



**2025 - 2026**

**COURSE DESCRIPTION AND**  
**PLANNING GUIDE**

INSPIRING SUCCESS

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Dear Students and Parents:

It is time to prepare student schedules for the coming school year and to make plans for your remaining years in high school and post-high school. In order for this process to be most beneficial for the students, we must have parental involvement during the pre-enrollment period. When assisting your child, many factors must be seriously considered.

- Building a solid transcript
- The type of graduation plan selected for each child, e.g. college prep or traditional
- The types of post-secondary career paths:
  - a) college student, 2 year or 4 year
  - b) technical training – apprenticeship, vocational, or military
  - c) enter the workforce

A student's high school transcript is an official document that records a minimum of four years of academic performance. In this time of fierce competition for desired jobs, scholarships and college admission, an excellent transcript can open doors.

Although a high GPA is important, colleges, universities, and personnel directors are far more impressed with quality curriculum choices. Students who exhibit a pattern of non-challenging courses are neither highly recruited nor well placed. In reality, it is no longer good enough to just get by, particularly for the college bound. A student with a weak transcript may be placed on a restricted enrollment plan and subject to remediation classes for "no credit".

Therefore, approach the enrollment process with appropriate seriousness. Make course selections carefully and be sure to indicate alternate choices when required, as you will not be allowed to change your mind once you have selected courses for pre-enrollment.

Classes are "made" and staff assigned based upon student requests made during the pre-enrollment period. If you choose a class that does not "make," because of low enrollment, your alternative choice will be used.

If you have questions regarding pre-enrollment you may contact a counselor or a building administrator.

Josh Hall  
Principal

## GUIDANCE SERVICES

### **COUNSELOR ASSIGNMENTS 2024-2025**

<u>UHS Guidance Counselors</u>	<u>Students</u>	<u>Telephone #</u>
Ms. Nikki Birkmann	A to G	(636) 583-2513 ext. 1710
Mrs. Sarah Otto	H to O	(636) 583-2513 ext. 1711
Mrs. Shelby Puls	P to Z	(636) 583-2513 ext. 1712

<u>UHS College and Career Advisor</u>	<u>Students</u>	<u>Telephone #</u>
Mrs. Sarah Hurt	A to L	(636) 583-2513 ext. 1743
Mr. Philip Giacomelli	M to Z	(636) 583-2513 ext. 1745

### **District Testing Programs**

EOC (END OF COURSE)	- Mandated by the Missouri Department of Elementary and Secondary Education to measure student achievement and progress toward postsecondary readiness in selected areas.
COMMON ASSESSMENT	- Periodic assessments to measure student growth and achievement.
ACT	- College entrance test (optional ACT.org)
PSAT	- Preliminary SAT and National Merit Scholarship Qualifying test (optional)
Pre-ACT	-Preliminary ACT (all Sophomores)
SAT	- College entrance test (optional)
ASVAB	- Armed Services Vocational Aptitude Battery, results used primarily for military job placement (all juniors)

It is extremely important to take advantage of opportunities to “practice” taking the types of tests used for college or job placement.

There are three basic types of tests administered at Union High School: Achievement/Exit inventories, predictors of success and interest inventories.

Achievement/exit inventories attempt to measure one’s ability to demonstrate knowledge of specific subject areas. Union R-XI uses Common Assessments and End-Of-Course exams to measure these areas.

American College Test (ACT) is considered by most educators to be a measure of what a student has learned in high school and is a nationally normed referenced test which measures achievement across the country and establishes entrance criteria for most state colleges and universities. National testing dates are available at ACT.org.

**PSAT, ACT, AND SAT PREPARATION NEEDS**

For all students who want to take the PSAT, ACT, or SAT, it is strongly recommended by these companies, our teaching and guidance staff, and administration, to take four (4) years of language arts and math and at least three (3) years of social studies and science. In the math and science areas, it is strongly recommended that the student take at least Algebra I, Geometry, Algebra II, College Algebra, Accelerated College Algebra (.5) or Pre-Calc Trig (.5), Biology, Chemistry, and Physics. This course of study is needed in order for a student to best prepare to take the ACT or SAT. In addition to these courses, students are encouraged to read a great deal. Reading comprehension and analysis of what is read make up a great deal of these tests.

**UNION R-XI SCHOOL DISTRICT REGULATIONS AND PROCEDURES  
FOR HIGH SCHOOL GRADUATION**

**HIGH SCHOOL COURSE GRADUATION REQUIREMENTS**

<b>CURRICULAR AREAS</b>	<b>Graduation</b>
<b>COMMUNICATION SKILLS</b>	4 units (Must include 1 unit in a core English class for each grade 9-12)
<b>SOCIAL STUDIES</b>	3 units (Must include 1 unit Am. History, 1 unit World History, 1 unit Government)
<b>MATHEMATICS</b>	3 units
<b>SCIENCE</b>	3 units
<b>FINE ARTS</b>	1 unit
<b>PRACTICAL ARTS</b>	1 unit
<b>PHYSICAL EDUCATION</b>	1 unit
<b>PERSONAL FINANCE</b>	1/2 unit (Completion of 3 Ag classes (one must be Ag Sales) will fulfill the Personal Finance Requirement)
<b>HEALTH</b>	1/2 unit
<b>ELECTIVES</b>	9 units
<b>Totals</b>	<b>26 units</b>

**Graduates must pass the United States Constitution test, the Missouri Constitution test, Civics test and complete CPR training.**

## **PROMOTION/RETENTION**

The above represents the minimum requirements for graduation.

***In order for a student to be promoted to the next grade/advisory level, students must meet the following requirements by the beginning of the school year:***

To be promoted to the sophomore class, freshmen must have at least:	5.5 credits
To be promoted to the junior class, sophomores must have at least:	11.5 credits
To be promoted to the senior class, juniors must have at least:	18.0 credits

### **Four Rivers Vocational Students:**

The district may waive one unit of elective credit for students who successfully complete an eligible three-unit career/technical program during their junior and/or senior year with the exception of Health Occupations and Teaching Careers.

## **ADMISSION STANDARDS FOR 4-YEAR COLLEGES (MO)**

The four-year colleges and universities in Missouri have adopted general admission standards for first-time college students. For admission requirements within a specific college or university, check the university's general catalog.

The University of Missouri System (Univ. of MO – Columbia, Univ. of MO – St. Louis, Univ. of MO – Kansas City, Missouri University of Science & Technology) has the following course requirements for admission:

- Four (4) units of English, one of which may be speech or debate. Two units emphasizing composition or writing skills are required.
- Four (4) units of mathematics (Algebra I or higher). This may be satisfied by the completion of courses in middle school, junior high, or senior high. Even though the four-unit mathematics requirement may be in part satisfied with Algebra I that was taken in middle school, college-bound high school seniors are encouraged to take a mathematics course during the senior year. This will enhance their performance in mathematics courses at the University.
- Three (3) units of science (not including General Science). The three units of science must include a laboratory course and must include units from at least two of the following areas: physical science, biology, physics, chemistry, and earth sciences. This requirement may be satisfied by completion of courses in middle school, junior high, or senior high. \* A student may substitute three units of secondary vocational agriculture courses for one unit of biological science. The three units must be selected from the following list of six specific courses: Agricultural Science I, Agricultural Science II, Crop Science, Greenhouse Operation and Management, Animal Science, Conservation of Natural Resources. This substitution will be accepted for admission to any college within the university.
- Three (3) units of social studies.
- One (1) unit of fine arts to be taken in visual arts, music (e.g., band, orchestra, music appreciation, music theory), dance or theater.
- Two (2) units of a single world language.

Recognizing that special circumstances sometimes arise, the University's admission policy permits each campus to admit as exceptions to the regular admission requirements some students who are deficient in either the high school unit requirements, the High School Class Rank Percentile/ACT Composite Score (HSCR/ACT) requirement, or both.

## SCHOLARSHIP PROCEDURES

1. Scholarship applications are supplied to Union High School by various organizations: national (ex. Burger King), state (ex. Missouri Professional Engineers), and local (ex. Union Chamber)
2. Copies of current applications are available in the high school guidance office or on-line.
3. All available scholarship applications are listed in the following places: message board in the guidance office and on the district website. If we know the intended major of a senior(s) and receive a related scholarship, we contact that senior(s).
4. Students inquiring in the guidance office for scholarships in general or for a specific scholarship are given individual assistance on all available applications, their criteria, and submission instructions.
5. There are two basic submission procedures:
  - a. Applicant mails completed forms, as directed, to the address within the application, or:
  - b. Applicant returns completed forms to the guidance office for:
    - 1) Collection purposes only until the funding organization can pick them up or for delivery to a representative of the organization.
    - 2) Review of applications by a faculty scholarship committee for the purpose of selecting a nominee best meeting the criteria. (This process is used only for scholarships that limit high school submissions to one. Approximately five (5) scholarships are in this category per year.) The selected nominee's application is then forwarded to the scholarship organization.
  - c. Applicant submits form on-line.

