Principles of Color Theory AND Cosmetology II	3	12	Intro to Cosmetology AND Cosmetology I

Employment of barbers, hair stylists, and cosmetologists are projected to grow 4 percent from 2022-2032 with approximately 27,350 jobs in this field with an average annual income in Texas of $30,660/year. Employment of social workers is projected to grow 7.5 percent from 2022-2032 with approximately 53,800 jobs in this field with an average annual income in Texas of $68,500/year. - Bureau of Labor Statistics

HUMAN SERVICES COURSES

PRINCIPLES OF HUMAN SERVICES

VO6600

GRADES: 9–10

1 Credit

PREREQUISITE: None

Principles of Human Services is a laboratory course that will enable students to investigate careers in the Human Services Career Cluster, including counseling and mental health, early childhood development, family and community, personal care, and consumer services. Each student is expected to complete the knowledge and skills essential for success in high-skill, high-wage, or high-demand human services careers. *Adequate time will be given to acquire supplies.*

ENTREPRENEURSHIP I

BU5100

GRADES: 10–12

1 Credit

PREREQUISITE: None

Entrepreneurship is a course designed to introduce students to the process of establishing a small business. Concepts introduced will be applied and practiced. Students will design, develop, and implement a business plan. Using a virtual business simulation, they will manage all aspects of a business and integrate business practices.

HUMAN GROWTH & DEVELOPMENT

VO7300

GRADES: 10–12

1 Credit

RECOMMENDED PREREQUISITE: Principles of Education and Training

Human Growth and Development is an examination of human development across the lifespan with emphasis on research, theoretical perspective, and common physical, cognitive, emotional, and social development milestones. The course covers material that is generally taught in a college level, one-semester introductory course in developmental psychology or human development.

COUNSELING AND MENTAL HEALTH

VO6700

GRADES: 11–12

1 Credit

RECOMMENDED PREREQUISITE: Principles of Human Services

In Counseling and Mental Health, students model the knowledge and skills necessary to pursue a counseling and mental health career through simulated environments. Students are expected to apply knowledge of ethical and legal responsibilities, limitations on their actions and responsibilities, and the implications of their actions. Students understand how professional integrity in counseling and mental health care is dependent on acceptance of ethical and legal responsibilities.

PRACTICUM IN HUMAN SERVICES

VO6850

GRADES: 11-12

2 Credits

RECOMMENDED PREREQUISITE: Counseling and Mental Health

REQUIRED: Completed Practicum Student Information Packet

Practicum in Human Services provides background knowledge and occupation-specific training that focuses on the development of consumer services, early childhood development and services, counseling and mental health services, and family and community-services careers. Content for Practicum in Human Services is designed to meet the occupational preparation needs and interests of students and should be based upon the knowledge and skills selected from two or more courses in a coherent sequence in the human services cluster. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

INTRODUCTION TO COSMETOLOGY & COSMETOLOGY I – Dual Credit

VO4000 AND VO4001

GRADES: 11-12

3 Credits

PREREQUISITES: None

Students coordinate integration of academic, career, and technical knowledge and skills in this laboratory instructional sequence course designed to provide job-specific training for employment in cosmetology careers. Instruction includes sterilization and sanitation procedures, hair care, nail care, and skin care and meets the Texas Department of Licensing and Regulation requirements for licensure upon passing the state examination. *Transportation to Grayson College will be provided. Students will need to apply to Grayson College the spring before classes begin. Students will be expected to purchase their own supply kit for the 2 year program.*

PRINCIPLES OF DESIGN/COLOR THEORY & COSMETOLOGY II – Dual Credit

VO4004 and VO4005

GRADE: 12

3 Credits

Prerequisites: Intro to Cosmetology & Cosmetology I

Students review academic knowledge and skills related to cosmetology. This course is designed to provide advanced training for employment in cosmetology careers. Instruction includes advanced training in sterilization and sanitation processes, hair care, nail care, and skin care and meets the Texas Department of Licensing and Regulation requirements for licensure upon passing the state examination. Students apply, combine, and justify knowledge and skills to a variety of settings and problems. *Transportation to Grayson College will be provided. Students will need to apply to Grayson College the spring before classes begin. Students will be expected to purchase their own supply kit for the 2 year program. .*

LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY CAREER CLUSTER

Introduction:

Career Opportunities in the criminal justice field are extensive and projected as a high growth area. Students may choose the introductory course to explore career options and/or continue into the more in-depth courses. Students have the option to explore and prepare for careers ranging from emergency operators to a Supreme Court judge. The opportunities and variations are exciting. Opportunities for student leadership and competitions are available.

CAREERS OPPORTUNITIES:

- **Airport Security**
- **Correction Officer**
- **Hotel Security**
- **Bodyguard**
- **Detective**
- **Probation and Parole**
- **Border Patrol**
- **Drug Enforcement Agent**
- **Attorney**
- **Central Intelligent Agent**
- **FBI Agent**
- **Police Officer**
- **Corporate Security**
- **Arson Investigator**
- **911 Operator**

Certification Opportunities:

- Non-Commissioned Security Officer Level I
- IAED Emergency Telecommunicator
- Emergency Medical Technician

Student Organization:

- Criminal Justice Club
- SkillsUSA

Public Service Endorsement

LAW AND PUBLIC SERVICE PATHWAYS

Course Name	Credits	Grade Levels	Pre-Requisites
Emergency Services			
Principles of Law, Public Safety, Corrections, and Security	1	9-12	None
Law Enforcement I	1	10-12	None
Anatomy and Physiology	1	10-12	Biology and a second science credit
Counseling and Mental Health	1	11-12	None
Extended Practicum in Law - EMT	3	12	None
Law Enforcement			
Principles of Law, Public Safety, Corrections, and Security	1	9-12	None
Law Enforcement I	1	10-12	None
Criminal Investigation	1	10-12	None
Law Enforcement II	1	11-12	*Recommended:* Law Enforcement I
Counseling and Mental Health	1	11-12	None
Forensic Science	1	11-12	Biology and Chemistry
Practicum in Law, Public Safety, Corrections, and Security	2-3	12	None

Employment of police and detectives is projected to grow 1 percent with approximately 6,550 jobs and an average annual income in Texas of $95,850, lawyers projected to grow 6 percent with approximately 62,400 jobs and an annual income in Texas of $166,620 and paralegals/legal assistants are expected to grow 7 percent with approximately 24,600 jobs and an annual income in Texas of $59,970 from 2022-2032. - Bureau of Labor Statistics

LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY COURSES

PRINCIPLES OF LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

VO8100

GRADES: 9–10

1 Credit

PREREQUISITE: None

This course introduces students to professions in law enforcement, security, corrections, and fire and emergency management services. Students will examine the roles and responsibilities of police, courts, corrections, private security, and protective agencies of fire and emergency services.

LAW ENFORCEMENT I

VO8200

GRADES: 10–12

1 Credit

RECOMMENDED PREREQUISITE: Principles of Law, Public Safety, Corrections, and Security

This course is an overview of the history, organization, and functions of local, state, and federal law enforcement. This course includes the role of constitutional law, the United States legal system, criminal law, law enforcement terminology, and the classification and elements of crime.

LAW ENFORCEMENT II

VO8300

GRADES: 11–12

1 Credit

RECOMMENDED PREREQUISITE: Law Enforcement I

Law Enforcement II provides the knowledge and skills necessary to prepare for a career in law enforcement. Students will understand the ethical and legal responsibilities, patrol procedures, first responder roles, telecommunications, emergency equipment operations, and courtroom testimony.

