

# MILLER GROVE COURSE CATALOG

## 2023-2024



This catalog is available online @ [www.MGISD.net](http://www.MGISD.net)

# **MILLER GROVE HIGH SCHOOL**

## **COURSE SELECTION CATALOG**

This catalog is intended for the use of both parents and students. The following Course Descriptions and Curriculum Guidelines for Miller Grove High School represents the school administration's continuing efforts to provide pertinent information about high school and, specifically, a description of the courses offered. This guide has been assembled utilizing Texas Education Agency publications as they apply to the local district. Students are urged to study this booklet along with other documents as they plan their high school programs. An early decision about the career one wishes to pursue will be helpful in selecting courses.

The course guide lists the courses available to high school students. It should be noted that not all of the courses listed are scheduled every year. For a class to be offered, a minimum number of students must request that course. For this reason, it may be necessary to schedule classes on an alternate-year basis or to eliminate them. When a sufficient number of student requests warrant it, every effort will be made to offer a desired course.

The course guide offers other valuable information such as graduation plans, graduation requirements, and college requirements. Students should be careful to stay in contact with colleges they are interested in attending to make sure entrance requirements do not change from year to year.

### **Equal Opportunity**

Miller Grove ISD offers equal educational opportunities to all eligible persons without regard to race, creed, color, national origin, sex, handicapping conditions, or English proficiency.

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# MILLER GROVE HIGH SCHOOL ACADEMIC PROGRAMS

## 2023-2024

All students entering Grade 9 in the 2014-2015 school year and thereafter shall enroll in the courses necessary to complete the curriculum requirements for the Foundation High School Program and the curriculum requirements for at least one endorsement specified in HB 5.

### GRADUATION REQUIREMENTS

#### **Foundation High School Plan (FHSP) with ENDORSEMENTS:**

HB 5 specifies two plans that are offered to complete graduation requirements. There are also five possible endorsements: STEM, Business and Industry, Public Service, Arts and Humanities, and Multidisciplinary. However not all schools are able to offer all of them. Below are the plans and endorsements that Miller Grove currently offers:

- Foundation Plan (FHSP)-22 credits
- Foundation Plan plus Endorsement -26 credits
  - STEM (Science, Technology, Engineering, and Mathematics)
  - Business and Industry
  - Arts and Humanities
  - Multidisciplinary Studies

#### **STAAR End of Course (EOC) Assessments**

Students are required to pass each STAAR EOC at the Approaches achievement level as a graduation requirement. Texas Education Code (TEC) §39.025 allows a student who does not pass the STAAR EOC, but passes the course to retake the assessment without retaking the course. STAAR EOC assessments will be administered in Algebra I, Biology, English I, English II and U.S. History.

#### **Graduating with a Distinguished Level of Achievement**

What qualifies a student to graduate distinguished from high school:

The Distinguished Level of Achievement requires more math and more science than the Foundation High School Program (FHSP). The Distinguished Level of Achievement requires:

- A total of four credits in math, including Algebra II;
- A total of four credits in science;
- The remaining curriculum requirements (FHSP), and
- Successful completion of the curriculum requirements for at least one endorsement.

#### **Distinguished/College**

A student must earn a **distinguished** level of achievement to be eligible for top 10% automatic admission to any Texas public post-secondary school. To meet the requirements, a student must graduate in the top 10% of their class at either recognized public or private high school in Texas or a high school operated by the U.S. Department of Defense, and be either a Texas resident or eligible to pay resident tuition. This rule has been modified for The University of Texas at Austin who has automatic admission if for the top 6% of the class. A student will also have to ensure that all required documents are received by the institution being applied to by the application deadline and to enroll in college no more than two years after graduating from high school.

## **Graduating with a Honors Level of Achievement**

What qualifies a student to graduate with honors:

A Student must complete a distinguished graduation plan and have an overall GPA of 95 or above.

## **HONORS COURSES**

Honors classes are academically rigorous, take more time, and require more effort. Honors courses are accelerated and course objectives are extended in depth and content. Students are responsible for completing all summer work prior to the first day of class. Students not completing the summer work will be placed in a regular class during the schedule change period.

### **What are the criteria for enrolling in an Honors course?**

- ❖ Have an average of 80+ in an honors class or a 90+ average in a regular class of the academic area(s) for which applying
- ❖ Pass all sections of previous state assessment
- ❖ Teacher recommendation
- ❖ Students who do not pass for a nine weeks grading period may be removed from the honors class and placed in a regular class. This change could possibly modify the students class schedule.

### **What Honors courses are offered at Miller Grove High School?**

Algebra I

English I

English II

All dual credit courses that students receive high school credit and college credit that have been pre-approved by the administration.

## **ACADEMIC COURSES**

Academic classes are those that are not required to graduate and are an advanced level of learning that does not fall under the honors course category.

### **What are the criteria for enrolling in an Academic course?**

- ❖ Successful completion of Spanish II to enroll in Spanish III
- ❖ Successful completion of 3 other Science courses for Forensics

### **What Academic courses are offered at Miller Grove High School?**

Spanish III

Forensics

## **GUIDELINES FOR ALL PROGRAMS**

### **Year Long and Semester Courses**

A one (1) credit course is one that meets for one class period for both semesters (the entire school year).

To receive credit in a one (1) credit course, the first and second semester averages must average to a 70 or higher. A one-half (1/2) credit course is one that meets for one class period per day for one semester only, either fall or spring. To receive credit in a one-half (1/2) credit course, the semester average must be a 70 or higher.

### **Grade Level Classifications**

Grade level classifications will be updated one time per year in August. After the ninth grade, students are classified according to the number of credits earned toward graduation.

<b>Credits Earned</b>	<b>Classification</b>
5	Grade 10 (Sophomore)
10	Grade 11 (Junior)
15	Grade 12 (Senior)

### **DROPPING/ADDING/CHANGING COURSES**

Students who wish to change their schedules in any way must do so within the **first three days** of the semester for which the change is to be made. The Texas Education Agency requires students to be in attendance in a class a certain number of days in order to receive credit for a course (90% of each semester), **there can be no student-initiated changes after this three-day period**. It is important for students to register for the correct courses in the spring of each year for the following year because teacher class assignments are based on the number of students enrolled in a particular course.

The following criteria will be used to allow for schedule changes:

- \*A change is needed because the student failed a required course making necessary a schedule adjustment.
- \*A change is needed because the student earned credits during summer school necessitating a change.
- \*A change is needed which enables a senior to graduate in his/her senior year as opposed to not graduating.
- \*A change is needed as a result of a student being elected to or administratively assigned to an activity within the school.
- \*A change is needed as a result of a student having a schedule, which is not educationally feasible, i.e. prerequisite not met, etc.
- \*A change is needed, in the judgment of the principal that is in the best interest of the student and/or the teacher.

**In order to best serve all students, some schedules may need to be changed to lower class size after each semester begins.**

### **CREDIT BY EXAM WITH PRIOR INSTRUCTION**

Students may take an examination to receive credit without prior instruction for certain courses. To receive credit, the student must score 80% or higher. Interested students must visit with the principal to determine eligibility and pick up an application. Applications must be completed and returned thirty days prior to the published test date. There is no limit to the number of credits by exam a student may obtain. There is no fee for Credit by Exam for Acceleration.

Students who fail a class may make up credits lost by:

- Attending summer school if offered.
- Taking approved correspondence courses at the student's expense
- Scoring 70% on a Credit by Exam (To be eligible for credit recovery, a student must have had prior instruction in the course and pay appropriate test fees.)

Circumstances under which a student with prior instruction may take CBE:

- Student is enrolling from a non-accredited school
- Student has failed a course
- Student has failed to earn credit because of excessive absences

### **DUAL CREDIT**

The Texas Higher Education Coordinating Board (THECB) defines dual credit as a system under which an eligible high school student enrolls in college course(s) and receives credit for the course(s) from both the college and high school. Students get both high school and college credit for these courses.

A dual credit class is a class that a student completes to earn academic credits that are recognized by two or more institutions. A district may enter into an agreement with a public college to form a dual credit partnership. Dual credit means the process by which a high school student enrolls in a college course and receives simultaneous academic credit for the course from both the college and high school. 19 TAC 4.83(4), (7); Education Code 61.003(8).

Option 1-Courses taken in-person at the high school and taught by the high school teacher/college professor

Option 2-Courses taken at high school but taught by a college professor and student completes courses online

Option 3- Off-high school campus courses taken at the college in-person and taught by a college professor.

All college classes must be taken on the Miller Grove campus, or approved by administration to be taken off campus, during the school day as a dual credit class. Classes taken in the summer will not go on high school transcript but will be on college transcript.

Students who withdraw or fail a dual credit course need to contact their dual credit advisor and principal immediately to see what alternatives are available to receive credit for graduation.

High School credit will be awarded for any successfully completed approved dual credit course needed for graduation. If a Paris Junior College professor utilizes a Letter Grade System, MGISD will award grades as follows unless the institution submits an official numeric grade via mail, e-mail, or fax.

**A-95 B-85 C-75 D-65\* F, W, I-No grade or credit issued**

**\*Students receiving a “D” in a Dual Credit Course WILL NOT receive high school credit for the course.**

Students interested in dual credit may take three classes per semester if they meet the following requirements:

1. Pass the TSIA2 (Texas college readiness test) or provide documentation of exemption (please refer to the college for exemption information and passing score requirements)
2. Have a high school GPA of 3.0 or higher on a scale of 4.0
3. Classified as a Freshman or above
4. Complete the institutions of higher education’s application for admission and be accepted
5. Stay in good academic standing to continue to take dual credit courses

Dual Credit advisor will provide institutions of higher education with official high school transcript, most current state assessment scores and high school letter of approval to enroll in dual credit courses

Students desiring to take more than three classes per semester must meet the above requirements, except high school GPA must be a 3.5. Students must also receive a waiver from the institution they are attending that will allow them to take 12 hours in one college semester.