Every UHS senior is given the same opportunities to pick up and complete all available scholarship applications. It takes initiative on the student's part to get applications and it takes effort to complete these and submit them to the appropriate place. Many students do not pick up applications at all and many pick them up but do not follow through. The selection of a scholarship recipient is up to the funding organization.

## A+ SCHOOLS STUDENT FINANCIAL INCENTIVE

Union High School has been designated, by the Missouri State Board of Education, as an A+ High School. According to the following criteria and the continuation of his/her education at a Missouri Public Community College or Vocational-Technical School your student is eligible for state reimbursed tuition.

To be eligible, each student must enter into a written agreement with the school (an application can be found at the end of this course description handbook). Students must also:

- ❖ Have attended a designated A+ school for 2 years prior to high school graduation;
- ❖ 2020, 2021, and 2022 seniors who attended an A+ designated high school for any 2 years of the 4 years prior to high school graduation have met this requirement. 2018 and 2019 seniors who attended an A+ designated high school for any 3 of the 4 years prior to high school graduation have met this requirement. Students graduating in or before 2017 must have attended an A+ designated high school for 3 years immediately prior to graduation. In addition, regardless of your graduation year, if one of your parents is a member of the military on active duty or has retired from the military and relocated to Missouri within one year of their retirement, you are exempt from this requirement. However you must attend and A+

designated high school in the school year immediately preceding graduation and meet all of the other high school eligibility requirements.

- ❖ Have at least a 95% attendance record for the four year;
- ❖ Have graduated from high school with a grade point average of 2.5 on a 4.0 point scale;
- ❖ Have performed 50 hours of unpaid tutoring or mentoring with younger students;
- ❖ Have maintained a record of good citizenship and avoidance of the unlawful use of drugs and alcohol;
- ❖ Beginning with the high school senior class 2015, students must achieve a score of proficient or advanced in the Algebra I end of course exam or a higher level DESE approved end-of-course exam in the field of mathematics. If a student does not meet this requirement, he/she will be responsible for paying for their 1<sup>st</sup> semester at a community college or tech school. If the student completes the first semester at a postsecondary institution with a minimum of (12) hours and earns a 2.5 GPA, they will then become eligible for the A+ scholarship. <http://dese.mo.gov/documents/APlusAdministrativeRule.pdf>
- ❖ Have filled out and submitted the FAFSA (Free Application for Federal Student Aid) Form;
- ❖ Registered for Selective Service, if applicable.

**The FAFSA Form must be submitted or the student will forfeit their eligibility in the A+ Schools Program.**

The period of eligibility shall be for a maximum period of two (2) years, (six semesters) during the four (4) year period immediately following graduation. A+ benefits end upon receiving a degree or certificate.

If you are unable to attend school due to active duty service to any branch of the armed forces of the United States, you may qualify for a deferment of your scholarship eligibility. The deferment will ensure you receive 48 months of eligibility (see “How long can I receive an award?” above). You must return to full-time status within 12 months of the end of your military service and provide a copy of your DD214 to verify the length of your service in order to resume your eligibility.

To defer your eligibility you must submit a written request to:

Missouri Department of Higher Education Workforce Development  
ATTN: A+  
P.O. Box 1469  
Jefferson City, MO 65102-1469

**The student financial incentive program is dependent upon Union High School maintaining A+ designation and the Department of Elementary and Secondary Education receiving the state appropriation from the Missouri General Assembly.**

Still have questions:                      Contact the A+ Office                      (636) 583-2513 ext. 1716

## GRADING

A weighted grading system, which places emphasis on students challenging themselves with rigorous courses, is used at Union High School. These courses will better prepare students for higher education.

Below are the courses that are weighted.

### LANGUAGE ARTS

English I - Honors  
English II- Honors  
English III - Honors  
English Comp. I /II  
World Literature  
College Speech

### SOCIAL STUDIES

Am. History-Honors  
World. History - Honors  
Government - Honors  
AP US History

### SCIENCE

AP Biology Lecture  
AP Biology Lab  
AP Chem. Lecture  
AP Chem. Lab  
PLTW Human Body Systems  
PLTW Principles of Biomedical Science

### WORLD LANGUAGE

Spanish III  
Spanish IV  
German III  
German IV

### MATH

College Algebra  
AP Statistics  
Accelerated College Algebra  
Pre-Calculus Trigonometry  
AP Calculus AB

### FINE ART

Theatre Appreciation

The Laude System is used to recognize graduating honors students. Below are the criteria that must be met:

#### **Cum Laude:**

- Cumulative GPA of 3.5-3.99 at the end of eight semesters

#### **Magna Cum Laude:**

- Cumulative GPA of 4.0-4.19 at the end of eight semesters

#### **Summa Cum Laude:**

- Cumulative GPA of 4.2 or higher at the end of eight semesters

### NON-WEIGHTED GRADE POINT AVERAGE (GPA)

A student's non-weighted GPA is based upon his/her cumulative semester grades beginning with the ninth grade year. Grades are figured based on a 4.0 scale:

### WEIGHTED GRADE POINT AVERAGE (GPA)

A student's weighted GPA is based upon his/her cumulative semester grades beginning with the ninth grade year. Grades are figured based on a 5.0 scale:

# GRADING SYSTEM

	<u>Regular</u>	<u>Honors</u>
A	4.0	5.0
B	3.0	4.0
C	2.0	3.0
D	1.0	2.0
F	0	0
P	Gives credit does not affect GPA	Gives credit does not affect GPA

When enrolling in college level courses, college rules apply. Although accommodations can be made, no modifications will be allowed to the curriculum.

## Honors Courses

An honors level course is, in general, a more challenging level course. Students can expect to spend more time on completing the necessary work in an honors course. In an honors level course, complete mastery of previous courses is assumed so there is very little review of previous courses at the beginning of the year. The ability to read and interpret textual material is expected. The honors level course also proceeds at an accelerated pace, so additional topics are usually covered. The topics are taught with a greater level of rigor – more “abstract” applications of concepts in the general rule.

## Advanced Placement Courses (AP)

The Advanced Placement (AP) Program is a nationwide program of college level courses and exams for secondary school students. AP courses are taught on the college level. Colleges and universities can receive the AP examination grades and use them as a basis for granting credit and/or placement to entering students whose scores meet their requirements. AP exam scores are highly recognized and honored by most colleges and universities in the United States. Before taking an AP course, the student is advised to contact the college or university she/he plans to attend concerning the status of credit by examination at that particular school.

## Dual Enrollment / Dual Credit Courses

It is recommended to check with the university or college that the student will eventually attend if it is

a different school than who the credit is initially issued through. That will help determine if the credit will remain in the subject area it was taken or if it will count as an elective after the transfer.

### **ADVANCED PLACEMENT AND/OR DUAL CREDIT COURSES**

#### English Composition I (semester course)

- Credit through East Central College
- Course number ENG 101
- 3 credit hours

#### English Composition II (semester course)

- Credit through East Central College
- Course number ENG 102
- 3 credit hours

#### World Literature I (semester course)

- Credit through East Central College
- Course number ENG 124
- 3 credit hours

#### College Speech

- Credit through East Central College
- Course number COM 110 Public Speaking
- 3 credit hours

#### Theatre Appreciation

- Credit through East Central College
- Course number THE 101
- 3 credit hours

#### AP Biology Lecture/Lab

- Credit through Missouri Baptist University
- Course number BIOL 113 General Biology Lecture (3 credits) & BIOL 111 General Biology 1 Lab (1 credit)
- Students earning a C or better will earn 4 credits (3 credits for lecture, 1 credit for lab).
- The cost of all 4 credits is \$268.
- The AP exam can be taken. Depending on the exam score, credits and placements are decided by each individual college or university.

#### AP Chemistry Lecture/Lab

- Credit through Missouri State University (Cost approx. \$300 per semester)
- Course number CH133 and CH132 General Chemistry I Lecture and Lab, and CH143 and CH142 General Chemistry II Lecture and Lab
- Students earning a C or better will earn 5 credits (3 credit hours for lecture, 2 credit hours for lab) during the first half of the course. The second half of the course is worth an additional 5 hours of credit.

- The AP exam can be taken. Depending on the exam score, credits and placements are decided by each individual college or university.

### AP US History

- Credit through East Central College
- (1<sup>st</sup> semester) HST 101 US History to 1877
- (2<sup>nd</sup> semester) HST 102 US History Since 1877
- 3 credit hours for each course for a total of 6 hours
- The AP exam can be taken. Depending on the exam score, credits and placements are decided by each individual college or university.

### College Algebra

- Credit through East Central College
- Course number MTH 170
- 3 credit hours

### AP Statistics

- Credit through East Central College
- Course number MTH 150
- 3 credit hours
- The AP exam can be taken. Depending on the exam score, credits and placements are decided by each individual college or university.

### Accelerated College Algebra

- Credit through East Central College
- MTH 170 College Algebra
- 3 credit hours

### Pre-Calculus Trig

- Credit through East Central College
- MTH 171 Trigonometry
- 2 credit hours

### AP Calculus AB

- Credit through East Central College
- Course number MTH 190 Analytic Geometry & Calculus I
- 5 credit hours
- The AP exam can be taken. Depending on the exam score, credits and placements are decided by each individual college or university.