CRIMINAL INVESTIGATIONS

VO8510

GRADES: 10–12

1 Credit

RECOMMENDED PREREQUISITE: Principles of Law, Public Safety, Corrections, and Security

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

FORENSIC SCIENCE

VO8500

GRADES: 11-12

1 Credit

PREREQUISITE: Biology and Chemistry

RECOMMENDED PREREQUISITE OR CO-REQUISITE: ANY Law, Public Safety, Corrections, and Security Career Cluster course

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. Scientific methods of investigation can be experimental, descriptive, or comparative. The method chosen should be appropriate to the question being asked.
Note: This course satisfies a SCIENCE credit requirement for those interested in the Law pathway.

PRACTICUM IN LPCS

VO8150

GRADE: 12

2-3 Credits

REQUIRED: Completed Practicum Student Information Packet

RECOMMENDED PREREQUISITE: Law Enforcement 1

The practicum course is designed to give students supervised practical application of previously studied knowledge and skills in law, public safety, corrections, and security. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations. *Background check and random drug testing will be required for internship placements.*

EXTENDED PRACTICUM IN LAW

VO4500

GRADE: 12

2-3 Credits

REQUIRED: Completed Practicum Student Information Packet

RECOMMENDED PREREQUISITE: Law Enforcement 1

The practicum course is designed to give students supervised practical application of previously studied knowledge and skills in the law field. If students are interested in participating in the Dual Credit EMT program second semester, each student is responsible for paying for their textbook and supply fees. *Background check and random drug testing will be required for internship placements.*

MANUFACTURING CAREER CLUSTER

INTRODUCTION:

Are you interested in how products and machines come together? *Do you care about the quality of materials and workmanship?* The Manufacturing cluster covers how industry and technology work together to make or package the things that we use or consume every day like cars, computers and food. Students are expected to be able to problem solve, make decisions and work in teams.

Careers in advanced manufacturing offer exciting opportunities in designing and improving products, operating high-tech tools and machinery, analyzing problems and coming up with creative solutions, and working with both your hands and your mind.

CAREERS OPPORTUNITIES:

- **Computer Systems Hardware Analyst**
- **Aircraft Assembler**
- **CNC Machinist**
- **Tool & Die Maker**
- **Technologist**
- **Industrial Engineer**
- **Machine Operators**
- **Automated Manufacturing Tech**
- **Assemblers**
- **Manufacturing Engineers**
- **Computer Engineering Technician**
- **Diesel Engine Machinist**
- **Welder**
- **Instrumentation Technician**
- **Extruding & Drawing Mach. Operators**
- **Precision Metal Workers**
- **Calibration Technician**
- **Machine Technician**
- **Avionics Maintenance Tech**

Certification Opportunities:

- Grayson College Basic Manufacturing Technician Certificate
- Advanced Manufacturing Technician Certificate
- Grayson College Combination Welder
- American Welding Society SENSE Level 1 - Entry Welder

Business & Industry Endorsement

MANUFACTURING PATHWAYS

Course Name	Credits	Grade Levels	Pre-Requisites
Advanced Manufacturing and Machinery Mechanics Program (AMP) - Dual Credit			
Principles of Applied Engineering	1	9-12	None
Manufacturing Engineering Technology I	1	10-12	None
Robotics I	1	9-10	None
Engineering Design and Presentation 1	1	10-11	Algebra 1
Extended Practicum in Manufacturing 1	3	11	*Recommended:* Engineering Design and Presentation 1
Robotics II	1	11-12	Robotics I
Extended Practicum in Manufacturing 2	3	12	Extended Practicum in Manufacturing 1
Summer Internship	College Credit	Summer of 12th grade	Ext Practicum in Manufacturing 1 & 2
Welding - Dual Credit			
Principles of AG	1	9-12	None
Agricultural Mechanics	1	10-12	None
Intro to Welding AND Welding I	3	11-12	*Recommended:* Agricultural Mechanics
Welding II/Lab	3	12	Intro to Welding AND Welding I

Employment of machinists is projected to increase 5 percent from 2022-2032 with approximately 18,170 jobs in this field with an average annual income in Texas of $53,970/year and welders, cutters, solderers, and brazers are projected to increase by 2 percent with approximately 48,380 jobs in this field and an annual income in Texas of $52,500 - Bureau of Labor Statistics

MANUFACTURING COURSES

ROBOTICS I

VO4825

GRADES: 9–10

1 Credit

RECOMMENDED PREREQUISITE: Principles of Applied Engineering

Students enrolled in this course will demonstrate knowledge and skills necessary for the robotic and automation industry. Through implementation of the design process, students will transfer advanced academic skills to component designs in a project-based environment. Students will build prototypes or use simulation software to test their designs. Additionally, students explore career opportunities, employer expectations, and educational needs in the robotic and automation industry. Students are encouraged to participate in Robotics competitions each year.