If a student takes a dual credit course, they are charged an agreed upon price for each course. Non-dual credit courses and summer courses are at the normal institute rate. Currently, Miller Grove ISD school pays for the tuition and the textbooks for:

English 1301/1302

English 2322/2323

History 1301/1302

Math 1314/2312

***If a student makes a 60-69 on a college course, this will be considered a D and passing on their college transcript. HOWEVER, it will NOT be considered passing on their high school transcript.***

***If a student fails a college course, they will be placed on academic probation at Miller Grove ISD-that means that the student will HAVE to make a “C” or better in their next college course to continue taking dual credit courses. If the student fails a second course, they will not be allowed to take dual credit courses for a full calendar year while attending Miller Grove ISD. Please note that if the student is taking a college course for a “required” high school course, then the student will either need to retake the college course and make a passing grade, retake the course at the high school level and achieve a passing grade, or retake the course on APEX, our credit recovery program. If a student fails or receives a D (60-69) in a dual credit class, they will be required to pay the cost of tuition and textbook fees back to Miller Grove School if it was originally paid for by Miller Grove ISD. If a student loses books, codes, etc. that the school has purchased, it will be the student’s responsibility to replace those items.***

For More information on Dual credit please see Dual Credit under the student tab on the school website.

## **COLLEGE PLANS**

A student who plans to enter college after high school graduation should know the requirements for entrance into the college or university he/she plans to attend. Be certain to enroll in high school subjects required for admission to college. Students and their parents must accept the responsibility for making the proper choices of subjects in high school to meet the requirements for entrance into the college of their choice. School officials are, under no circumstances, responsible for ensuring courses are taken that meet any higher institution’s requirements. The counselors, principal, or faculty members are available to assist with planning, but it is ultimately the responsibility of the parent/guardians and the student to ensure that any requirements for the next level of a student’s education are met.

## **COLLEGE ENTRANCE EXAMS AND CERTIFICATION TESTS**

Many colleges and universities require that students take an entrance examination such as the ACT or SAT, and many junior colleges require that students take the Texas Success Initiative Assessment (TSIA2) to meet entrance qualifications. Also, many of our Programs of Study require certification tests to help students complete their desired program of study.

Students are eligible to receive fee waivers for ACT and SAT examinations while in high school.

Students must meet one of the qualifying areas to receive an ACT or SAT fee waiver:

1. Be currently enrolled in high school in the 11th or 12th grade.
2. Be testing in the United States, US territories, or Puerto Rico.
3. Meet one or more of the indicators of economic need listed below:
  - Enrolled in a federal free or reduced-price lunch program at school, based on US Department of Agriculture (USDA) income levels (see table).
  - Enrolled in a program for the economically disadvantaged (for example, a federally funded program such as GEAR UP or Upward Bound). Note: If the student participates in a program, but is not economically disadvantaged, they are not eligible for a fee waiver.
  - Resides in a foster home, is a ward of the state, or is homeless.
  - Family receives low-income public assistance or lives in federally subsidized public housing.
  - Family’s total annual income is at or below USDA levels for free or reduced-price lunches on the USDA Food and Nutrition Service website. USDA Food and Nutrition Service

**Miller Grove High School Code for ACT is 441-666**

**Miller Grove High School Code for College Board/SAT is 441-666**

## **NCAA COLLEGE-BOUND STUDENT ATHLETE INFORMATION**

Students planning to participate in Division I or Division II college athletics are encouraged to register with the NCAA during their sophomore year. Students following the Recommended or Distinguished Achievement Program meet the NCAA “core course” requirements. Go to [www.ncaa.org](http://www.ncaa.org) for more information or to register. Athletes registering with the NCAA must send ACT / SAT scores directly to



NCAA by entering “9999” on the test registration form. Please note, students receiving an ACT/SAT fee waiver, may be eligible for a NCAA application fee waiver as well.

### **COLLEGE AND CAREER TESTING PROGRAMS**

**ACT** - The ACT college readiness assessment is a curriculum and standards based educational and career planning tool that assesses students' academic readiness for college. Miller Grove offers the ACT once a year.

**PSAT** - The PSAT measures the critical reading, math problem solving, and writing skills that have been developed throughout the student’s life. The PSAT is administered on the Miller Grove campus to sophomores once a year.

**ASVAB** - The Armed Services Vocational Aptitude Battery is offered to juniors and seniors in the fall at no cost to the student.

Students can also apply for Paris Junior College Educational Talent Search Program (ETS). ETS is a federally funded program that is designed to assist students in reaching their academic potential and continue on to postsecondary education at the college of their choice. It is a free program that helps pay for college testing exams, preparation for ACT/SAT, assistance with financial aid applications, academic advising, free online tutoring, as well as waivers for college applications.

## Foundation High School Program Plus Endorsement

**All students must pass State Mandated Assessment in order to graduate**

<b>English</b>	4 credits	<ul style="list-style-type: none"> <li>● English I, II, III, IV</li> <li>● An advanced English Course may be substituted for English IV</li> </ul>
<b>Mathematics</b>	4 credits	<ul style="list-style-type: none"> <li>● Algebra I</li> <li>● Geometry</li> <li>● Algebra II</li> <li>● Advanced Mathematics Course</li> </ul>
<b>Science</b>	4 credits	<ul style="list-style-type: none"> <li>● Biology or Integrated Physics and Chemistry</li> <li>● Biology or Chemistry</li> <li>● Chemistry, Physics or Advanced Science Course</li> <li>● Physics or Advanced Science Course</li> </ul>
<b>Social Studies</b>	4 credits	<ul style="list-style-type: none"> <li>● World Geography or World History</li> <li>● World Geography or World History or another history</li> <li>● U.S. History Studies Since Reconstruction</li> <li>● U.S. Government (one-half credit)</li> <li>● Economics (one-half credit)</li> </ul>
<b>Physical Education</b>	1 credit	<ul style="list-style-type: none"> <li>● Individual or Team Sports/Athletics (up to 4 credits)</li> <li>● Physical Education</li> <li>● Marching Band /Cheer Waiver</li> </ul>
<b>World Languages</b>	2 credits	<ul style="list-style-type: none"> <li>● Any two levels of the same language</li> <li>● Two credits in a computer programming language</li> </ul>
<b>Fine Arts</b>	1 credit	<ul style="list-style-type: none"> <li>● Music</li> <li>● Art</li> <li>● Theatre</li> <li>● Floral Design (CTE)</li> <li>● Other approved fine arts course</li> </ul>
<b>Endorsement(s)/Performance Acknowledgements</b>	6 credits	<ul style="list-style-type: none"> <li>● Depending on Selected Endorsements</li> </ul>
<b>Total Credits</b>	26	

## FOUNDATION HIGH SCHOOL PLAN OVERVIEW

In order to earn a Distinguished Level of Achievement on the Foundation High School Program, students must take Algebra II as one of their advanced math courses and complete the curriculum requirements for at least one endorsement. A student must earn the distinguished level of achievement to be eligible for the top 10% automatic admissions.

Miller Grove will offer endorsements in the following areas and students may select multiple endorsements.

Arts and Humanities, Business and Industry, Multidisciplinary Studies, and STEM (Science, Technology, Engineering, and Mathematics)

With the endorsement, students will select from an area of specialization. Miller Grove will offer the following specializations to better prepare our graduates for both career and college.

Arts and Humanities	Business/Industry	Multidisciplinary Studies	STEM
Art Social Studies	Agriculture, Food and Natural Resources  Manufacturing	<p>Pathway A: Take 4 advanced courses within 1 endorsement area or among endorsement areas that are not in a coherent sequence. The courses must prepare students to enter the workforce successfully or postsecondary education without remediation.</p> <p>Pathway B: Take 4 credits in each of the 4 core subject areas to include English IV and chemistry and/or physics.</p> <p>Pathway C: Take 4 dual credit classes selected from the 4 core subject areas, Fine Arts and or Languages other than English</p>	Advanced Math  Advanced Science  Advanced Math & Science

## **GRADING SYSTEM / GRADE REPORTING / INTERNET GRADE ACCESS**

Student academic evaluation is achieved through the use of a grading system. An average grade of 70 is required for successful completion of a course. The grading system of the Miller Grove Independent School District shall be in accordance with the following scale:

**A : 90-100   B : 80-89   C : 70-79   F: Below 70**

One-half credit may be earned in one semester. Students who fail one semester of a two-semester course may:

- A. Retake the semester failed or
- B. Earn a 70 or above when the two semesters are averaged.

**Grades are available to parents online. Contact the Secondary Secretary at 903-382-2801 for the Parent Portal ID and assistance.**

### RANK IN CLASS

Class rank is determined by averaging the grades of all courses taken for **high school credit**, including those taken in Grade 8, through the third nine-week grading period of the senior year.

### VALEDICTORIAN AND SALUTATORIAN

The valedictorian and salutatorian shall be the eligible students with the highest and second highest rank as determined by the District's ranking procedure. To be eligible for this local graduation honor, a student must:

1. Have been continuously enrolled in the District high school for the four semesters immediately preceding graduation;
2. Be graduating after exactly eight semesters of enrollment in high school;
3. Have completed the foundation program with a distinguished level of achievement.

In case of a tie in weighted numerical grade averages after calculation to the fourth decimal place, the District shall recognize all students involved in the tie as sharing the honor and title. The student meeting the local eligibility criteria for recognition as the valedictorian shall also be considered the highest-ranking graduate for purposes of receiving the honor graduate certificate from the state of Texas.

Honor graduates are students who have completed Foundation High School Program with an Endorsement with a cumulative overall grade average of 95 or above.

### GRADE POINT SYSTEM

Numeric grades earn grade points according to the district's weighted grade point scale. Honors-Advanced courses, (designated Honors or dual credit) denoted with an H or DH receive a 10 additional points. Academic courses are denoted with (A) receive 5 additional points, Regular courses receive no additional points.