### Intro to Engineering Design (PLTW) & Principles of Engineering (PLTW)

- Credit through Missouri S & T
- Course number MECH ENG 1720
- 3 credit hours

## Computer Science Essentials (PLTW)

- Credit through Missouri S & T
- Course number IS&T 1310
- 3 credit hours

Students that complete TWO of the four PLTW Biomedical Science courses:

- Principles of Biomedical Science (PBS) - offered at UHS
- Human Body Systems (HBS) - offered at UHS
- Medical Interventions (MI) - offered at FFRC or
- Biomedical Innovation (BI) - offered at FFRC

with a B or better and a stanine score of 6 or higher are eligible for college credit through Missouri S & T for 43 credit hours for BIO SCI 1113 General Biology and BIO SCI 1219 General Biology Lab. The cost is \$400. For more information see: <https://pltw.mst.edu/undergraduate-credit/biomedicalsciences/>

## **HONOR ROLL REQUIREMENTS**

Honor Roll requirements are 3.0000 to 3.5099 grade point average (GPA). Merit Honor Roll requires a GPA of 3.5100 or above. Both honor rolls require that students have no grade below a "C-". Grades from all credit courses with a grade of A, B, C, D, or F are used to calculate the GPA.

## **HONOR GRADUATE REQUIREMENTS**

In order to qualify for honor graduate status, a student must achieve the honor roll a minimum of seven (7) out of eight (8) semesters.

## **TRANSFER STUDENTS**

When transfer students are unable to meet state or local high school graduation requirements, the Board of Education may make necessary exceptions in specific requirements that will permit the student to graduate if:

- They have done satisfactory work since the date of transfer
- They have been unable to meet the specific requirements due to conditions beyond their control
- They would have graduated from the former school if they had not transferred.

## **SPECIAL EDUCATION STUDENTS**

The Board of Education shall establish requirements that are compatible with each special education student's ability to perform and may waive specific courses when it is determined to be in the best interests of the special education or handicapped child to do so.

For students who need more than two correspondence credits, summer school is available. Exceptions to the above policy will be made only in extraordinary circumstances and must have written approval of the principal.

## **SUMMER SCHOOL**

### Credit Recovery

Summer school is an opportunity for students to take courses for remediation (to make up a credit). Enrollment will be during April and May. Credits earned can be applied to meet graduation requirements. Grades are issued as Pass/Fail and will not affect a student's cumulative grade point average. Credits earned in **core classes** may be used to meet the academic eligibility requirement for extra-curricular activities at Union High School.

### Credit Advancement

This summer school program is web-based and accessible anywhere through an internet connection. UHS partners with LAUNCH and Springfield Public Schools to provide this incredible opportunity to our students. You may obtain up to 1.0 full credit in the Virtual Summer School Credit Acquisition / Credit Advancement Session.

### **JOB SHADOWING**

Union High School's Job Shadowing Program is open to all students in grades 9 through 12. The purpose of the program is to allow students to experience a career firsthand. Students will accompany a work site employee through a 'typical' day and learn about the varied aspects of their job and skills required to work in the business or industry.

Participating students will visit a business or industry within their Career Pathway. Union High School will make the arrangements. Students are responsible for their own transportation. Students will be made aware of the importance of appropriate behaviors, attitudes, manners, appearance, and personal hygiene, along with the importance of confidentiality. They will be reminded that they are representatives not only of themselves but of their parents and school.

Interested students will fill out an application to Job Shadow. Students will be counseled regarding questions to ask during the shadowing experience. An evaluation form will need to be completed by the student and a thank-you note will be written and sent to the employer. Benefits of Job Shadowing are many. Students place more emphasis on career exploration. They begin to think of their future and see the link between learning and earning. Students who know more about the world of work and the skills essential for career development can make informed choices and be better prepared to meet the challenges of tomorrow.

## **UNION R-XI SCHOOL DISTRICT STATEMENT OF NON-DISCRIMINATION**

Applicants for admission or employment, students, parents or elementary and secondary school students, employees, sources of referral and applicants for employment, and all professional organizations that have entered into agreements with our School District are hereby notified that our School District does not discriminate on the basis of race, color, national origin, sex, age, religion, or disability in admission or access to, or treatment or employment in, its programs and activities.

Any person having inquiries concerning our School District's compliance with the laws and regulations implementing Title VI of the Civil Rights Act of 1964 (Title VI), Title IX of the Education Amendments of 1972 (Title IX), the Age Discrimination Act, Section 504 of the Rehabilitation Act of 1973 (Section 504), or Title II of the Americans with Disabilities Act of 1990 (ADA), is directed to the Union R-XI Superintendent's office. This office has been designated by our School District to coordinate our School District's efforts to comply with the laws and regulations implementing Title VI, Title IX, the Age Discrimination Act, Section 504, and Title II of the ADA. In addition, any inquiries concerning our School District's Compliance with the employment provisions of Title VII of the Civil Rights Act of 1964 or religious discrimination issues may also be directed to the Union R-XI School District Superintendent's office.

Our School District has established grievance procedures for persons unable to resolve problems arising under statutes above. Upon request, the Superintendent's office will provide information regarding those procedures.

Any person who is unable to resolve a problem or grievance arising under Title VI, Title IX, the Age Discrimination Act, Section 504, or Title II of the ADA, may contact the Office for Civil Rights, Region VII, 8930 Ward Parkway, Suite 2037, Kansas City, MO 64114; phone (816) 268-0550.

Union R-XI Superintendent's Office  
21 Progress Pkwy  
Union, MO 63084  
(636) 583-8626



# UNION HIGH SCHOOL

## Architecture and Construction program of study

**Architecture and Construction Career Cluster:** Careers in designing, planning, managing, building and maintaining the built environment.

This Career Cluster Plan of Study (based on the Architecture and Construction Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. \*This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.

EDUCATION LEVELS	GRADE	English Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science AND PLTW: Intro to Engineering	American History (option for Honors)	P.E.-Boys OR P.E. Girls and Health (1 sem. each)	Credits for Fine Arts offerings in Course Description Listings of Booklet	1/2 credit must be Personal Finance (or Ag Sales); Additional credits from Practical Arts offerings in Course Description Listings of Booklet	<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> Chem I, Chem II, AP Chem, Robotics, Physics <b>RECOMMENDED MATH ELECTIVES</b> Pre-Calculus, Calculus, College Algebra <b>Recommended Practical Art and Technical Ed. Courses</b> Ag Structures I/II, Ag Construction I/II, Woodworking I/II/III, Machine Drafting <b>FRCC: Building Construction III</b> <b>CERTIFICATION and/or Professional Organizations</b> Career Prep Certificate Skills USA	<ul style="list-style-type: none"> <li>▶ Architect</li> <li>▶ Carpenter</li> <li>▶ Civil Engineer</li> <li>▶ Construction Foreman/Manager</li> <li>▶ Contractor</li> <li>▶ Demolition Engineer</li> <li>▶ Drafter</li> <li>▶ Drywall Installer</li> <li>▶ Electrician</li> <li>▶ Electronic Systems Technician</li> <li>▶ Equipment/Material Manager</li> <li>▶ General Contractor/Builder</li> <li>▶ Heating, Ventilation, Air Conditioning and Refrigeration Mechanic</li> <li>▶ Interior Designer</li> <li>▶ Painter</li> <li>▶ Paperhanger</li> <li>▶ Plumber</li> <li>▶ Project Estimator</li> <li>▶ Project Inspector</li> <li>▶ Roofer</li> <li>▶ Safety Director</li> <li>▶ Sheet Metal Worker</li> <li>▶ Tile and Marble Setter</li> </ul>
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology AND PLTW: Prin. Of Engineering	World Studies (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Adv.				
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chem Lab/Lecture, Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
	12	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp I/C Comp II, CC English	**Additional Math Courses will count as electives: Algebra II, College Algebra, College Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**Additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**Additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Adv., Weight Training, Girls Weight Training, Aerobics				



# UNION HIGH SCHOOL

## Arts, Audio Visual Technology & Communications program of study

**Arts, Audio Visual Technology & Communications Career Cluster:** Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

This Career Cluster Plan of Study (based on the Arts, Audio/Video Technology and Communications Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E. Girls and Health (1 sem. each)	Credits for Fine Art offerings in Course Description Listings of Booklet	1/2 credit must be Personal Finance (or Ag Sales); Additional credits from Practical Art offerings in Course Description Listings of Booklet	<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> N/A <b>RECOMMENDED MATH ELECTIVES</b> Pre-Calculus <b>Recommended Career and Technical Ed. Courses</b> Art I, Art Appreciation, Ceramics/Sculpture, Design, Painting, Drawing, Crafts, Drama, Computer Applications, Graphic Design, Speech, Guitar, Concert Choir, Women's Choir, Chamber Choir, Music Theory, Fall Guard, Band, Jazz Band, Scholastic Journalism, Stagecrafts, Creative Writing, Theatre Appreciation, Acting & Improv <b>FRCC:</b> Graphic Comm I/II <b>CERTIFICATION and/or Professional Organizations</b> Career Prep Certificate, Art Club, Drama Club	<ul style="list-style-type: none"> <li>▶ Actor</li> <li>▶ Audio-Video Designer and Engineer</li> <li>▶ Broadcast Technician</li> <li>▶ Commercial Artist</li> <li>▶ Computer Animator</li> <li>▶ Curator/Gallery Manager</li> <li>▶ Director and Coach</li> <li>▶ Fashion Designer</li> <li>▶ Journalist</li> <li>▶ Lithographer</li> <li>▶ Musician</li> <li>▶ Printing Equipment Operator</li> <li>▶ Telecommunication Technician</li> <li>▶ Videographer</li> <li>▶ Web Page Designer</li> </ul>
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Adv.				
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chem Lab/Lecture, Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
	12	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp I/Comp II, CC English	**Additional Math Courses will count as electives: Intermediate Algebra, Algebra II, College Algebra, College Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**Additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**Additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Adv. Weight Training, Girls Weight Training, Aerobics				