ROBOTICS II

VO4826

GRADES: 10–12

1 Credit

PREREQUISITE: Robotics I

In Robotics II, students will explore artificial intelligence and programming in the robotic and automation industry. Through implementation of the design process, students will transfer academic skills to component designs in a project-based environment. Students will build prototypes and use software to test their designs. *NOTE: This course satisfies a MATH credit requirement.*

AGRICULTURAL MECHANICS AND METAL TECHNOLOGIES

VO2900

GRADES: 10–12

1 Credit

RECOMMENDED PREREQUISITE: Principles of Agriculture, Food, and Natural Resources

A basic course designed to develop proficiency in many welding skills. Students will be expected to use the cutting torch and MIG Welders. Welding is taught in several positions, which include flat, horizontal and vertical. The course develops an understanding of tool operation, electrical wiring, plumbing, carpentry, fencing, concrete and metal working techniques.

MANUFACTURING ENGINEERING TECHNOLOGY I (AMP Program - Year 1)

VO3815

GRADES: 10-11

1 Credits

RECOMMENDED PREREQUISITE: Algebra 1

In Manufacturing Engineering, students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing. Knowledge and skills in the proper application of Manufacturing Engineering, the design of technology, efficient manufacturing technology, and the assessment of the effects of production technology prepare students for success in the global economy. The study of Manufacturing Engineering allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings in a manufacturing setting. *College credit for TECM 1303 and MCHN 1320 will be articulated upon completion of the course with an 80 or above. These courses will count as part of the Grayson College Basic/Advanced Manufacturing Technician Certificate.*

EXTENDED PRACTICUM IN MANUFACTURING 1 - *Dual Credit* (AMP Program)

VO3870

GRADE: 11

3 Credits

FOR SCHOLARSHIP OPPORTUNITIES: Grayson College Application and Interview Process possible

Students will participate in the Grayson College Advanced Manufacturing Program (AMP). Students will learn basic skills relating skills to Advanced Manufacturing and gain real-world, hands-on training through industry driven curriculum. *Students MUST be responsible and dedicated for college level work. Students will be working towards their Advanced Manufacturing Certification - Level 1.*

EXTENDED PRACTICUM IN MANUFACTURING 1 - *Dual Credit* (AMP Program)

VO3875

GRADE: 12

3 Credits

FOR SCHOLARSHIP OPPORTUNITIES: Grayson College Application and Interview Process possible

Students will participate in the Grayson College Advanced Manufacturing Program (AMP). Students will learn basic skills relating skills to Advanced Manufacturing and gain real-world, hands-on training through industry driven curriculum. *Students MUST be responsible and dedicated for college level work. Students will be working towards their Advanced Manufacturing Certification - Level 1.*

INTRODUCTION TO WELDING & WELDING 1 – *Dual Credit*

VO3860/VO4010

GRADES: 11–12

3 Credits

Rapid advances in technology have created new career opportunities and demands in many industries. Welding provides the knowledge, skills, and technologies required for employment in metal technology systems. Students 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. *Courses will be held at Grayson College. Supply Kit and textbook costs apply.*

WELDING 2 W/LAB – *Dual Credit*

VO4020

GRADE: 12

3 Credits

PREREQUISITES: Welding I

Advanced Welding builds on knowledge and skills developed in Welding. Students will develop advanced welding concepts and skills as they relate to personal and career development. This course integrates academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. *Courses will be held at Grayson College. Supply Kit and textbook costs apply.*

INFORMATION TECHNOLOGY CAREER CLUSTER

INTRODUCTION:

The Information Technology Support and Services program of study explores the occupations and educational opportunities associated with administering, testing, and implementing computer databases and applying knowledge of database management systems. This program of study may also include analyzing user requirements and problems to automate or improve existing systems and review computer system capabilities. This program of study may also include exploration into the research, design, or testing of computer or computer-related equipment for commercial, industrial, military, or scientific use.