### *GPA EXEMPT CLASSES*

Grades earned in credit by examination without prior instruction, summer school credit, credit for which only a pass/fail grade was given, credit for courses not recognized by TEA, and credit awarded in a non-accredited instructional setting shall not be included in this calculation.

# COURSE OFFERINGS AND DESCRIPTIONS

## (R)-Regular/(A)-Academic/(H)-Honors/ (L)-Local

The District shall categorize and weigh eligible courses as Honors, Academic, and Regular in accordance with provisions of this policy and as designated in appropriate District publications. Eligible dual credit courses and courses locally designated as honors shall be categorized and weighted as Honors courses. Eligible courses locally designated as academic shall be categorized and weighted as Academic courses. All other eligible courses shall be categorized and weighted as Regular courses. Local courses are just recognized at Miller Grove ISD and will not count towards state credits.

The District shall assign weights to semester grades earned in eligible courses and calculate a weighted numerical grade average, in accordance with the following:

Category Weight

- Honors Plus 10
- Academic Plus 5
- Regular Plus 0

**The District shall record unweighted numerical grades on student transcripts.**

## **ENGLISH LANGUAGE ARTS**

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### **ENGLISH I (R)-9th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

English I is designed for students exhibiting average reading and language arts skills. Reading, vocabulary, writing, speaking, and listening skills are taught through reviewing grammar principles, writing compositions, and analyzing literature. The literature for this course includes poetry, short stories, novels, plays, and nonfiction. English I students continue to develop their writing skills by creating compositions through the use of the writing process. They advance their reading abilities and acquire knowledge of literary terminology through the study of various literary genres. Students continue to expand their vocabularies, learn grammar of Standard English, and analyze the components and structure of well-formed sentences and paragraphs, with emphasis placed on the development of skills required for successful performance on standardized tests. Individual and group projects help students enhance their library and research skills. Students are encouraged to develop and use oral language skills through a variety of applications.

### **ENGLISH I HONORS (H)-9th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) Meet or above on 8th Grade RLA STAAR

English I Honors is designed for students exhibiting better than average language arts skills in reading, vocabulary, writing, speaking, and listening. The emphasis on literary analysis, analytical writing, and independent study skills will help to prepare the student for taking English II Honors. This literary analysis includes studies of poetry, short stories, novels, drama, and nonfiction. English I Honors emphasizes the higher-level critical thinking skills of analysis, evaluation, and synthesis. Students in English I Honors follow the Basic English I curriculum, but they write more compositions of greater length and complexity. They read more literature selections and study them in greater depth; the pieces themselves tend to be more difficult. Students study elements of grammar and vocabulary at an accelerated rate, and they complete individual and cooperative projects that encourage creative thinking, accommodate a variety of learning styles, and ensure competency in research skills.

**ENGLISH II (R)-10th Grade \* 1 credit**

Recommended Prerequisite(s) English I

Required Prerequisite(s) None

English II is designed for students exhibiting average reading and language arts skills. Reading, vocabulary, writing, speaking, and reading skills are taught through studying vocabulary, a review of grammar principles, writing compositions, and analyzing literature. The literature for this course includes poetry, short stories, novels, plays, and nonfiction. As they learn to recognize the major differences among these various forms, they acquire the ability to recognize and use various literary and poetic devices and techniques. Reading skills and vocabulary are reinforced through the literary selections. In their language study, the students distinguish and produce different types of sentences, analyze the parts of a sentence, choose appropriate language, learn to vary word and sentence choice, and learn to convey coordinate and subordinate ideas appropriately. Oral language of a variety of types is encouraged. Students produce a variety of legible compositions of increasing length and complexity, learning to adjust their writing for audience and purpose. Additionally, students will write a composition incorporating outside information with documentation. They also produce a variety of types of literary discourse. Students are asked to write according to form and convention, evaluate the merits of a written work, and proofread work for mechanical and grammatical errors. Papers are taken through the writing process. Use of technology is expected. Critical thinking skills and collaborative skills are necessary for success.

**ENGLISH II (H)-10th Grade \* 1 credit**

Recommended Prerequisite(s) English I

Required Prerequisite(s) None

English II covers the regular English II core curriculum and also provides an enriched version of this curriculum. The higher level thinking skills of analysis, evaluation, and synthesis are stressed, and students are expected to work independently and collaboratively. Many of the projects are designed to encourage creativity, productive thinking, and interdisciplinary work. Careful examination of various genres of world literature, the application of research methods, preparation of composition exercises are emphasized to acquaint the students with fine literature and to provide the student with the opportunity to experience a variety of activities designed to accommodate different learning styles. Use of technology is expected. Reading and vocabulary skills, specifically those required for the SAT and ACT test are reinforced. Students study grammar and vocabulary at an accelerated rate and cover more material.

**ENGLISH III (R)-11th Grade \*1 credit**

Recommended Prerequisite(s) English II

Required Prerequisite(s) None

English III is designed for students exhibiting average reading and language arts skills. Reading, vocabulary, writing, speaking, and listening skills are taught through studying vocabulary, reviewing grammar principles, writing compositions and analyzing American literature. The American literature for this course includes poetry, short stories, novels, plays, and nonfiction. They learn to recognize major American authors, periods, forms, and works while acquiring and using literary and poetic terminology. Reading skills are reinforced through the study of literature and writing. Students write paragraphs and essays of a variety of types generally in relation to the literature they read, making rhetorical choices based upon audience, purpose, period, and form. They also write a longer composition incorporating outside information with documentation. Both literary and ACT/SAT vocabulary is emphasized.

**ENGLISH III-Dual Credit (H)-11th Grade \*1 credit**

Recommended Prerequisite(s) English II

Required Prerequisite(s) English II

Miller Grove ISD pays all fees and tuition for ENGL1301 & ENGL1302. English III Dual Credit is designed for students exhibiting above average reading and language arts skills. ENGL 1301 and 1302 are introductory college writing courses focused on expository and persuasive texts. Students must be enrolled in 1301 in Fall and 1302 in spring to receive a full year credit of English III.

**ENGL 1301** Composition I-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** Composition II-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. Prerequisite: ENGL 1301.

Students will need to register for both of these courses at Paris Junior College through their dual credit advisor.

**ENGLISH IV (R) -12th Grade \*1 credit**

Recommended Prerequisite(s) English III

Required Prerequisite(s) None

English IV is a survey of British literature beginning from twentieth-century British authors. Selected works from the major authors of each time period will be read and discussed, including poetry, novels, short stories, and dramas. Proofreading, revising, and studying vocabulary and sentence structure are included to aid students in being precise and clear in their writing.

**ENGLISH IV-Dual Credit (H)-12th Grade \*1 credit**

Recommended Prerequisite(s) . . . . . English 1301/1302

Required Prerequisite(s) . . . . . English 1301/1302

Miller Grove ISD pays all fees and tuition for ENGL 2322 & ENGL2323 English IV Dual Credit is designed for students exhibiting above average reading and language arts skills. ENGL 2322 and 2323 are Literature courses focused on British literature..

**ENGL 2322** British Literature I-A survey of the development of British literature from the Anglo-Saxon period to the Eighteenth Century. Students will study works of prose, poetry, drama, and fiction in relation to their historical linguistic, and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

**ENGL 2323** British Literature II-A survey of the development of British literature from the Romantic period to the present. Students will study work of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

Students will need to register for both of these courses at Paris Junior College through their dual credit advisor.

## **MATHEMATICS**

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**ALGEBRA I (R) -9th-10th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

A student enrolls in Algebra I as a one-year course. The course involves a study of the real numbers and their properties, simplifying expressions, the language of Algebra, solving and graphing linear equations and inequalities, linear and quadratic relations and functions, ratios, proportions and variations, and polynomials. The student should acquire a basic knowledge of the structure and use of Algebra. Algebra I is the foundation of high school math, providing a transition from arithmetic to higher math. It is the study of the interrelationship between variables and the methods for manipulating them. Students will use tools, technology, and a variety of representations to model and solve problems.

**ALGEBRA I (H) -8th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) Meets or above on 7th Math STAAR

A student enrolls in Algebra I as a one-year course. The course involves a study of the real numbers and their properties, simplifying expressions, the language of Algebra, solving and graphing linear equations and inequalities, linear and quadratic relations and functions, ratios, proportions and variations, and polynomials. The student should acquire a more in depth knowledge than students in on level Algebra I. Algebra I Honors is a rigorous and fast paced course designed to challenge the academically able student. This course covers the regular Algebra I curriculum in greater depth.

**GEOMETRY (R)-9th-11th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) Algebra I (Can be taken concurrently with Algebra II w/administrator approval)

This course is an in-depth study of plane and solid figures. The student will apply the principles of inductive and deductive reasoning in developing basic proofs. Particular emphasis is given to applying definitions, conjectures, postulates, and theorems. The student will study the basic properties of lines, planes, polygons, circles, and geometric solids. Topics include the principle of congruence and similarity of triangles and the basic concepts of coordinate and transformational geometry. Geometry consists of the study of geometric figures of zero, one, two, and three dimensions. Students study properties and relationships having to do with size, shape, location, direction, and orientation of these figures. Deductive reasoning is used extensively to develop an axiomatic system. Compass and straightedge constructions are used to explore attributes of geometric figures and make conjectures about geometric relationships. The connection between algebra and geometry is made and the tools of both courses will be used to solve applications problems.

**ALGEBRA II (A)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) Geometry (can be taken concurrently w/admin approval)

Required Prerequisite(s) Algebra I

This course includes a study of foundations of functions, identifying and graphing parent functions, extending those functions using transformations, analyzing the relationships between those functions and their inverses, and identifying and graphing conic sections. Systems of equations and inequalities will be solved using algebraic methods, tables, graphs, and matrices. Algebra II is an extension of Algebra I. Topics are added in the area of functions that expand the algebras to include conic sections, thus relating algebra to geometric concepts. This course focuses on problem solving and mathematical reasoning, real and complex numbers, equations and inequalities, polynomials and factoring, powers and roots, quadratic functions, rational functions, exponential and logarithmic functions, and conic sections. The student will be required to use a graphing calculator.