# UNION HIGH SCHOOL

## Agriculture, food, and natural resources program of study

**Agriculture, Food and Natural Resources Career Cluster:** The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

This Career Cluster Plan of Study (based on the Agriculture, Food and Natural Resources Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E.-Girls and Health (1 sem. each)			<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> Chem I, Chem II, AP Chem, Environmental Science, Meteorology, Zoology, AP Biology Lab/Lecture, Anatomy <b>RECOMMENDED MATH ELECTIVES</b> Pre-Calculus, Calculus, College Algebra <b>Career and Technical Ed. Courses</b> Ag. Science I, Ag. Science II, Ag. Sales & Mngmt., Food Sci./Flor., Greenhouse, Wildlife, Computer Applications <b>CERTIFICATION and/or Professional Organizations</b> FFA	<b>Occupations Requiring Postsecondary Education</b> ► Agricultural Chemical Dealer ► Aquaculturalist ► Bank/Loan Office ► Environmental Compliance-Assurance Manager ► Equine Manager ► Farm Manager ► Health and Safety Sanitarian ► Meat Cutter-Meat Grader ► Park Manager ► Produce Buyer ► Recycling Technician ► Wildlife Manager
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology	World Studies (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Adv.	Credits for Fine Arts offerings in Course Description Listings of Booklet	1/2 credit must be Personal Finance (or Ag Sales); A additional credits from Practical Arts offerings in Course Description Listings of Booklet		
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chem Lab/Lecture, Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
12	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp I, Comp III, CCE English	**A additional Math Courses will count as electives: Algebra II, Intermediate Algebra, College Algebra, College Statistics, Pre-Calculus, Calculus	**A additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**A additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**A additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Adv., Weight Training, Girls Weight Training, Aerobics			<b>Occupations Requiring Baccalaureate Degree</b> ► Agricultural Educator ► Botanist ► Ecologist ► Environmental Engineer ► Fish and Game Officer ► Plant Pathologist ► Veterinarian		



# UNION HIGH SCHOOL

## Education program of study

**Education Career Cluster:** Planning, managing and providing education and training services and related learning support services.

This Career Cluster Plan of Study (based on the Finance Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
<b>SECONDARY</b>	9	English I (option for Honors)	Algebra I A, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E. Girls and Health (1 sem. each)	Credits for Fine Arts offerings in Course Description Listings of Booklet	1/2 credit must be Personal Finance (or Agriculture Sales); A dditional credits from Practical Arts offerings in Course Description Listings of Booklet	<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> <b>RECOMMENDED MATH ELECTIVES</b> College Algebra <b>Recommended Career and Technical Ed. Courses</b> Speech, Psychology, Sociology, Teacher's Aide, Child Development I/II, Computer Applications, A+ Tutoring <b>CERTIFICATION and/or Professional Organizations</b> FBLA (Future Business Leaders of America)	<ul style="list-style-type: none"> <li>▶ Adult and Vocational Education Teachers</li> <li>▶ Archivists</li> <li>▶ Coaches and Scouts</li> <li>▶ College and University Administrators</li> <li>▶ Education Administrators</li> <li>▶ Elementary School Teachers</li> <li>▶ Farm and Home Management Advisors</li> <li>▶ High School Teachers</li> <li>▶ Instructional Coordinators</li> <li>▶ Interpreters and Translators</li> <li>▶ Librarians</li> <li>▶ Library Technical Assistants</li> <li>▶ Middle School Teachers</li> <li>▶ Museum Technicians and Conservators</li> <li>▶ Preschool and Kindergarten Teachers</li> <li>▶ School Counselors</li> <li>▶ Special Education Teachers</li> <li>▶ Teacher Aides</li> <li>▶ University and College Teachers</li> </ul>
	10	English II (option for Honors)	Algebra I B, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, A ctv.				
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
	12	Mythology /Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp I/Comp II, C C English	**A dditional Math Courses will count as electives: Intermediate Algebra, College Algebra, AP Statistics, Pre-Calculus, Calculus	**A dditional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**A dditional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**A dditional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, A ctv. Weight Training, Girls Weight Training, Aerobics				



# UNION HIGH SCHOOL

## Business Management and Administration program of study

**Business Management & Administration Career Cluster:** Careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.

This Career Cluster Plan of Study (based on the Business, Management and Administration Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E.-Girls and Health (1 sem. each)			<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> <b>RECOMMENDED MATH ELECTIVES</b> College Algebra <b>Recommended Career and Technical Ed. Courses</b> Accounting I, Supr. Bus. Experience I/II, Intro to Business, Business Management, Entrepreneurship, Advertising, Marketing Internship, Marketing, Adv. Marketing, Computer Applications, Speech, PLTW- Computer Science Principles <b>CERTIFICATION and/or Professional Organizations</b> Career Prep Certificate	<ul style="list-style-type: none"> <li>▶ Administrative Assistant</li> <li>▶ Advertising Sales Person</li> <li>▶ Auditor</li> <li>▶ Business Consultant</li> <li>▶ Certified Public Accountant</li> <li>▶ Corporate Trainer</li> <li>▶ E-Commerce Analyst</li> <li>▶ Entrepreneur</li> <li>▶ Facilities Manager</li> <li>▶ Finance Director</li> <li>▶ Human Resources Manager</li> <li>▶ Investment Executive</li> <li>▶ Marketing Analyst</li> <li>▶ Medical Transcriptionist</li> <li>▶ Office Manager</li> <li>▶ OSHA/ADA Compliance Officer</li> <li>▶ Personnel Recruiter</li> <li>▶ Public Relations Manager</li> <li>▶ Sales Representative</li> <li>▶ Wholesale and Retail Buyer</li> </ul>
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Adv.	Credits for Fine Arts offerings in Course Description Listings of Booklet	1/2 credit must be Personal Finance (or Ag Sales); Additional credits from Practical Arts offerings in Course Description Listings of Booklet		
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
12		Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp I/Comp II, CC English	**Additional Math Courses will count as electives: Intermediate Algebra, College Algebra, College Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**Additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**Additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Adv. Weight Training, Aerobics				



# UNION HIGH SCHOOL

## Finance program of study

**Finance Career Cluster:** Planning, services for financial and investment planning, banking, insurance, and business financial management

This Career Cluster Plan of Study (based on the Finance Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E.-Girls and Health (1 sem. each)			<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> <b>RECOMMENDED MATH ELECTIVES</b> Pre-Calculus, Calculus, College Algebra <b>Recommended Career and Technical Ed. Courses</b> Accounting I, Supervised Business Exp. VII, College Personal Finance, Computer Applications, Entrepreneurship, Intro to Business, Marketing, Adv. Marketing <b>CERTIFICATION and/or Professional Organizations</b> FBIA (Future Business Leaders of America)	<ul style="list-style-type: none"> <li>▶ Abstractor</li> <li>▶ Accountant</li> <li>▶ Actuary</li> <li>▶ Bill and Account Collector</li> <li>▶ Commodities Representative</li> <li>▶ Controller</li> <li>▶ Credit Analyst</li> <li>▶ Debt Counselor</li> <li>▶ Economist</li> <li>▶ Financial Planner</li> <li>▶ Foreign Exchange Manager</li> <li>▶ Fund Raiser</li> <li>▶ Insurance Broker</li> <li>▶ Internal Auditor</li> <li>▶ Loan Officer</li> <li>▶ Non-Profit Manager</li> <li>▶ Tax Examiner</li> <li>▶ Title Researcher and Examiner</li> <li>▶ Treasurer</li> <li>▶ Trust Officer</li> <li>▶ Underwriter</li> </ul>
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Adv.	Credits for Fine Arts offerings in Course Description Listings of Booklet	1/2 credit must be Personal Finance (or Ag Sales); A dditional credits from Practical Arts offerings in Course Description Listings of Booklet		
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
12		Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp I/Comp II, CC English	**Additional Math Courses will count as electives: Intermediate Algebra, Algebra II, College Algebra, AP Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**A dditional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**A dditional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Adv. Weight Training, Aerobics				



# UNION HIGH SCHOOL

## Government and Public Administration program of study

**Government & Public Administration Career Cluster:** Executing governmental functions to include Governance; National Security; Foreign Service; Planning; Revenue and Taxation; Regulation; and Management and Administration at the local, state, and federal levels.