CAREERS OPPORTUNITIES:

- **Database Administrator**
- **Computer Hardware Engineer**
- **Computer System Analyst and Support**
- **Computer Network Architects**
- **Computer Systems Analysts**
- **Computer Network Support Specialist**
- **Web Developers**
- **Web Administrators, Computer Occupations**
- **Software Developers**
- **Information Security Analysts**
- **Network and Computer System Administrators**
- **Computer System Analysts**
- **Software Developer, Systems Software**
- **Computer Programmers**

Certification Opportunities:

- C++
- CyberSecurity Certificate

Student Organization:

- Engineering Club
- Robotics Club
- SkillsUSA

Business and Industry Endorsement

INFORMATION TECHNOLOGY PATHWAYS

Course Name	Credits	Grade Levels	Pre-Requisites
Cybersecurity			
AP Computer Science Principles	1	9-12	None
Computer Science I	1	9-12	Algebra I
Networking	1	10-12	None
Extended Practicum in Information Technology 1 - *Cybersecurity*	3	11-12	Algebra I and Geometry *Recommended:* Computer Science 1
Extended Practicum in Information Technology 2 - *Cybersecurity*	3	12	Algebra I, Geometry, and Ext Practicum in IT 1 *Recommended:* Computer Science 1
Networking			
AP Computer Science Principles	1	9-12	None
Computer Science I	1	9-12	Algebra I
Networking	1	10-12	None
Extended Practicum in Information Technology 1 - *Networking*	3	11-12	Algebra I and Geometry *Recommended:* Computer Science 1
Extended Practicum in Information Technology 2 - *Networking*	3	12	Algebra I, Geometry, and Ext Practicum in IT 1 *Recommended:* Computer Science 1

Employment of information security analysts is projected to grow 4.5 percent with approximately 14,910 jobs in this field with an average annual income in Texas of $115,570/year and network and computer systems administrators are projected to grow 4% with approximately 30,110 jobs in this field and an annual average income in Texas of $92,160/year from 2022-2032- Bureau of Labor Statistics

INFORMATION TECHNOLOGY COURSES

AP COMPUTER SCIENCE PRINCIPLES

TA2000

GRADES: 10-12

1 Credit

PREREQUISITES: Algebra 1

AP Computer Science Principles is an introductory college-level computing course that introduces students to the breadth of the field of computer science. Students learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. They incorporate abstraction into programs and use data to discover new knowledge. Students also explain how computing innovations and computing systems—including the internet—work, explore their potential impacts, and contribute to a computing culture that is collaborative and ethical. **Students will be required to take the AP Exam.**

COMPUTER SCIENCE I

VO5251

GRADES: 9-12

1 Credit

PREREQUISITES: Algebra 1

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

COMPUTER SCIENCE II

VO5252

GRADES: 11-12

1 Credit

PREREQUISITES: Algebra I and Computer Science I

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

NETWORKING

VO5010

GRADES: 10–12

1 Credit

RECOMMENDED PREREQUISITES: Principles of Information Technology, Computer Maintenance

Networking teaches students practical networking skills that can be used in the IT industry. Students will also focus on secure communication channels and data integrity. Students will gain hands-on experience building and installing networks and network components.

Students will be working towards the COMPTIA Networking certification.

PRACTICUM IN INFORMATION TECHNOLOGY 1 - CYBERSECURITY

VO5210

GRADE: 11-12

3 Credits

PREREQUISITES: Two Information Technology Classes

REQUIRED: Completed Practicum Student Information Packet

In the Practicum in Information Technology, students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an industry mentor, as an unpaid or paid internship, as part of a capstone project, or as career preparation.