**Math and Models (R)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) Geometry

Required Prerequisite(s) Algebra I

Students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. This course is not currently accepted by the NCAA Clearinghouse as a math credit.



**COLLEGE ALGEBRA-Dual Credit (H)-11th-12th Grade \* .5 credit**

Recommended Prerequisite(s) . . . . . None

Required Prerequisite(s) . . . . . Alg I/Geom/Alg II/ and dual credit requirements

This class is an in-depth study and application of polynomial, rational, radical, exponential and logarithmic functions, and system of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included. Students must register for MATH 1314 College Algebra at Paris Junior College. This course is advanced math including topics in Algebra II, Statistics and Analytical Geometry. Advanced math skills are required.

**MATH 1314** College Algebra- 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.

Miller Grove ISD pays for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**Must pair with another college math (Pre Calc or Stats) in order to receive full required 4th math credit for distinguished plan.**

**PRECALCULUS-Dual Credit (H)-11th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) MATH 1314 or the equivalent preparation

Precalculus covers the essential elements of trigonometry, analytical geometry, as well as real numbers and coordinates; functions and their graphs; polynomial and rational functions; exponential and logarithmic functions; circular functions and their properties; trigonometric functions, their properties, identities, and applications; vectors; complex numbers; polar coordinates and their graphs; sequences and series; curves in a plane, conics and transformations; second degree relations; matrices and determinants; the binomial theorem; and limits. It is recommended that students earn average or above average grades in Geometry and Algebra II.

**MATH 2312** Pre-Calculus Math- In-depth combined study of algebra, trigonometry, and other topics for calculus readiness.

Miller Grove ISD pays for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**STATISTICS-Dual Credit (H)-11th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) Alg I/Geom/Alg II/ and dual credit requirements

This course content will include exploratory analysis of data using graphical and numerical techniques, studies of patterns and departures from patterns, collection of data, and development of conjectures based on data, analysis of the distribution of data, and using models to draw conclusions from data.

**MATH 1342**-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.

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

# SCIENCE

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## **INTEGRATED PHYSICS & CHEMISTRY (R)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

This course focuses on understanding basic chemistry and physics concepts with minimal application of algebra. The first semester covers chemistry topics, and the second semester covers physics. The purpose of the course is to prepare students for success in later, yearlong courses in chemistry and/or physics.

Integrated Physics & Chemistry integrates the disciplines of physics and chemistry in the following topics: motion, waves, energy, properties of matter, and solution chemistry. This course is designed to provide students with an introduction to the basic concepts of these two sciences. Students will be challenged with hands-on activities, class discussions, lectures, demonstrations, and performance activities.

## **BIOLOGY (R)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Biology provides instruction in the study of life. Students investigate various biological, chemical, and mathematical processes affecting organisms and environments. Study of biology begins with the microscopic composition of cells and gradually builds to a macroscopic understanding of populations in the biosphere. Throughout the course, students learn to make informed decisions outside the classroom by researching the contributions of biologists, practicing evidence-based writing, and developing critical thinking skills. Students will study life from the cellular level all the way to the global level. Students will experience a variety of ways in which each topic is presented. The classroom part will be enhanced by hands-on, laboratory experiences. Students will be expected to learn how to use the lab correctly and safely. Laboratory work will include, but will not be limited to, microscope work, dissection, and practice in experimental design, and data collection.

## **BIOLOGY-DUAL (R)-10th-12th Grade \* 1 credit**

**BIOL 1408** Biology for Non-Science Majors I-Provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction. Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction.

**BIOL 1409** Biology for Non-Science Majors II-This course will provide a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology. Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology. Fee charged

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

## **ANATOMY AND PHYSIOLOGY-DUAL (H)-11th-12th Grade \* 1 credit**

Recommended Prerequisite(s) Biology, Chemistry, Physics

Required Prerequisite(s) None

In Anatomy and Physiology, students 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 study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. ***This course counts as a Career and Technology Science credit and meets HB 5 Graduation requirements***

**BIOL 2401** Anatomy & Physiology I- Anatomy & Physiology I is the first part of a two course sequence. It is a study of the structure and function of the human body including cells, tissues and organs of the

following systems: integumentary, skeletal, muscular, nervous and special senses. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Systems to be studied include integumentary, skeletal, muscular, nervous, and special senses.

**BIOL 2402 Anatomy & Physiology II-Anatomy & Physiology II** is the second part of a two-course sequence. It is a study of the structure and function of the human body including the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics). Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. The lab provides a hands-on learning experience for exploration of human system components and basic physiology

Students are responsible for paying for these courses. Students will need to register for this course at Paris Junior College through their dual credit advisor.

### **CHEMISTRY (A)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) Biology

Required Prerequisite(s) Biology

Chemistry is the study of matter and the changes it undergoes. Students complete lab experiments and analyze data to understand chemical principles. Topics of study include physical and chemical properties, bonding, chemical reactions, stoichiometry, gasses, solutions, thermochemistry, and nuclear chemistry. Algebraic problem-solving skills will be utilized throughout the course. Chemistry is a laboratory-based course that combines the theories and concepts of inorganic chemistry with practical applications and problems. Time spent in the laboratory (approximately 40%) utilizes a lab notebook, which documents the lab experience, safety, scientific measurement, atomic theory, chemical names and formulas, stoichiometry, gas laws, quantum theory, periodicity, chemical bonding, solutions and equilibrium, acids and bases, and oxidation-reduction reactions.

### **PHYSICS (A)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) Biology, and either Chemistry or IPC

Physics is a year-long study of motion, forces, waves, energy, and thermodynamics. The year concludes with a brief review of developments in modern physics and quantum theory. Students analyze data to discover physical laws and apply principles of algebra throughout the course

### **PHYSICS-DUAL (H)-10th-12th Grade \* .5 credit ( 1 credit if take both)**

Recommended Prerequisite(s) MATH 1314 and 1316 or MATH 2312 and 1401 to take 1402

Required Prerequisite(s) MATH 1314 and 1316 or MATH 2312 and 1401 to take 1402

**PHYS 1401** College Physics I-Fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces; with emphasis on problem solving. Laboratory activities will reinforce fundamental principles of physics, as listed previously.

**PHYS 1402** College Physics II-Fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving. Laboratory activities will reinforce fundamental principles of physics, as listed previously.

Students are responsible for paying for both of these courses. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**ENVIRONMENTAL SCIENCE (R)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

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. Topics studied 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.

**EARTH & SPACE SCIENCE-DUAL (H)-11th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

This course studies the long, complex, and dynamic history of Earth. Advances in technologies continue to further our understanding of the origin, evolution, and properties of Earth and planetary systems within a chronological framework. Topics studied are divided into the Earth's position in space and time, the solid features of the planet, and the fluid Earth.

**PHYS 1304** Solar System-Study of the sun and its solar system, including its origin. No Prerequisite; may be taken prior to PHYS 1303.

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**ASTRONOMY-DUAL (H)-11th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

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, 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.

**PHYS 1303** Stars and Galaxies-Study of stars, galaxies, and the universe outside our solar system

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**FORENSIC SCIENCE (R)-9TH-12TH \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Students in Forensic Science use a structured and scientific approach to the investigation of crimes. Students will learn terminology and investigative procedures. Using scientific methods students will

collect and analyze evidence through case studies and simulated crime scenes. Students will learn the history, legal aspects, and career options for forensic science. Forensic Science is a course that uses a structured and scientific approach to the investigation of crimes of assault, abuse and neglect, domestic violence, accidental death, homicide, and the psychology of criminal behavior. Students will learn terminology and investigative procedures related to crime scene, questioning, interviewing, criminal behavior characteristics, truth detection, and scientific procedures used to solve crimes. This course satisfies a high school science graduation requirement. ***This course is also a Career and Technology course.***

### **SPECIALIZED TOPIC IN SCIENCE (R)-9TH-12TH \* 1 CREDIT**

#### **BIOL 1322**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Nutrition & Diet Therapy -This course introduces general nutritional concepts in health and disease and includes practical applications of that knowledge. Special emphasis is given to nutrients and nutritional processes including functions, food sources, digestion, absorption, and metabolism. Food safety, availability, and nutritional information including food labels, advertising, and nationally established guidelines are addressed.

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

### **ADVANCED ANIMAL SCIENCE DUAL (H)-11th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production

This course is designed to prepare students for careers in the field of animal science. Students need to attain academic skills and knowledge, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry standards. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. This course examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences. This course examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences. ***This course counts as a Career and Technology Science credit and meets HB 5 Graduation requirements.***

## **SOCIAL STUDIES**

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### **WORLD GEOGRAPHY (R)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) 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 on the physical processes that shape patterns in the physical environment. Students use problem-solving and decision-making skills to ask and answer geographic questions. World Geography encompasses the general study of the physical geography of the world and the elements that affect the physical setting and environment. Regional studies are conducted with emphasis on the use of natural resources and the cultures that developed within these regions.

**WORLD HISTORY (R)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) 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 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.

**WORLD HISTORY DUAL (H)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

**HIST 2311** Western Civilization I-A survey of the social, political, economic, cultural, religious, and intellectual history of Europe and the Mediterranean world from human origins to the 17th century. Themes that should be addressed in Western Civilization I include the cultural legacies of Mesopotamia, Egypt, Greece, Rome, Byzantium, Islamic civilizations, and Europe through the Middle Ages, Renaissance, and Reformations.

**HIST 2312** Western Civilization II- A survey of the social, political, economic, cultural, religious, and intellectual history of Europe and the Mediterranean world from the 17th century to the modern era. Themes that should be addressed in Western Civilization II include absolutism and constitutionalism, growth of nation states, the Enlightenment, revolutions, classical liberalism, industrialization, imperialism, global conflict, the Cold War, and globalism.