This Career Cluster Plan of Study (based on the Government and Public Administration Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E.-Girls and Health (1 sem. each)			<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> <b>RECOMMENDED MATH ELECTIVES</b> <b>Recommended Career and Technical Ed. Courses</b> Accounting I, Speech, Computer Applications, Contemporary Issues, Psychology, Sociology <b>CERTIFICATION and/or Professional Organizations</b> Student Council, Speech Team	<ul style="list-style-type: none"> <li>▶ Ambassador</li> <li>▶ Bank Examiner</li> <li>▶ City Manager</li> <li>▶ Combat Control Officer</li> <li>▶ Commissioner</li> <li>▶ Cryptographer</li> <li>▶ Election Supervisor</li> <li>▶ Elected Official</li> <li>▶ Foreign Service Officer</li> <li>▶ Immigration Officer</li> <li>▶ Intelligence Analyst</li> <li>▶ Internal Revenue Investigator</li> <li>▶ Lobbyist</li> <li>▶ National Security Advisor</li> <li>▶ Planner</li> <li>▶ Policy Advisor</li> <li>▶ Tax Policy Analyst</li> </ul>
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Aerobics				
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics	Credits for Fine Arts offerings in Course Description Listings of Booklet	1/2 credit must be Personal Finance (or Agriculture Sales); Additional credits from Practical Arts offerings in Course Description Listings of Booklet		
	12	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp II, CC English	**Additional Math Courses will count as electives: Intermediate Algebra, Algebra II, College Algebra, AP Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**Additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**Additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Aerobics, Weight Training, Girls Weight Training, Aerobics				



# UNION HIGH SCHOOL

## Health Science program of study

**Health Science Career Cluster:** Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development

This Career Cluster Plan of Study (based on the Health Science Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English/ Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
		SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science AND PLTW- Intro to BioMed Science	American History (option for Honors)	P.E.-Boys OR P.E.-Girls and Health (1 sem. each)		
10	English II (option for Honors)		Algebra IB, Geometry or Algebra II	Biology AND PLTW- Human Body Systems	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Adv.	Credits for Fine Art offerings in Course Description Listings of Booklet	1/2 credit must be Personal Finance (or Agriculture Sales); Additional credits from Practical Art offerings in Course Description Listings of Booklet		
11	English III (option for Honors)		Informal Geometry, Geometry, Algebra II, Algebra IIA, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
12	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Environmental English	**Additional Math Courses will count as electives: Algebra II, Algebra IIB, College Algebra, College Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chemistry Lab/Lecture, AP Bio Lab/Lecture, Zoology	**Additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**Additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Adv. Weight Training, Girls Weight Training, Aerobics					



# UNION HIGH SCHOOL

## Hospitality and Tourism program of study

**Hospitality & Tourism Career Cluster:** Encompassing the management, marketing and operations of restaurants and other foodservices, lodging, attractions, recreation events and travel related services.

This Career Cluster Plan of Study (based on the Hospitality and Tourism Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts	Math	Science	Social Studies	P.E./Health	Fine Arts	Practical Arts	Other: Electives and Related Career & Technical Course Options	SAMPLE Occupations Relating to this career
		(4 credits)	(3 credits)	(3 credits)	(3 credits)	(1.5 credits)	(1.0 credit)	(1.0 credit)	(7.5 credits)	
SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E. - Boys OR P.E. - Girls and Health (1 sem. each)	Credits for Fine Arts offerings in Course Description Listings of Booklet	1/2 credit must be Personal Finance (or Ag Sales); A additional credits from Practical Arts offerings in Course Description Listings of Booklet	<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> <b>RECOMMENDED MATH ELECTIVES</b> <b>Recommended Career and Technical Ed. Courses</b> Foods I/II, Culinary Arts I/II, Marketing, Adv. Marketing, Psychology <b>FRCC; Culinary Arts I/II</b> <b>CERTIFICATION and/or Professional Organizations</b> Student Council, FB LA, FCCLA	<ul style="list-style-type: none"> <li>▶ Baker</li> <li>▶ Bartender</li> <li>▶ Casino Manager</li> <li>▶ Caterer</li> <li>▶ Concierge</li> <li>▶ Convention Services Manager</li> <li>▶ Director of Operations - Lodging</li> <li>▶ Director of Tourism Development</li> <li>▶ Event Planner</li> <li>▶ Executive Chef</li> <li>▶ Facilities Manager</li> <li>▶ Maitre d'</li> <li>▶ Museum Director</li> <li>▶ Reservations Manager</li> <li>▶ Restaurant Owner/Manager</li> <li>▶ Sports Promoter</li> <li>▶ Theme Park Manager</li> <li>▶ Tour and Travel Guide</li> <li>▶ Travel Agent</li> <li>▶ Wine Steward</li> </ul>
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Adv.				
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chem Lab/Lecture, Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
	12	Mythology /Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp I/Comp II, CC English	**Additional Math Courses will count as electives: Intermediate Algebra, Algebra II, College Algebra, AP Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**Additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**Additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Adv. Weight Training, Girls Weight Training, Aerobics				



# UNION HIGH SCHOOL

## Human Services program of study

**Human Services Career Cluster:** Preparing individuals for employment in career pathways that relate to families and human needs.

This Career Cluster Plan of Study (based on the Human Services Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E.-Girls and Health (1 sem. each)			<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> Anatomy & Physiology <b>RECOMMENDED MATH ELECTIVES</b> College Algebra <b>Recommended Career and Technical Ed. Courses</b> Child Development I/II, Computer Applications, Psychology, Sociology <b>CERTIFICATION and/or Professional Organizations</b> Student Council, FCCLA	<ul style="list-style-type: none"> <li>▶ Buyer</li> <li>▶ Certified Financial Planner</li> <li>▶ Community Service Director</li> <li>▶ Consumer Advocate</li> <li>▶ Cosmetologist</li> <li>▶ Director of Childcare Facility</li> <li>▶ Emergency and Relief Worker</li> <li>▶ Esthetician</li> <li>▶ Funeral Director</li> <li>▶ Licensed Professional Counselor</li> <li>▶ Market Researcher</li> <li>▶ Massage Therapist</li> <li>▶ Personal Fitness Trainer</li> <li>▶ School Counselor/Psychologist</li> <li>▶ Small Business Owner</li> <li>▶ Social Worker</li> </ul>
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, A ctv.	Credits for Fine Arts offerings in Course Description Listings of Booklet	1/2 credit must be Personal Finance (or Ag Sales); Additional credits from Practical Arts offerings in Course Description Listings of Booklet		
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chem Lab/Lecture, Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
12	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp I/C Comp II, CC English	**Additional Math Courses will count as electives: Intermediate Algebra, Algebra II, College Algebra, AP Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**Additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**Additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, A ctv. Weight Training, Girls Weight Training, Aerobics					



# UNION HIGH SCHOOL

## Information technology program of study

**Information Technology Career Cluster:** Careers relating to the design, development, support and management of hardware, software, multimedia, and systems integration services.

This Career Cluster Plan of Study (based on the Information Technology Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E.-Girls and Health (1 sem. each)	Credits for Fine Arts offerings in Course Description Listings of Booklet	1/2 credit must be Personal Finance (or Agriculture Sales); Additional credits from Practical Arts offerings in Course Description Listings of Booklet	<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> <b>RECOMMENDED MATH ELECTIVES</b> Pre-Calculus, Calculus, College Algebra <b>Recommended Career and Technical Ed. Courses</b> Computer Applications, Web Design, Wildcat Instructional Technology, PLTW- Computer Science Principles, Graphic Design <b>FRCC: Information Technology VII, Graphic Communications VII CERTIFICATION and/or Professional Organizations Career Prep Certificate</b>	<ul style="list-style-type: none"> <li>▶ Animator</li> <li>▶ Database Administrator</li> <li>▶ Data Systems Designer</li> <li>▶ E-Business Specialist</li> <li>▶ Game Developer</li> <li>▶ Information Technology Engineer</li> <li>▶ Media Specialist</li> <li>▶ Network Administrator</li> <li>▶ Network Security Analyst</li> <li>▶ PC Support Specialist</li> <li>▶ Programmer</li> <li>▶ Software Applications Specialist</li> <li>▶ Systems Administrator</li> <li>▶ Telecommunications Network Technician</li> <li>▶ User Support Specialist</li> <li>▶ Virtual Reality Specialist</li> <li>▶ Web Architect/Designer</li> </ul>
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Arch.				
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chem Lab/Lecture, Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
	12	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp I/Comp II, CC English	**Additional Math Courses will count as electives: Intermediate Algebra, Algebra II, College Algebra, AP Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**Additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**Additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Arch., Weight Training, Girls Weight Training, Aerobics				



# UNION high school

## Law, public safety, corrections, & security program of study

**Law, Public Safety, Corrections, & Security Career Cluster:** Planning, managing and providing legal public safety, protective services and homeland security, including professional and technical support services.