PRACTICUM IN INFORMATION TECHNOLOGY 2 - CYBERSECURITY

VO5220

GRADE: 12

3 Credits

PREREQUISITES: Two Information Technology Classes AND Practicum in Information Technology 1

REQUIRED: Completed Practicum Student Information Packet

In the Practicum in Information Technology, students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an industry mentor, as an unpaid or paid internship, as part of a capstone project, or as career preparation.

PRACTICUM IN INFORMATION TECHNOLOGY 1 - NETWORKING

DC5230

GRADE: 11-12

3 Credits

PREREQUISITES: Two Information Technology Classes

REQUIRED: Completed Practicum Student Information Packet

In the Practicum in Information Technology, students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an industry mentor, as an unpaid or paid internship, as part of a capstone project, or as career preparation.

PRACTICUM IN INFORMATION TECHNOLOGY 2 - NETWORKING

DC5240

GRADE: 12

3 Credits

PREREQUISITES: Two Information Technology Classes AND Practicum in Information Technology 1

REQUIRED: Completed Practicum Student Information Packet

In the Practicum in Information Technology, students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an industry mentor, as an unpaid or paid internship, as part of a capstone project, or as career preparation.

ENGINEERING CAREER CLUSTER

INTRODUCTION:

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

CAREERS OPPORTUNITIES:

- **Aerospace Engineers**
- **Industrial Engineers**
- **Mechanical Engineers**
- **Chemical Engineers**
- **Electrical Engineers**
- **Civil Engineers**
- **Petroleum Engineers**
- **Biomedical Engineers**
- **Automobile Engineers**
- **Nuclear Engineers**
- **Industrial Engineers**
- **Architectural Engineers**
- **Manufacturing Engineers**

Certification Opportunities:

- AutoCad for Design
- Electrical Engineering Technician Level 1 Certification

Student Organization:

- Engineering Club
- Robotics Club
- SkillsUSA

Business and Industry Endorsement

ENGINEERING PATHWAYS

Engineering			
Principles of Applied Engineering	1	9-12	None
Engineering Design & Presentation I	1	10-12	Algebra I & Geometry
Robotics 1	1	10-12	*Recommended:* Principles of Applied Engineering
AC/DC Electronics	1	10	Principles of Applied Engineering
Digital Electronics	1	11	AC/DC Electronics
Engineering Design and Presentation II	2	11-12	Engineering & Design Presentation I
Engineering Design & Problem Solving	1	11-12	Algebra I & Geometry
Practicum in STEM	2	12	Algebra I and Geometry
Electrical Engineering Technology 4-year commitment			
Principles of Applied Engineering	1	9-12	None
AC/DC Electronics	1	10	Principles of Applied Engineering
Digital Electronics	1	11	Principles of Applied Engineering, AC/DC Electronics
Practicum in Engineering 1 - EET	2	11	Principles of Applied Engineering, AC/DC Electronics, Digital Electronics
Practicum in Engineering 2- EET	2	12	Principles of Applied Engineering, AC/DC Electronics, Digital Electronics, Practicum in Engineering 1 - EET

Employment of civil engineers is projected to grow 6 percent from 2022 - 2032 with approximately 27,470 jobs in this field with an average income in Texas of $93,970/year and electrical and electronic engineering technologists and technicians is projected to grow 4% with approximately 7,300 jobs in this field and an average income in Texas of $66,210.00. - Bureau of Labor Statistics

ENGINEERING COURSES

PRINCIPLES OF APPLIED ENGINEERING
VO4820
GRADES: 9–10
1 Credit
PREREQUISITE: None
Principles of Applied Engineering provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will use a variety of computer hardware and software applications to complete assignments and projects. Upon completing this course, students will have an understanding of the various fields and will be able to make informed decisions regarding a coherent sequence of subsequent courses. Further, students will have worked on a design team to develop a product or system. Students will use multiple software applications to prepare and present course assignments.