**HIST 2321** World Civilizations I-A survey of the social, political, economic, cultural, religious, and intellectual history of the world from the emergence of human cultures through the 15th century. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania and their global interactions over time. Themes include the emergence of early societies, the rise of civilizations, the development of political and legal systems, religion and philosophy, economic systems and trans-regional networks of exchange. The course emphasizes the development, interaction and impact of global exchange.

**HIST 2322** World Civilizations II- A survey of the social, political, economic, cultural, religious, and intellectual history of the world from the 15th century to the present. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania and their global interactions over time. Themes include maritime exploration and transoceanic empires, nation/state formation and industrialization, imperialism, global conflicts and resolutions, and global economic integration. The course emphasizes the development, interaction and impact of global exchange.

Students are responsible for paying for these courses. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**UNITED STATES HISTORY(R)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

United States History examines the people and events that shaped this country from the period of Reconstruction to the present time. Included in this study are the presidential administrations, foreign and domestic policies, and the global wars that transformed America from an isolated country to a modern world power. Also, the people and events that gradually changed the United States from a rural

agricultural nation to an urban, industrial power are studied. United States History is taught as a survey of United States history since the Civil War. It begins with a review of U.S. History through the Civil War. It then encompasses an in-depth study of major movements and events in U.S. history from 1877 to present, including geographic influences, political, economic, social, and cultural developments, and the emergence of the U.S. as a world power and its conduct as such. The course content will primarily emphasize factual information.

**UNITED STATES HISTORY DUAL (H)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

College course enrollment HIST1301 & HIST1302 United States History examines the people and events that shaped this country. Included in this study are the presidential administrations, foreign and domestic policies, and the global wars that transformed America from an isolated country to a modern world power. Students must be enrolled in this course for the entire year and will not be allowed to enter at the semester.

**HIST 1301** United States History I- 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** United States History II- 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, 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.

Miller Grove ISD pays for both of these courses. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**UNITED STATES GOVERNMENT(R)-10th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Government is a study of the historical forces that influenced our Founding Fathers to create the Constitution at Philadelphia. This course includes a study of the structure and content of the Constitution as well as the extensions and alterations which occurred during its 200 years of existence and application. The main focus in this one-semester course is on the American government, covering the United States and the Texas Constitution in addition to its operation at the local, state, and federal level. This course includes comparative studies of various types of government such as democracy, republicanism, socialism, and communism. It explores foreign policy and voting rights and responsibilities.

**UNITED STATES GOVERNMENT DUAL (H)-10th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

This course studies the Constitution and Government of the United States. Emphasis is on the structure of governmental institutions, the three branches, political parties, elections, civil rights and civil liberties. This course provides advanced academic instruction beyond, and in greater depth, than the TEKS mandated by the state for U.S. History Students will need to register for GOVT 2305 - Federal Government at Paris Junior College (3 credit hours). This course satisfies the requirement of government for graduation

**GOVT 2305** Federal Government (Federal constitution & topics)-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.

Students are responsible for paying for these courses. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**ECONOMICS (R)-10th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

This course is designed to give students an understanding of the principles of economics that apply to an economic system. The content will include analysis of economic concepts, measurement of economic performance, national income and price level determination, financial sector, inflation, unemployment and stabilization policies, economic growth and productivity, and international trade and finance. Economics, a one-semester course, emphasizes the essentials and benefits of the free enterprise economic system. Topics include profit and competition, the role of government, taxation, the roles of business and the consumer, and the interaction of the American economy in the world market.

**ECONOMICS DUAL (H)-10th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

**ECON2301** This course studies the principles of macroeconomics. Topics include 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. This course fulfills the economics requirement for graduation.

Students are responsible for paying for both of these courses. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**TEXAS GOVERNMENT (SSADV) DUAL (H)-10th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

**GOVT 2306** Texas Government (Texas constitution & topics) (45.1002.51 25) 3.3.0 Origin and development of the Texas constitution, structure and powers of CLASS LISTINGS A-Z 144 state and local government, federalism and intergovernmental relations, political participation, the election process, public policy, and the political culture of Texas. This course counts as a social studies advanced course, but **does not** satisfy the government requirement for graduation.

Students must pay for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**SPECIAL TOPICS (R)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Special Topics in Social Studies, an elective course, students are provided the opportunity to develop a greater understanding of the historic, political, economic, geographic, multicultural, and social forces that have shaped their lives and the world in which they live. Students will use social science knowledge and skills to engage in rational and logical analysis of complex problems using a variety of approaches, while recognizing and appreciating diverse human perspectives



### **SOCIOLOGY DUAL (H)-10th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Sociology students will study such things as culture, social structure, methods of research, the family, the life course, groups, collective action, gender, deviance and crime, social stratification, race and ethnicity; and political and religious institutions. This course is designed to help students develop an understanding of the basic principles of sociology. It deals with the study of people and their social institutions found in all societies.

**SOCI 1301** Introduction to Sociology-The scientific study of human society, including ways in which groups, social institutions, and individuals affect each other. Causes of social stability and social change are explored through the application of various theoretical perspectives, key concepts, and related research methods of sociology. Analysis of social issues in their institutional context may include topics such as social stratification, gender, race/ethnicity, and deviance.

Students must pay for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

### **INTRO TO PSYCHOLOGY DUAL (H)-10th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

In Psychology, an elective course, 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. This course is an introduction to the systematic and scientific study of the behavior and mental processes of human beings and other animals. The course will also examine the history of psychology.

**PSYC 2301** General Psychology-General Psychology is a survey of the major psychological topics, theories and approaches to the scientific study of behavior and mental processes.

Students must pay for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

### **PSYCHOLOGY LIFESPAN AND DEVELOPMENT DUAL (H)-10th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

**PSYC 2314** Lifespan Growth and Development-Life-Span Growth and Development is a study of social, emotional, cognitive, and physical factors and influences of a developing human from conception to death. *This course counts as a Career and Technology credit as well.*

Students must pay for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

## **LANGUAGES OTHER THAN ENGLISH (LOTE)**

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### **SPANISH I-(R)-8TH-11th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Level I of high school Spanish offers the student the opportunity for acquisition of the four basic language skills listening, speaking, reading, and writing. The primary objective of the level one course is to develop

audio-lingual skills and to obtain a mastery of simple basic communicative structures. The students will develop a cultural appreciation of the Hispanic World. This course is designed to give students a working Spanish vocabulary and a basic understanding of the verb/sentence structure in the language as it compares to and differs from English. Basic grammar skills and vocabulary will be taught through methods that include reading, writing, listening, and speaking.

**SPANISH II-(R)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Level II continues the Level I emphasis on listening and speaking skills. More complex grammatical structures are introduced and reading and writing skills are developed to a higher level of proficiency. The interdependent roles of culture and language are studied in more depth, and Level II students are expected to grasp the relevance of Hispanic countries and cultures in today's world. This course is an extension of Spanish I, with broadening of vocabulary, greater stress upon grammar and structure, and an extension of the study of Spanish verb tenses. Also, listening, speaking, reading, and composition skills will be developed. Translation skills are needed also.

**SPANISH III (A)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) Spanish II

The course will encourage the students to read, write, listen, and think in Spanish requiring greater concentration, rapid organization of thought, and spontaneous processing for oral communication using all four language skills to communicate. Students will examine culture in the target language and will present with a deeper understanding. The students will study literature from Spain and Latin America. This course is an extension of Spanish II. Students review Spanish grammar and verb tenses, and enhance their skills with more advanced writing and reading assignments. Speaking and listening skills will also be utilized.

**SPANISH III-Dual Credit (H)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) Spanish II

The course will encourage students to read, write, listen, and think in Spanish requiring greater concentration, rapid organization of thought, and spontaneous processing into oral communication. Students will find it necessary to be more creative in their responses to questions and more original in their writings. All four language skills will be developed. Culture will be examined in the target language.

Students will enroll in SPAN 1411 in fall and SPAN 1412 in spring at Paris Junior College

**SPAN 1411** Beginning Spanish I -Basic Spanish language skills in listening, speaking, reading, and writing within a cultural framework. Students will acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the beginner level.

**SPAN 1412** Beginning Spanish II -Continued development of basic Spanish language skills in listening, speaking, reading, and writing within a cultural framework. Students acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the high beginner to low intermediate level.

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**SPANISH IV-Dual Credit (H)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) Spanish III

Students will be required to read, write, listen, speak, and think in Spanish. Students will be expected to give oral presentations, analyze listening material, write compositions, and read in the target language. An

in-depth study of the cultures of Latin America and Spain will be covered as well as an overall review of Spanish grammar.

**SPAN 2311** Intermediate Spanish I-The consolidation of skills acquired at the introductory level. Further development of proficiency in listening, speaking, reading and writing. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world.

**SPAN 2312** Intermediate Spanish II-The consolidation of skills acquired at the introductory level. Further development of proficiency in listening, speaking, reading and writing. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world.

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

If student has not taken 1411 and 1412, then 2311 and 2312 can be taken for Spanish III Dual Credit (H)

## **HEALTH AND PHYSICAL EDUCATION**

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Miller Grove ISD offers a wide range of University Interscholastic League competitive sports. Completion of medical history, physical examination, and parent permission forms is required prior to participation in grades 7th, 9th and 11th. Students must meet state mandated academic and attendance requirements to be eligible for participation in extracurricular activities. The following sports may be offered at Miller Grove High School • Baseball (boys) • Basketball (boys and girls) • Track (boys and girls) • Cross Country (boys and girls) • Volleyball (girls)

### **PERSONAL FITNESS (R)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Foundations of Personal Fitness represents a new approach in physical education. The basic purpose of this course is to motivate students to strive for lifetime personal fitness with an emphasis on the health related components of physical fitness. The knowledge and skills taught in this course include teaching students about the process of becoming fit as well as achieving some degree of fitness within the class. Students are expected to participate in physical activities a minimum of three days per week, as well as, various fitness assessments throughout the semester. The concept of wellness, or striving to reach optimal levels of health, is the cornerstone of this course and is exemplified by one of the course objectives: students designing their own personal fitness program.