This Career Cluster Plan of Study can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
		<b>SECONDARY</b>	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E.- Girls <b>and</b> Health (1 sem.	Credits for Fine Art offerings in Course Description Listings of Booklet	1/2 credit <b>must be</b> Personal Finance (or Agriculture Sales); Additional credits from Practical Art offerings in Course Description Listings of Booklet
10	English II (option for Honors)		Algebra IB, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Adv.				
11	English III (option for Honors)		Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, A P Bio Lab/Lecture, A P Chem Lab/Lecture, Chemistry I, Physics I, Anatomy, Robotics & Design	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
12	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp II, CC English	**Additional Math Courses will count as electives: Intermediate Algebra, College Algebra, AP Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, A P Chem Lab/Lecture, A P Bio Lab/Lecture, Zoology	**Additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**Additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Adv. Weight Training, Girls Weight Training, Aerobics					



# UNION high school

## Manufacturing program of study

**Manufacturing Career Cluster:** 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.

This Career Cluster Plan of Study can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English/ Language Arts (# credits)	Math (\$ credits)	Science (\$ credits)	Social Studies (\$ credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
<b>SECONDARY</b>	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E.- Girls and Health (1 sem.)	Credits for Fine Art offerings in Course Description Listings of Booklet	1/2 credit <b>must be</b> Personal Finance (or Ag Sales); Additional credits from Practical Art offerings in Course Description Listings of Booklet	<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> Chemistry I/II, AP Chem II w/Lab, Environmental Science <b>RECOMMENDED MATH ELECTIVES</b> Pre-Calculus, Calculus, College Algebra <b>Career and Technical Ed. Courses</b> PLTW- Computer Science Principles FRCC: Collision Repair VII, Auto Technology III, Machine Tool VII, Welding Tech III, Building Construction I/II <b>CERTIFICATION and/or Organizations</b> Career Prep Certificate	<ul style="list-style-type: none"> <li>▶ Assembler</li> <li>▶ Boilermaker</li> <li>▶ Design Engineer</li> <li>▶ Environmental Engineer</li> <li>▶ Foundry Worker</li> <li>▶ Freight, Stock and Material Mover</li> <li>▶ Health and Safety Representative</li> <li>▶ Industrial Machinery Mechanic</li> <li>▶ Inspector</li> <li>▶ Labor Relations Manager</li> <li>▶ Logistician</li> <li>▶ Manufacturing Technician</li> <li>▶ Pattern and Model Maker</li> <li>▶ Production Manager</li> <li>▶ Quality Control Technician</li> <li>▶ Safety Engineer</li> <li>▶ SPC Coordinator</li> <li>▶ Tool and Die Maker</li> <li>▶ Traffic Manager</li> <li>▶ Welder</li> </ul>
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Act.				
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chem Lab/Lecture, Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics				
	12	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp I/Comp II, C.C English	**Additional Math Courses will count as electives: Intermediate Algebra, Algebra II, College Algebra, AP Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**Additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**Additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Act., Weight Training, Girls Weight Training, Aerobics				



# Union high school

## Marketing, Sales, & Service program of study

**Marketing, Sales, & Service Career Cluster:** Planning, managing, and performing marketing activities to reach organizational activities.

This Career Cluster Plan of Study can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts	Math	Science	Social Studies	P.E./Health	Fine Arts	Practical Arts	Other: Electives and Related Career & Technical Course Options	SAMPLE Occupations Relating to this career
		(4 credits)	(3 credits)	(3 credits)	(3 credits)	(1.5 credits)	(1.0 credit)	(1.0 credit)	(7.5 credits)	
SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E.- Girls and Health (1 sem.			<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> <b>RECOMMENDED MATH ELECTIVES</b> College Algebra, Statistics <b>Career and Technical Ed. Courses</b> Marketing, Adv. Marketing, Accounting I, Computer Applications, Entrepreneurship, Intro to Business, Scholastic Journalism, Adv. Sales, Speech, Business Management, Marketing Internship, Supervised Business Experience, Web Design <b>CERTIFICATION and/or Organizations</b> DECA, Career Prep Certificate	<ul style="list-style-type: none"> <li>▶ Copy writer/Designer</li> <li>▶ E-Commerce Director</li> <li>▶ Entrepreneur</li> <li>▶ Field Marketing Representative</li> <li>▶ Forecasting Manager</li> <li>▶ Interactive Media Specialist</li> <li>▶ Inventory Manager/Analyst</li> <li>▶ Logistics Manager</li> <li>▶ Merchandise Buyer</li> <li>▶ On-line Market Researcher</li> <li>▶ Public Relations Manager</li> <li>▶ Promotions Manager</li> <li>▶ Retail Marketing Coordinator</li> <li>▶ Sales Executive</li> <li>▶ Shipping/Receiving Clerk</li> <li>▶ Telemarketer</li> <li>▶ Trade Show Manager</li> <li>▶ Warehouse Manager</li> <li>▶ Webmaster</li> </ul>
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Adv.				
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chem Lab/Lecture, Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics		Credits for Fine Art offerings in Course Description Listings of Booklet  1/2 credit <b>must be</b> Personal Finance (or Adv. Sales); Additional credits from Practical Art offerings in Course Description Listings of Booklet		
12	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp I/Comp II, CC English	<b>**Additional Math</b> Courses will count as electives: Intermediate Algebra, Algebra II, College Algebra, AP Statistics, Pre-Calculus, Calculus	<b>**Additional Science</b> courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	<b>**Additional Social Studies</b> courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	<b>**Additional P.E.</b> Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Adv. Weight Training, Girls Weight Training, Aerobics					



# Union high school

## Science, Technology, Engineering, & Mathematics program of study

**Science, Technology, Engineering, & Mathematics Career Cluster:** Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering), including laboratory and testing services, and research and development

This Career Cluster Plan of Study can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts	Math	Science	Social Studies	P.E./Health	Fine Arts	Practical Arts	Other: Electives and Related Career & Technical Course Options	SAMPLE Occupations Relating to this career
		(4 credits)	(3 credits)	(3 credits)	(3 credits)	(1.5 credits)	(1.0 credit)	(1.0 credit)	(7.5 credits)	
SECONDARY	9	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science AND PLTW- Intro to Engineering Design OR P.LTW- Intro to Biomedical Science	American History (option for Honors)	P.E.-Boys OR P.E.- Girls and Health (1 sem. each)	Credits for Fine Art offerings in Course Description Listings of Booklet	1/2 credit <b>must be</b> Personal Finance (or Ag Sales); Additional credits from Practical Art offerings in Course Description Listings of Booklet	<b>Foreign Language</b> (not required for graduation) Spanish I, II, III, and IV German I, II, III, and IV <b>RECOMMENDED SCIENCE ELECTIVES</b> Anatomy & Physiology, Environmental Science, Chemistry I, AP Chem Lab/Lecture, Physics VII, Astronomy, Zoology, AP Biology Lab/Lecture, <b>RECOMMENDED MATH ELECTIVES</b> Pre-Calculus, Calculus, Trigonometry, College Algebra, College Statistics <b>Career and Technical Ed. Courses</b> Computer Applications, Machine Drafting, Marketing, Sociology, PLTW- Computer Science Principles <b>CERTIFICATION and/or Organizations</b> Science Club	<ul style="list-style-type: none"> <li>▶ Aerospace Engineer</li> <li>▶ Agricultural Engineer</li> <li>▶ Analytical Chemist</li> <li>▶ Anthropologist</li> <li>▶ Architectural Engineer</li> <li>▶ Astrophysicist</li> <li>▶ Biomedical Engineer</li> <li>▶ CAD Technician</li> <li>▶ Civil Engineer</li> <li>▶ Computer Programmer</li> <li>▶ Ecologist</li> <li>▶ Geologist</li> <li>▶ Geothermal Engineer</li> <li>▶ Math Teacher</li> <li>▶ Mathematician</li> <li>▶ Metallurgist</li> <li>▶ Statistician</li> <li>▶ Survey Technician</li> <li>▶ Zoologist</li> </ul>
	10	English II (option for Honors)	Algebra IB, Geometry or Algebra II	Biology AND PLTW- Prin. Of Engineering OR PLTW- Human Body Systems	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Adv. Weight Training, Girls Weight Training, Aerobics				
	11	English III (option for Honors)	Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chem Lab/Lecture, Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)					
	12	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP Lit/Comp, Comp V/Comp II, C/C English	**Additional Math Courses will count as electives: Intermediate Algebra, Algebra II, College Algebra, AP Statistics, Pre-Calculus, Calculus	**Additional Science courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry I, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**Additional Social Studies courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**Additional P.E. Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Adv. Weight Training, Girls Weight Training, Aerobics				



# Union high school

## Transportation, Distribution, & Logistics program of study

**Transportation, Distribution, & Logistics Career Cluster:** Planning, management, and movement of people, materials, and goods by road, pipeline air, rail and water and related professional and technical support services, such as transportation infrastructure planning and management, logistics

This Career Cluster Plan of Study can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