ENGINEERING DESIGN & PRESENTATION 1
VO4800
GRADES: 10–12
1 Credit
PREREQUISITE: Algebra I
RECOMMENDED PREREQUISITE: Principles of Applied Engineering
Engineering Design and Presentation I is a continuation of knowledge and skills learned in Principles of Applied Engineering. Students enrolled in this course will demonstrate knowledge and skills of the design process as it applies to engineering fields using multiple software applications and tools necessary to produce and present working drawings, solid model renderings, and prototypes. Students will use a variety of computer hardware and software applications to complete assignments and projects. Through implementation of the design process, students will transfer advanced academic skills to component designs. Additionally, students explore career opportunities in engineering, technology, and drafting and what is required to gain and maintain employment in these areas.

ROBOTICS I
VO4825
GRADES: 9–10
1 Credit
RECOMMENDED PREREQUISITE: Principles of Applied Engineering
Students enrolled in this course will demonstrate knowledge and skills necessary for the robotic and automation industry. Through implementation of the design process, students will transfer advanced academic skills to component designs in a project-based environment. Students will build prototypes or use simulation software to test their designs. Additionally, students explore career opportunities, employer expectations, and educational needs in the robotic and automation industry. Students are encouraged to participate in Robotics competitions each year.

AC/DC ELECTRONICS
DC6250
GRADES: 10
1 Credit
PREREQUISITE: Principles of Applied Engineering
AC/DC Electronics focuses on the basic electricity principles of alternating current/direct current (AC/DC) circuits. Students will demonstrate knowledge and applications of circuits, electronic measurement, and electronic implementation. Through use of the design process, students will transfer academic skills to component designs in a project-based environment. Students will use a variety of computer hardware and software applications to complete assignments and projects. Additionally, students will explore career opportunities, employer expectations, and educational needs in the electronics industry.

DIGITAL ELECTRONICS

VO6210

GRADES: 11

1 Credit

PREREQUISITE: Principles of Applied Engineering and AC/DC Electronics

Digital Electronics is the study of electronic circuits that are used to process and control digital signals. In contrast to analog electronics, where information is represented by a continuously varying voltage, digital signals are represented by two discreet voltages or logic levels. This distinction allows for greater signal speed and storage capabilities and has revolutionized the world of electronics. Digital electronics is the foundation of modern electronic devices such as cellular phones, digital audio players, laptop computers, digital cameras, and high-definition televisions. The primary focus of Digital Electronics is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation.
Note: This course satisfies a math credit requirement for students on the Foundation High School Program.

ENGINEERING DESIGN & PRESENTATION 2

VO4805

GRADES: 11–12

2 Credits

PREREQUISITES: Algebra I and Geometry

RECOMMENDED PREREQUISITE: Principles of Applied Engineering or Engineering Design & Presentation 1

Engineering Design and Presentation II is a continuation of knowledge and skills learned in Engineering Design and Presentation I. Students enrolled in this course will demonstrate knowledge and skills of the design process as it applies to engineering fields using multiple software applications & tools necessary to produce and present working drawings, solid model renderings, and prototypes. Students will use a variety of computer hardware and software applications to complete assignments and projects. Through implementation of the design process, students will transfer advanced academic skills to component designs.

ENGINEERING DESIGN & PROBLEM SOLVING

VO4810

GRADES: 11–12

1 Credit

PREREQUISITES: Algebra I and Geometry

RECOMMENDED PREREQUISITES: two (STEM) Career Cluster credits

The Engineering Design and Problem-Solving course is the creative process of solving problems by identifying needs and then devising solutions. The solution may be a product, technique, structure, or process depending on the problem. Science aims to understand the natural world, while engineering seeks to shape this world to meet human needs and wants. Engineering design takes into consideration limiting factors or "design under constraint." Various engineering disciplines address a broad spectrum of design problems using specific concepts from the sciences and mathematics to derive a solution.
Note: This course satisfies a SCIENCE credit requirement.