### **ATHLETICS I/II/III/IV (R)-9th-12th Grade \* 1 credit**

The Miller Grove High School athletic program consists of basketball, volleyball, track, baseball, and cross country. All programs are U.I.L. participant sports. Each sport consists of weight training and year-round exercises for both boys and girls in an off-season program. PE equivalent courses are included under the same course credit requirements as PE courses with no more than 4 credits used toward graduation.

## **FINE ARTS**

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### **ART I (R)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Art I is a study of the structure of Art. The Elements and Principles of Design are utilized in a broad overview of artistic processes. Students are given the opportunity to explore a wide range of artistic media and procedures. Students must take 2 semesters of art to fulfill the Fine Arts state requirement. Art I will

include both two and three-dimensional art. This is a yearlong course in which first semester skills are needed to be successful in semester two. Basic drawing, design, and painting will be taught through the understanding of the elements and principles of art.

**ART II (R)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

Art II is an intensive year-long course in basic drawing, design, and painting with some three dimensional work designed to challenge the students who are planning to take advanced art classes. First semester skills are needed to be successful in semester two. Students will explore a variety of traditional and experimental media including pencil, ink, colored pencils, pastels, charcoal, mixed media, printmaking, and collage. Students are encouraged to create ambitious and original works of art while developing their own personal style.

**ART III (R)-11th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

Art III is an intensive year-long course in drawing, design, and painting for the student who is seriously interested in the practical experience of art. The course is oriented toward exhibitions and competitions and the development of individual artistic strengths and interests. First semester skills are needed to be successful in semester two. Students are required to purchase a specific list of supplies costing approximately \$15-20. Supplies must be purchased during the first three weeks of school to remain in the class.

**ART APPRECIATION-DUAL (H)-9th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

**ARTS 1301** Art Appreciation- A general introduction to the visual arts designed to create an appreciation of the vocabulary, media, techniques, and purposes of the creative process. Students will critically interpret and evaluate works of art within formal, cultural, and historical contexts.

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**MUSIC APPRECIATION-DUAL (H)-9th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

**MUSI 1306** Music Appreciation-Understanding music through the study of cultural periods, major composers, and musical elements. Illustrated with audio recordings and live performances. This class involves the study of critical listening to understand the different types of music. The focus will be largely on Western Art Music, commonly called "Classical Music". It will include the study of the history and cultural aspects of the music. Information about the composers, the instruments and ensembles, and the different styles of music will also be covered.

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

### **THEATRE I (R)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Theater Arts I is designed for the student who is interested in learning basic acting concepts, basic production concepts, theatrical history, voice, movement, and characterization. Students will explore the production process through performance of classroom scenes emphasizing learned skills in concentration, creativity, improvisation, and pantomime. These skills are learned through physical exercises, mental exercises, and writing exercises. This course is designed to give students an opportunity to gain insight into stage performance; understand the language and direction of staging; to gain an appreciation of drama as an art form; to know and appreciate the history and purpose of drama. These goals shall be achieved through instruction, demonstration, actual state performance, viewing films, and reading and attending plays.

### **THEATRE I-DUAL (H)-9th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

DRAM 1310 Theater Appreciation- Survey of theater including its history, dramatic works, stage techniques, production procedures, and relation to other art forms. Participation in productions may be required.

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

### **THEATRE II, III, IV (R)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Theatre Arts II, III and IV will focus on the more specialized aspects of the previous theatre course taken.

### **FLORAL DESIGN (R)-9TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) 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 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. To prepare for careers in floral design, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. This course satisfies the fine arts graduation requirement. *This course is a Career and Technology course that may be substituted for Fine Art Credit and meets HB 5 Graduation requirements.*

## **ELECTIVES**

### **YEARBOOK I, II, III (R)-10-12th Grade \*1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

This course is designed to explore all facets of producing a yearbook. Photography, layouts, story writing, proofing, editing, and overall thematic design will be studied. Students must be able to participate during after school hours. This course is specifically designed for dedicated and responsible students. This is a highly technical and specialized course that is designed to provide instruction in computer graphics layout,

design, and implementation using varied software. The course will focus on a journalistic approach to publishing. Technical aspects include the printing process, image format, image resolution, and color mixing, among others. The yearbook is designed and compiled in this course, and entails a proficiency at graphics software, photography, ad sales, extensive writing, and the attendance of extra-curricular events. Students are expected to investigate all aspects of design, publishing, and printing.

**SPEECH DUAL (H)-9-12th Grade \*.5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

**SPCH 1315** Public Speaking-Application of communication theory and practice to the public speaking context, with emphasis on audience analysis, speaker delivery, ethics of communication, cultural diversity, and speech organizational techniques to develop students' speaking abilities, as well as ability to effectively evaluate oral presentations.

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

**MASS COMMUNICATIONS DUAL (H)-9-12th Grade \*.5 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

**COMM 1307** Introduction to Mass Communications-Survey of basic content and structural elements of mass media and their functions and influences on society.

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College through their dual credit advisor.

## **LOCAL ELECTIVES**

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**STAAR EOC Tutorial (L) 9th-12th \*.5-1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

In this course instruction will be focused on areas of need, with emphasis on assessed curriculum and focused learning in different subject areas. In order to help prepare students for the State of Texas Assessments of Academic Readiness, accelerated instruction class will concentrate on student data with regard to learning objectives and performance indicators to help students achieve at grade level and beyond.

**STUDY SKILLS (L) 9th-12th \*.5-1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Study Skills is a graded, self-driven class with little teacher instruction. In Study Skills, students have the ability to work on homework, projects, to study, read, or other school related activities.

**AIDE I, II, III, IV (L) 9th-12th \*.5-1 credit**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

Student aides provide valuable services such as running errands in a professional manner, answering the phones and other office duties. PE aides will assist the lead teacher during PE class, help set up equipment, explain game rules to students, and various other tasks. Some aide positions are directly related to helping a teacher with various activities such as making copies, cutting activities out, and other classroom tasks.

**UIL PREP I, II, III, IV (L) 9th-12th \*.5-1 credit**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

The University Interscholastic League offers the most comprehensive program of academic competition in the nation. UIL Academics offers 30 contests at the high school level. Students are able to take this course and focus on their activities that they will be competing in each spring.

**LOCALLY APPROVED INNOVATIVE COURSES**

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**COLLEGE TRANSITION-DUAL (H) 9th-12th \*.5-1 credit**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

**PSYC 1300** Learning Framework-A study of the 1) research and theory in the psychology of learning, cognition, and motivation, 2) factors that impact learning, and 3) application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of college-level student academic strategies. Students use assessment instruments (e.g., learning inventories) to help them identify their own strengths and weaknesses as strategic learners. Students are ultimately expected to integrate and apply the learning skills discussed across their own academic programs and become effective and efficient learners. Students developing these skills should be able to continually draw from the theoretical models they have learned. (Cross-listed as EDUC 1300.)

# Miller Grove ISD

## Career and Technology Education (CTE)

*Miller Grove Career – Technical Education Program does not discriminate on the basis of race, color, creed, national origin, sex, age, or disability in providing education services.*



### **PRINCIPLES OF AGRICULTURE FOOD AND NATURAL RESOURCES (R) 8TH-12TH \*1 CREDIT**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

This course prepares a student for a career in agriculture, food, and natural resources, students must attain academic skills and knowledge in agriculture. This course allows students to develop knowledge and skill regarding the FFA Organization, History of Agriculture, Agricultural Careers, Parliamentary Procedures, Plant Science, Animal Science and All livestock species.

### **EQUINE SCIENCE(R)-9th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

To be prepared for careers in the field of animal science, students need to enhance academic knowledge and skills, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. Suggested animals which may be included in the course of study include, but are not limited to, horses, donkeys, and mules.

### **SMALL ANIMAL MANAGEMENT (R)-9th-12th Grade \* .5 credit**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

Small Animal Management is a course designed to enhance the understanding of small animal care. Students will develop a deeper understanding of career opportunities, industry expectations, knowledge and skills related to the care and maintenance of small animals. In addition, students will learn about the various species and breeds of small animals, and their individual body systems. During the course of the semester, students will examine small mammals, dogs, cats, birds, amphibians, and reptiles



### **ADVANCED ANIMAL SCIENCE (R)-10th-12th Grade \* 1 credit**

Recommended Prerequisite(s) None

Required Prerequisite(s) Biology and Chemistry or IPC, Algebra and Geometry and one course from small animal, equine, or livestock production

This course is designed to prepare students for careers in the field of animal science. Students need to attain academic skills and knowledge, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry standards. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. This course examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences. This course examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences. This course counts as a Career and Technology Science credit and meets HB 5 Graduation requirements.

### **FLORAL DESIGN (R)-9TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) 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 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. To prepare for careers in floral design, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. This course satisfies the fine arts graduation requirement.

### **ADVANCED FLORAL DESIGN (R)-10TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) Floral Design I

In this course, students build on the knowledge from Floral Design and are introduced to more advanced floral design concepts, with an emphasis on specialty designs and specific occasion planning.

### **GREENHOUSE OPERATION AND PRODUCTION (R)-9TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Designed to develop an understanding of greenhouse production techniques and practices. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.

### **HORTICULTURAL SCIENCE(R)-9TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

To be prepared for careers in horticultural systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to horticulture and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for

success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills in a variety of settings. This course is designed to develop an understanding of common horticultural management practices as they relate to food and ornamental plant production.

### **LIVESTOCK PRODUCTION (R)-9TH-12TH GRADE \* 1 CREDIT)**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

To be prepared for careers in the field of animal science, students need to attain academic skills and knowledge, acquire knowledge and skills related to animal systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. Animal species to be addressed in this course may include, but are not limited to, beef cattle, dairy cattle, swine, sheep, goats, and poultry.