EDUCATION LEVELS	GRADE	English Language Arts (4 credits)	Math (3 credits)	Science (3 credits)	Social Studies (3 credits)	P.E./Health (1.5 credits)	Fine Arts (1.0 credit)	Practical Arts (1.0 credit)	Other: Electives and Related Career & Technical Course Options (7.5 credits)	SAMPLE Occupations Relating to this career
		<b>SECONDARY</b>	<b>9</b>	English I (option for Honors)	Algebra IA, Algebra I or Geometry	Physical Science	American History (option for Honors)	P.E.-Boys OR P.E.- Girls and Health (1 sem.		
<b>10</b>	English II (option for Honors)		Algebra IB, Geometry or Algebra II	Biology	World History (option for Honors)	Lifetime Sports, Team Sports, Weight Training, Adv.				
<b>11</b>	English III (option for Honors)		Informal Geometry, Geometry, Algebra II, Intermediate Algebra, Pre-Calculus or College Algebra	Environmental Science, Astronomy, Meteorology, Zoology, AP Bio Lab/Lecture, AP Chem Lab/Lecture, Chemistry I, Physics I, Anatomy, Robotics & Design VII	Government (option for Honors)	Weight Training, Girls Weight Training, Aerobics	Credits for Fine Art offerings in Course Description Listings of Booklet	1/2 credit <b>must be</b> Personal Finance (or Ag Sales); A additional credits from Practical Art offerings in Course Description Listings of Booklet		
	<b>12</b>	Mythology/Modern Novels, Speech, AP Speech, Composition, Scholastic Journalism, AP LWC omp, Comp W/C omp II, CC English	**A dditional <b>Math</b> Courses will count as electives: Intermediate Algebra, Algebra, College Algebra, AP Statistics, Pre-Calculus, Calculus	**A dditional <b>Science</b> courses will count as electives: Environmental Science, Astronomy, Meteorology, Chemistry I, Physics I, Anatomy, Robotics & Design VII, Chemistry II, Physics II, AP Chem Lab/Lecture, AP Bio Lab/Lecture, Zoology	**A dditional <b>Social Studies</b> courses will count as electives: Psychology, Sociology, AP American History, Contemporary Issues/Foreign, Contemporary Issues/Domestic	**A dditional <b>P.E.</b> Courses will count as electives: Lifetime Sports, Team Sports, Weight Training, Adv. Weight Training, Girls Weight Training, Aerobics				

## **COURSE LISTING STATEMENT**

All of the courses listed in this handbook will be offered for the upcoming school year; however, minimum enrollment numbers must be met for each class and a certified teacher available or the course will not “make”.

## LANGUAGE ARTS

Communication skills, consisting of language arts, speech, and world languages, are designed to help students develop skills that will enable them to communicate effectively in the society in which they live. These skills will be acquired by learning to read and to listen with understanding and enjoyment, and to speak and write with clarity and meaning. The student will best learn these skills when they are related to the student and goals in life.

### ***English***

**Read 180** - Year Long Course (*½ credit per semester*)

**Elective Credit**

**H1008**

**Grades: 9, 10**

This is a full-year course for students who are at least two grade levels below in reading ability. While in this course, students will work the Read 180 program. This program consists of whole and small-group guided reading, independent reading time, and the Student Application computer program. Students' progress will be monitored throughout the school year, and students who test proficient in designated reading assessments will be allowed to test out of the program at the end of the semester or school year. This course is designed for freshmen and sophomores, and it is taken for **elective credit**.

**English I Honors** - Year Long Course (*½ credit per semester*)

**English Credit**

**H1011**

**Grade: 9**

**Prerequisite: Written recommendation from English instructor at Middle School, grade of "A" in 8<sup>th</sup> grade English, if available, testing scores will be used, and departmental approval.**

This full-year advanced course is for ninth-grade students. Students will enhance their reading comprehension, analysis, and vocabulary skills through various reading benchmarks, independent novel readings, and vocabulary quizzes. Students will compose analytical and thematic essays relating to their readings while continuing to reinforce and improve upon grammar, sentence structure, and basic mechanical skills like usage and punctuation. Shorter and more sustained research will be required, and MLA format and citation will be reinforced. Student enrollment is determined through examination of test score data, previous English grades, and teacher recommendations. Independent novel readings and assignments to be completed outside of class are expected, and a summer reading assignment will be required.

**All Honors students scoring below a C- at semester are subject to a grade review and possible change of placement to English 1.**

**\*REQUIRED SUMMER READING**

**English I** - Year Long Course (*½ credit per semester*)

**English Credit**

**H1010**

**Grade: 9**

This full year course is required for ninth grade students. Students are expected to have mastered usage and mechanics before high school. Students are expected to apply the basic language skills of grammar, usage, punctuation, sentence structure, paragraph writing, spelling, and vocabulary. This course examines a variety of genres including short stories, poetry, drama, nonfiction, and novels. Students will write a variety of essays, letters, journal entries, and research papers to improve writing, identify weakness, and explore a variety of writing genres. Students will complete independent projects throughout the semester.

**English II Honors** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**English Credit**

**H1022**

**Grade: 10**

**Prerequisite: Must have earned a “B” in English I Honors or “A” in English I, if available, testing scores will be used, and departmental approval.**

The material covered is similar to the material covered in English II, but works will be examined in more depth. Additionally, students will be expected to complete additional exercises and assignments. Students will study world literature and its various genres, including the short story, drama, nonfiction, poetry, and the novel. Students will write several multi-paragraph essays and complete a persuasive research essay which includes both written and oral presentations. Special problems with pronoun usage, subject-verb agreement, sentence structure, etc. will be taught through composition exercises and reviewed on an as-needed basis. Student enrollment will be determined through an examination of test score data, previous English course grades, and teacher recommendations.

**All Honors students scoring below a C- at semester are subject to a grade review and possible change of placement to English II.**

**\*REQUIRED SUMMER READING**

**English II** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**English Credit**

**H1020**

**Grade: 10**

**Prerequisite: English I**

This is a required course for tenth grade students. The course will include a study of world literature and its various genres, including the short story, drama, nonfiction, poetry, and the novel. Students will write several multi-paragraph essays and complete a career report involving research and written and oral presentations. Special problems with pronoun usage, subject-verb agreement, sentence structure, etc. will be taught through composition exercises and reviewed on an as-needed basis.

**English III Honors** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**English Credit**

**H1031**

**Grade: 11**

**Prerequisite: Must have earned a "B" in English Honors II or an "A" in both semesters of English II. A timed, in-class essay the first week of school will also determine eligibility.**

This is an advanced course for eleventh grade students. The material covered is similar to the material covered in English III, but works will be examined in more depth. Additionally, students will be expected to complete additional exercises and assignments. Students will study American literature, its influence on philosophical and political ideals, and its various genres: the short story, drama, nonfiction, poetry, and the novel. Students will write many literary analysis essays, scholarship essays and multi-genre research papers. Student enrollment will be determined through an examination of test score data, previous English course grades, and teacher recommendations.

**All Honors students scoring below a C- at semester are subject to a grade review and possible change of placement to English III.**

**\*REQUIRED SUMMER READING**

**English III** - Year Long Course (*½ credit per semester*)

**English Credit**

**H1030**

**Grade: 11**

**Prerequisite: English I and English II**

This course is required for juniors. The student will analyze and interpret the history, traditions, and philosophies evident in different periods of fiction and nonfiction American Literature. The students will produce a variety of written work that will reflect their knowledge of American Literature. Usage review and vocabulary studies will be included. In preparation for MAP testing, this course will emphasize written analytical responses that include textual support. One paper of analysis using research and documentation is also required. All major papers must be typed.

**Creative Writing** - Semester Course (*½ credit*)

**English or Elective Credit**

**H10281**

**Grades: 11, 12**

Students create original essays, poems, and short stories in this semester course. They read professionally written forms of creative writing as models and then integrate their impressions of these works with their personal life experiences as they compose their own writing projects. Students are encouraged to write about topics they find engaging as they practice writing on various themes. After students turn in each assignment, the teacher supplies detailed suggestions for revision. Students will perform a dramatic reading of a poem or an excerpt of a short story each quarter.

**Applied Career English** - Year Long Course (*½ credit per semester*)

**English or Elective Credit**

**H1037**

**Grades: 11, 12**

This course offers students an introduction to the practical aspects of writing documents for college and career readiness. Emphasis will be placed on using technology to create resumes, cover letters, and other forms of technical writing. Students will also participate in a professional interview with a local business leader. Students will strengthen their communication and writing skills through a review of grammar, usage, spelling, and vocabulary. Selected reading materials will strengthen reading levels and help students connect to real-life applications. Students will also enhance their professional skills through a variety of hands-on group activities.

**Literature and Society** - Semester Course (½ credit)

English or Elective Credit

H1046

Grades: 11, 12

This course will utilize various media from multiple genres, including literary texts, scholarly resources, relevant news formats, documentaries, etc., as the foundation for the discussion and evaluation of contemporary social issues. Students will be expected to analyze various social issues, convey understanding, and demonstrate real-world application through collaborative discussion, research projects, writing tasks and multimedia presentations.