PRACTICUM IN STEM

VO4840

GRADES: 12

2 Credit

PREREQUISITES: Algebra 1 and Geometry

RECOMMENDED PREREQUISITES: Two (STEM) Career Cluster credits

Practicum in STEM is designed to give students supervised practical application of previously studied knowledge and skills.

PRACTICUM IN STEM 1 - EET

VO4880

GRADES: 11

2 Credit

PREREQUISITES: Principles of Applied Engineering, AC/DC Electronics, Digital Electronics

Practicum in STEM is designed to give students supervised practical application of previously studied knowledge and skills.

PRACTICUM IN STEM 2 - EET
VO4890
GRADES: 12
2 Credit
PREREQUISITES: Principles of Applied Engineering, AC/DC Electronics, Digital Electronics, Practicum in Engineering 1 - EET
Practicum in STEM is designed to give students supervised practical application of previously studied knowledge and skills.

TRANSPORTATION, DISTRIBUTION AND LOGISTICS

INTRODUCTION:

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

CAREERS OPPORTUNITIES:

- **Drone Pilot**
- **Airline Pilot**
- **Transportation Operations**
- **Logistics Planning and Management Services**
- **Warehousing and Distribution Center Operations**
- **Facility and Mobile Equipment Maintenance**
- **Transportation Systems/Infrastructure Planning, Management and Regulation**
- **Health, Safety and Environmental Management**
- **Sales and Service**

Certification Opportunities:

- FAA Drone Pilot License (Part 107)
- ASE Entry-Level Automobile Brakes

Student Organization:

- SkillsUSA
- Rocket Club

Business & Industry Endorsement

TRANSPORTATION PATHWAYS

Course Name	Credits	Grade Levels	Pre-Requisites
Automotive Technology			
Automotive Basics	1	9-10	None
Automotive Technology I	2	10-12	None
Automotive Technology II	2	11-12	Automotive Technology I
Practicum in Transportation	2	12	*Recommended:* Auto Tech II

Employment of automotive service technicians is projected to grow 2 percent from 2022-2032 with approximately 61,200 jobs in this field with an average annual income in Texas of $48,280/year. - Bureau of Labor Statistics

TRANSPORTATION COURSES

PRINCIPLES OF TRANSPORTATION

VO9000

GRADES: 9

1 Credit

PREREQUISITE: None

In Principles of Transportation Systems, students will gain knowledge and skills in the safe application, design, production, and assessment of products, services, and systems. This knowledge includes the history, laws and regulations, and common practices used in the transportation industry. Students should apply knowledge and skills in the application, design, and production of technology as it relates to the transportation industries. This course allows students to reinforce, apply, and transfer their academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings.

AUTOMOTIVE BASICS

VO8800

GRADES: 9

1 Credit

PREREQUISITE: None

Automotive Basics includes knowledge of the basic automotive systems and the theory and principles of the components that make up each system and how to service these systems. Automotive Basics includes applicable safety and environmental rules and regulations. In Automotive Basics, students will gain knowledge and skills in the repair, maintenance, and servicing of vehicle systems. This study allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. The focus of this course is to teach safety, tool identification, proper tool use, and employability.

AUTOMOTIVE TECHNOLOGY I: MAINTENANCE AND LIGHT REPAIR

VO8801

GRADES: 10–12

2 Credits

RECOMMENDED PREREQUISITE: Automotive Basics

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

AUTOMOTIVE TECHNOLOGY II: AUTOMOTIVE SERVICE

VO8802

GRADES: 11-12

2 Credits

PREREQUISITE: Automotive Technology I

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

PRACTICUM IN TRANSPORTATION SYSTEMS

VO6750

GRADES: 12

2 Credits

RECOMMENDED PREREQUISITE: Automotive Technology II

Practicum in Transportation Systems 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 experience such as internships, mentorships, independent study, or laboratories. The Practicum can be either school lab based or work based learning.