### **AGRICULTURAL MECHANICS AND METAL TECHNOLOGIES (R)-9TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

This course prepares student for careers in agricultural power, structural, and technical systems, students need to attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the industry; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills and technologies in a variety of settings. This course is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metal working techniques.

### **AGRICULTURAL EQUIPMENT DESIGN AND FABRICATION (R)-10TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) Agricultural Mechanics and Metal Technologies

Students will acquire knowledge and skills related to the design and fabrication of agricultural equipment. To prepare for careers in mechanized agriculture and technical systems, students must attain knowledge and skills related to agricultural equipment design and fabrication. To prepare for success, students reinforce, apply, and transfer their academic knowledge and technical skills in a variety of settings.

### **AGRICULTURAL STRUCTURES DESIGN AND FABRICATION (R)-10TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

This course prepares students for careers in agricultural power, structural, and technical systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to agricultural power, structural and technical systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and technical skills in a variety of settings. This course is designed to develop an understanding of agricultural power systems, metal fabrication techniques, agricultural structures, electrical controls, and land and water management systems.

**PRACTICUM IN AGRICULTURE, FOOD, AND NATURAL RESOURCES (R)-11TH-12TH GRADE \* 2 CREDITS**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Practicum in Agriculture, Food, and Natural Resources is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internship, assistantship, mentorship, or laboratories. To prepare for careers in agriculture, food, and natural resources, students must attain academic skills and knowledge, acquire technical knowledge and skills related to the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.

**AGRICULTURAL POWER SYSTEM (R)-10TH-12TH GRADE \* 2 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) PrinAFNR

The Agricultural Power Systems course teaches students the power and control systems related to energy sources, small and large power systems and agricultural machinery. This course prepares students for careers in agricultural power, structural, and technical systems. Such lessons include Four-Stroke Engines, Diesel Technology and much more.



**PRINCIPLES OF APPLIED ENGINEERING (R)-9TH-12TH \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Principles of Applied Engineering provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will develop engineering communication skills, which include computer graphics, modeling, and presentations, by using 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 of engineering and will be able to make informed career decisions. 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..

**ROBOTICS 1 (R)-9TH-12TH \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) Principles of Applied Engineering

In Robotics I, students will transfer academic skills to component designs in a project-based environment through implementation of the design process. Students will build prototypes or use simulation software to test their designs. Additionally, students will explore career opportunities, employer expectations, and educational needs in the robotic and automation industry. 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.

### **ROBOTICS II/III (R)-9TH-12TH \* 1 CREDIT**

Recommended Prerequisite(s) None  
Required Prerequisite(s) 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. Additionally, students will explore career opportunities, employer expectations, and educational needs in the robotic and automation industry. In Robotics III, students will transfer academic skills to component designs in a project-based environment through implementation of the design process. Students will build upon skills learned in Robotics I and II through scientific inquiry and scientific methods of investigation. Robotics III has the components of any rigorous scientific or engineering program of study from the problem identification, investigation design, data collection, data analysis, formulation, and presentation of the conclusions

## **CAREER AND TECHNICAL ELECTIVES**

### **BUSINESS INFORMATION MANAGEMENT I (R)-8TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

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, create word-processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software.

### **BUSINESS INFORMATION MANAGEMENT II (R)-9TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None  
Required Prerequisite(s) 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 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.

### **BUSINESS INFORMATION MANAGEMENT II DUAL (H)-9TH-12TH GRADE \* .5 CREDIT**

Recommended Prerequisite(s) None  
Required Prerequisite(s) Business Information Management I.

**COSC 1301** Introduction to Computing-Overview of computer systems-hardware, operating systems, and microcomputer application software, including the Internet, word processing, spreadsheets, presentation graphics, and databases. Current topics such as the effect of computers on society, and the history and use of computers in business, educational, and other modern settings are also studied. This course is not intended to count toward a student's major field of study in business or computer science.

Students are responsible for paying for this course. Students will need to register for this course at Paris Junior College(3 credit hours) through their dual credit advisor

**BUSINESS MANAGEMENT DUAL (H)-10TH-12TH GRADE \* .5 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

**BMGT 1327**-Principles of Management-Concepts, terminology, principles, theories, and issues in the field of management. The course will have students to explain and apply the various theories, processes, and functions of management; identify roles of leadership in organizations; and recognize elements of the communication process. Students recognize, evaluate, and prepare for a rapidly evolving global business environment that requires flexibility and adaptability. Students analyze the primary functions of management and leadership, which are planning, organizing, staffing, directing or leading, and controlling. Topics will incorporate social responsibility of business and industry. Students develop a foundation in the economical, financial, technological, international, social, and ethical aspects of business to become competent managers, employees, and entrepreneurs. Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make appropriate management decisions.

**DOLLARS AND SENSE (R))-9TH-12TH \*.5 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Dollars and Sense focuses on consumer practices and responsibilities, the money management process, decision-making skills, impact of technology, and preparation for human services careers. Students are encouraged to participate in career and technical student organizations and other leadership organizations.

**INTERPERSONAL STUDIES (R)-9TH-12TH \*.5 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

This course examines how the relationships between individuals and among family members significantly affect the quality of life. Students use knowledge and skills in family studies and human development to enhance personal development, foster quality relationships, promote wellness of family members, manage multiple adult roles, and pursue careers related to counseling and mental health services. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

**LIFETIME NUTRITION AND WELLNESS (R)-9TH-12TH \*.5 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Lifetime Nutrition and Wellness is a laboratory course that allows students to use principles of lifetime wellness and nutrition to help them make informed choices that promote wellness as well as pursue careers related to hospitality and tourism, education and training, human services, and health sciences.

**FORENSIC SCIENCE (R)-9TH-12TH \* 1 CREDIT**

Recommended Prerequisite(s) None

Required Prerequisite(s) None

Students in Forensic Science use a structured and scientific approach to the investigation of crimes. Students will learn terminology and investigative procedures. Using scientific methods students will collect and analyze evidence through case studies and simulated crime scenes. Students will learn the history, legal aspects, and career options for forensic science. Forensic Science is a course that uses a structured and scientific approach to the investigation of crimes of assault, abuse and neglect, domestic violence, accidental death, homicide, and the psychology of criminal behavior. Students will learn terminology and investigative procedures related to crime scene, questioning, interviewing, criminal

behavior characteristics, truth detection, and scientific procedures used to solve crimes. This course satisfies a high school science graduation requirement.

**WILDLIFE, FISHERIES, AND ECOLOGY MANAGEMENT (R)-9TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

To be prepared for careers in natural resource systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to natural resources, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply and transfer their knowledge and skills in a variety of settings. This course examines the management of game and non-game wildlife species, fish, and aquacrops and their ecological needs as related to current agricultural practices.

**AG LEADERSHIP (R)-11TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None  
Required Prerequisite(s) None

Principles of Agriculture Agricultural Leadership, Research and Communications will focus on challenging Agriculture, Food, and Natural Resources (AFNR) students to use higher level thinking skills, develop leadership abilities, employ standard research principles, and communicate agricultural positions effectively with all stakeholders.

**PRINCIPLES OF CONSTRUCTION (R)-10TH-12TH GRADE \* 1 CREDIT**

Recommended Prerequisite(s) None  
Required Prerequisite(s) 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.

**AGRIBUSINESS (R)-10TH-12TH GRADE \* 1 CREDIT**

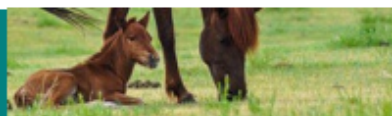
Recommended Prerequisite(s) None  
Required Prerequisite(s) None

Agribusiness Management provides foundation concepts in agricultural business. It is a two semester course that introduces students to the principles of business organization and management from a local and global perspective, with the utilization of technology. Concepts covered in the course include; accounting and record keeping, business planning and management, food and fiber, forms of business, finance, management, sales and marketing, careers, leadership development. Students will demonstrate principles and techniques for planning, development, application and management of agribusiness systems through a supervised agriculture experience (work based learning) programs. Agribusiness Management prepares students for many careers in agriculture, and more specifically agribusiness management.

# Agriculture, Food, and Natural Resources Career Cluster

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

## Animal Science Statewide Program of Study



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

### Secondary Courses for High School Credit

#### Level 1

- Principles of Agriculture, Food, and Natural Resources

#### Level 2

- Small Animal Management
- Equine Science

#### Level 3

- Livestock Production/Lab

#### Level 4

- Advanced Animal Science
- Veterinary Medical Applications/Lab
- Practicum in Agriculture, Food, and Natural Resources
- Project-Based Research
- Scientific Research and Design

### Postsecondary Opportunities

#### Associates Degrees

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

#### Bachelor's Degrees

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

#### Master's, Doctoral, and Professional Degrees

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

### Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> <li>Participate in Texas FFA</li> </ul>	<ul style="list-style-type: none"> <li>Compete in an Agri-Science Fair 4H</li> <li>Volunteer at a local farm or with a veterinarian</li> <li>Participate in an FFA supervised agriculture experience</li> </ul>

### Industry-Based Certifications

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



### Aligned Occupations

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

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



## Animal Science Course Information

### Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	None

### Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Small Animal Management	13000400 (0.5 credit)	None	None
Equine Science	13000500 (0.5 credit)	None	None

### Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Livestock Production/Lab	13000300 (1 credit) 13000310 (2 credits)	None	None

### Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Advanced Animal Science	13000700 (1 credit)	Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production	None
Veterinary Medical Applications/Lab	13000600 (1 credit) 13000610 (2 credits)	Equine Science, Small Animal Management, or Livestock Production	None
Practicum in Agriculture, Food, and Natural Resources	13002500 (2 credits) 13002505 (3 credits) 13002510 (2 credits) 13002515 (3 credits)	None	None
Project-Based Research	12701500 (1 credit)	None	None
Scientific Research and Design	13037200 (1 credit)	Biology, Chemistry, Integrated Physics, and Chemistry (IPC), or Physics	None

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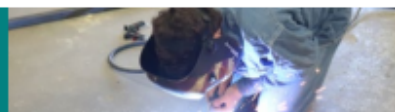
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# Agriculture, Food, and Natural Resources Career Cluster

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

## Applied Agricultural Engineering Statewide Program of Study



The Applied Agricultural Engineering program of study explores the occupations and educational opportunities associated with applying knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing agricultural products. This program of study may also include exploration into diagnosing, repairing, or overhauling farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.

### Secondary Courses for High School Credit

#### Level 1

- Principles of Agriculture, Food, and Natural Resources

#### Level 2

- Agricultural Mechanics and Metal Technologies/Lab

#### Level 3

- Agricultural Structures Design and Fabrications/Lab
- Agricultural Power Systems/Lab
- Geographic Information Systems for Agriculture

#### Level 4

- Agricultural Equipment Design and Fabrication/Lab
- Practicum in Agriculture, Food, and Natural Resources
- Project-Based Research
- Scientific Research and Design

### Postsecondary Opportunities

#### Associates Degrees

- Heavy Equipment Maintenance Technology/ Technician
- Agricultural Mechanization, General
- Small Engine Mechanics and Repair Technology/ Technician
- Welding Technology/ Welder

#### Bachelor's Degrees

- Agricultural Engineering
- Agricultural Mechanization, General

#### Master's, Doctoral, and Professional Degrees

- Agricultural Engineering
- Agricultural Mechanization, General

### Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> <li>Tour a farm products or machinery plant</li> <li>Participate in Texas FFA</li> </ul>	<ul style="list-style-type: none"> <li>Earn a welding certification</li> <li>Intern at a farm products or machinery plant</li> <li>Participate in an FFA supervised agriculture agriculture experience</li> </ul>

### Industry-Based Certifications

- Agriculture Mechanics
- API 1104 Welding Pipelines and Related Facilities AWS Certified Welder
- AWS D1.1 Structural Steel
- AWS D9.1 Sheet Metal Welding
- AWS SENSE Level 1: Entry Welder
- Feedyard Technician in Machinery Operation, Repair and Maintenance
- Industrial Technology Maintenance (ITM) - Maintenance Welding
- Machining Measurement, Material, and Safety Level I
- NCCER Welding Level I
- NCCER Core
- General Welding - Job Ready

- OSHA General 30\*

\*IBC sunseting 8/31/24

### Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Outdoor Power Equipment and Other Small Engine Mechanics	\$32,406	366	16%
Welders	\$41,350	6171	9%
Farm Equipment Mechanics and Service Technicians	\$39,915	304	17%
Mobile Heavy Equipment Mechanics	\$47,299	1627	16%
Agricultural Engineers	\$64,792	9	13%

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



# Applied Agricultural Engineering Course Information

## Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	None

## Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Agricultural Mechanics and Metal Technologies/Lab	13002200 (1 credit) 13002210 (2 credits)	None	None

## Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Agricultural Structures Design and Fabrications/Lab	13002300 (1 credit) 13002310 (2 credits)	None	None
Agricultural Power Systems/Lab	13002400 (2 credits) 13002410 (3 credits)	None	None
Geographic Information Systems for Agriculture	N1300272 (1 credit)	None	None

## Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Agricultural Equipment Design and Fabrication/Lab	13002350 (1 credit) 13002360 (2 credits)	None	None
Practicum in Agriculture, Food, and Natural Resources	13002500 (2 credits) 13002505 (3 credits) 13002510 (2 credits) 13002515 (3 credits)	None	None
Project-Based Research	12701500 (1 credit)	None	None
Scientific Research and Design	13037200 (1 credit)	Biology, Chemistry, Integrated Physics, and Chemistry (IPC), or Physics	

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## Plant Science Statewide Program of Study



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

### Secondary Courses for High School Credit

#### Level 1

- Principles of Agriculture, Food, and Natural Resources

#### Level 2

- Landscape Design and Management
- Turf Grass Management
- Greenhouse Operation and Production/Lab

#### Level 3

- Floral Design/Lab
- Horticultural Science/Lab
- Viticulture

#### Level 4

- Practicum in Agriculture, Food, and Natural Resources
- Advanced Plant and Soil Science
- Advanced Floral Design
- Project-Based Research
- Scientific Research and Design

### Postsecondary Opportunities

#### Associates Degrees

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

#### Bachelor's Degrees

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

#### Master's, Doctoral, and Professional Degrees

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

### Work-Based Learning and Expanded Learning Opportunities

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

### Industry-Based Certifications

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



### Aligned Occupations

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

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



## Plant Science Course information

### Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	None

### Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Landscape Design and Management	13001900 (.5 credit)	None	None
Turf Grass Management	13001950 (.5 credit)	None	None
Greenhouse Operation and Production/Lab	13002050 (1 credit) 13002060 (2 credits)	None	None

### Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Floral Design/Lab	13001800 (1 credit) 13001810 (2 credits)	None	None
Horticultural Science/Lab	13002000 (1 credit) 13002010 (2 credits)	None	None
Viticulture	N1300265 (1 credit)	None	None

### Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Practicum in Agriculture, Food, and Natural Resources	13002500 (2 credits) 13002505 (3 credits) 13002510 (2 credits) 13002515 (3 credits)	None	None
Advanced Plant and Soil Science	13002100 (1 credit)	None	None
Advanced Floral Design	N1300270 (1 credit)	Floral Design	None
Project-Based Research	12701500 (1 credit)	None	None
Scientific Research and Design	13037200 (1 credit)	Biology, Chemistry, Integrated Physics and Chemistry (IPC), or Physics	None



# Manufacturing Career Cluster

The Manufacturing Career Cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

## Advanced Manufacturing and Machinery Mechanics Statewide Program of Study



The Advanced Manufacturing and Machinery Mechanics program of study focuses on the assembly, operation, maintenance, and repair of electromechanical equipment or devices. CTE learners may work in a variety of mechanical fields, gaining knowledge and experience in robotics, refinery and pipeline systems, deep ocean exploration, or hazardous waste removal. CTE concentrators may work in a variety of fields of engineering.

### Secondary Courses for High School Credit

#### Level 1

- Principles of Manufacturing
- Principles of Applied Engineering

#### Level 2

- Occupational Safety and Environmental Technology I
- Robotics I
- Manufacturing Engineering Technology I
- Programmable Logic Controller I

#### Level 3

- Engineering Design and Presentation I
- Manufacturing Engineering Technology II
- Robotics II
- Occupational Safety and Environmental Technology II
- Programmable Logic Controller II

#### Level 4

- Practicum in Manufacturing
- Practicum in Entrepreneurship
- Career Preparation I

### Postsecondary Opportunities

#### Associates Degrees

- Electromechanical Engineering/Technology
- Certified Quality Technician
- Industrial Mechanics and Maintenance Technology

#### Bachelor's Degrees

- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

#### Master's, Doctoral, and Professional Degrees

- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

### Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> <li>Participate in SkillsUSA and local STEM events</li> </ul>	<ul style="list-style-type: none"> <li>Work at a local business or industry apprenticeship</li> <li>Join the American Welding Society</li> </ul>

### Industry-Based Certifications

- C-101 Certified Industry 4.0 Associate - Basic Operations
- C-103 Certified Industry 4.0 Associate - Robot System Operations
- C-200 Certified Industry 4.0 Automation System Specialist I - 216 Robotic System Integration 1
- C-200 Certified Industry 4.0 Automation Systems Specialist I - 208 Programmable Controller Troubleshooting 1
- C-200 Certified Industry 4.0 Automation Systems Specialist I - 215 Robotic Operations 1
- Certified Manufacturing Associate
- CNC Lathe Operations
- CNC Lathe Set Up and Operations
- FANUC Robot Operator 1
- FESTO Certified Industry 4.0 Associate Fundamentals
- Industrial Technology Maintenance (ITM) - Process Control Systems
- Machining CNC Mill Operations Level I
- Machining CNC Mill Programming Setup and Operations Level I
- Machining CNC Milling Skills Level II
- Machining CNC Milling Skills Level II
- Industrial Technology Maintenance (ITM) - Electronic Control Systems\*
- ISCET Certified Electronics Technicians\*
- Mastercam Associate Certification Mill Design and Toolpaths\*
- Mastercam Certified Professional Mill Level 1\*
- Mastercam Professional Level Certification\*
- OSHA 30 Hour General\*

\*IBC sunseting 8/31/24

### Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Electro-Mechanical Assemblers	\$30,160	951	9%
Electro-Mechanical Technicians	\$56,555	127	9%
Industrial Machinery Mechanics	\$49,816	3,788	27%

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



# Advanced Manufacturing and Machinery Mechanics Course Information

## Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Principles of Manufacturing	13032200 (1 credit)	None	None
Principles of Applied Engineering	13036200 (1 credit)	None	None

## Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Occupational Safety and Environmental Technology I	N1303680 (1 credit)	None	None
Robotics I	13037000 (1 credit)	None	None
Manufacturing Engineering Technology I	13032900 (1 credit)	None	None
Programmable Logic Controller I	N1303689 (1 credit)	None	None

## Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Engineering Design and Presentation I	13036500 (1 credit)	Algebra I	None
Manufacturing Engineering Technology II	13032950 (1 credit)	Manufacturing Engineering Technology I	None
Robotics II	13037050 (1 credit)	Robotics I	None
Occupational Safety and Environmental Technology II	N1303681 (1 credit)	OSET I	None
Programmable Logic Controller II	N1303690 (1 credit)	None	None

## Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Practicum in Manufacturing	13033000 (2 credits) 13033005 (3 credits) 13033010 (2 credits) 13033015 (3 credits)	None	None
Practicum in Entrepreneurship	N1303425 (2 credits)	None	None
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	None

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