**English Comp. I (Sem. 1)** - Semester 1 Course (½ credit)

English or Elective Credit

H1056

Grades: 11, 12

**Prerequisite: Students must have at least a 3.0 GPA. If students have a GPA between 2.5 and 2.9, they must score appropriately on the Accuplacer test. No student can get college credit if GPA is below a 2.5.**

Comp I is open to juniors and seniors who are capable of writing at the college freshman level and have demonstrated such ability in previous courses. Enrolling students can expect to study various modes of rhetoric and explore logical fallacies. An intense grammar review will also be a part of this course. Students will compose at least five argumentative essays (one that requires research) and provide drafts of these essays as well. While students can enroll in this course and not get college credit, it's highly recommended to get instructor approval beforehand. This course transfers to the majority of Missouri public colleges (as well as many out-of-state colleges). The cost of tuition is at the student's expense, but there are scholarships available if a student needs assistance.

**English Comp. II (Sem. 2)** - Semester 2 Course (½ credit)

English or Elective Credit

H1057

Grades: 11, 12

**Prerequisite: Students must have scored a “C” or better in ECC Dual Credit Comp I (70%).**

English Composition II is a second course in composition focused on in-depth critical thinking, reading, and writing. Students will write analytically, utilizing argumentation and research skills while examining a wide range of literature (short stories, short novels and plays). A literature-based research paper will be a component of this course, along with shorter literary analysis essays.

While students can enroll in this course and not get college credit, it's highly recommended to get instructor approval beforehand. This course transfers to the majority of Missouri public colleges (as well as many out-of-state colleges). The cost of tuition is at the student's expense, but there are scholarships available if a student needs assistance.

**World Lit. I (Sem. 2)** - Semester 2 Course (½ credit)

**English or Elective Credit**

**H1053**

**Grades: 11, 12**

**Prerequisite: Students must have scored a “C” or better in ECC Dual Credit Comp I (70%)**

This course is designed to strengthen students’ skills in the **discussion** of literary classics and in writing about great literature. **Poetry**, short stories, novels and plays will be explored from various countries (Germany, Russia, Poland, South America, etc.) Discussion board responses and creative presentations will also be a component of this course. While students can enroll in this course and not get college credit, it's highly recommended to get instructor approval beforehand. This course transfers to the majority of Missouri public colleges (as well as many out-of-state colleges). The cost of tuition is at the student's expense, but there are scholarships available if a student needs assistance.

**Greek Mythology** - Semester Course (½ credit)

**English or Elective Credit**

**H1033**

**Grade: 12**

This semester-long course is designed as an opportunity for seniors to complete part of the four English credits required for graduation. Students will examine Greek and Roman myths as a way of exploring the nature of myth and the function it plays for individuals, societies, and nations. Major archetypes, or recurring patterns in mythology, are studied and applied to contemporary literature and the arts. Vocabulary connections between the English language and mythology will also be examined. Students will read in groups and independently and complete a variety of writing assignments and group projects/presentations.

**World Mythology** - Semester Course (½ credit)

**English or Elective Credit**

**H1034**

**Grade: 12**

This semester-long course is designed as an opportunity for seniors to complete part of the four English credits required for graduation. The course covers the purposes and types of myths; development of myths and mythological characters; the common elements of mythological structures; the predominant characteristics of heroes in myth; the conflicts heroes encounter, and how ancient heroes relate to heroes today. Students will examine a variety of myths from different cultures, including Norse, Egyptian, African, Asian, and First Nations with the goal of developing and increasing their understanding and appreciation of other cultures. Students will read in groups and independently and complete a variety of writing assignments and group projects/presentations.

**Popular Literature: Fantasy, Sci-Fi, and Horror** - Semester Course (½ credit)

**English or Elective Credit**

**H1038**

**Grade: 12**

This semester-long course is designed as an opportunity for seniors to complete part of the English credits for graduation. It will examine a variety of popular literature in the genres of fantasy, science fiction, dystopian, and horror (school-appropriate). Students will explore various texts within these

genres, analyze their themes and elements, and engage in critical discussions and written assignments. Authors may include Ray Bradbury, Isaac Asimov, Neil Gaiman, Shirley Jackson, Stephen King, and Cormac McCarthy. This course aims to foster a love for reading while preparing students for college and beyond.

**Yearbook** - Year Long Course (*½ credit per semester*)

**English Credit (Seniors Only) or Elective Credit**

**H1071**

**Grade: 9, 10, 11, 12**

**Prerequisite: Instructor approval**

**(This course number is for Seniors only. They will receive an English credit for this course. Underclassmen use course code H1070 for Elective Yearbook credit.)**

This course helps produce The American, the Union High School yearbook. In this course, students will gain skills in the following areas: page design, publishing techniques, copywriting, editing, photography, record keeping, time management, teamwork, marketing, and leadership skills. Students are tasked with producing a timeless and creative multimedia publication that will record our school's community, memories, and events. Due to the nature of publishing deadlines, students may be expected to work periodically after school and to attend extracurricular events.

## **Speech**

**Speech** - Year Long Course (*½ credit per semester*)

**English or Elective Credit**

**H1510**

**Grades: 10, 11, 12**

This course provides students with the opportunity to practice oral communication in a variety of speaking situations as they present informative speeches, demonstrations, persuasive speeches, impromptu speeches, and entertainment speeches. The students will learn to control stage fright, and they will learn to demonstrate proper speaking techniques needed for college speech classes, business presentations, or any situations requiring good communication skills. Students will also find that they learn to improve their writing skills as they research topics, organize information, and present ideas in an effective manner.

- This course (when counted as a language arts credit) will meet the language arts requirement for high school graduation and can also help students meet the four-unit language arts requirement for admission to Missouri's colleges and universities.

**College Speech** - Semester Course (*½ credit*)

**English or Elective Credit**

**H1511**

**Grades: 11, 12**

**Prerequisite: Speech or Instructor permission**

**(Students must have at least a 3.0 GPA. If students have a GPA between 2.5 and 2.9, they must score appropriately on the Accuplacer test. No student can get college credit if GPA is below a 2.5.)**

An advanced study and application of the elements of public speaking. This course addresses how an effective oral presentation is developed and delivered through the principles and techniques of effective speaking and listening in a variety of communication experiences. Students will acquire strategies for overcoming anxiety and gaining confidence as well as audience analysis. Extensive opportunities will be provided- including the presentation of speeches, preparation of outlines, and discussion of evaluation techniques. **Dual Credit through ECC (3 credit hours)**

## WORLD LANGUAGE

Union High School offers the opportunity for students to learn German or Spanish. The knowledge of a world language is an invaluable tool for future success in a multilingual society. *Although world language is not required for high school graduation, many colleges and universities require 2 years of the same language for admittance to an unrestricted program.*

### **Spanish**

**All four levels of Spanish classes are one to one with ChromeBooks. They use an E-textbook, Google classroom and other web based programs to facilitate learning. The students are expected to use the ChromeBooks in class to complete classwork, quizzes and tests as well as practice activities. If a student does not have internet access at home, copies, notes, grammar, etc. may be provided.**

**Spanish I** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Elective Credit**

**H1210**

**Grades: 9, 10, 11**

**Prerequisite: "C" average or better in English**

The student is introduced to the Spanish language by learning the four fundamental skills: reading, writing, listening, and speaking. Students will study Spanish culture, including customs, songs, and history.

**Spanish II** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Elective Credit**

**H1220**

**Grades: 10, 11, 12**

**Prerequisite: "C" average or better in Spanish I or teacher approval**

The student will continue studying the four basic skills: reading, writing, listening, and speaking. There will be emphasis on conversational Spanish and on more developed composition and grammar.

**Spanish III** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Elective Credit**

**H1230**

**Grades: 11, 12**

**Prerequisite: "C" average or better in Spanish II or teacher approval**

Students will continue to build their knowledge of the basic skills for communication. They will continue the study of grammar. **Grades for this course are weighted.**

**Spanish IV** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Elective Credit**

**H1240**

**Grade: 12**

**Prerequisite: “C” average or better in Spanish III or teacher approval**

Spanish IV will focus on Spanish and Latin American literature. Students will be expected to communicate in Spanish, using both oral and written communication. We will also be studying more advanced grammar skills. **Grades for this course are weighted.**

## **German**

**German I** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Elective Credit**

**H1410**

**Grades: 9, 10, 11**

**Prerequisite: “C” average or better in English**

The student is introduced to the German language by learning the four fundamental skills: reading, writing, listening, and speaking. Students will study the culture and geography of the German-speaking world.

**German II** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Elective Credit**

**H1420**

**Grades: 10, 11, 12**

**Prerequisite: “C” average or better in German I or teacher approval**

German II will continue to study and use the four basic skills of speaking, listening, reading, and writing. The skills and material learned in German I will continue to be enhanced and used to broaden the student’s knowledge of German. There will be more emphasis placed on actively using the language. Students will continue to study the culture of the country, including such things as customs, festivals, and holidays.

### **UPPER-LEVEL GERMAN - 3rd and 4th Year**

**German III and IV are taught in a combined class in an A-Year, B-year format. The class covers different materials each year in a format to allow for different levels of proficiency among students. Students will receive credit for German III or IV based on their years of study.**

German III and IV will use the students’ knowledge of the four skills and use them to continue their study of German. The focus will be on more advanced conversation and writing, using a variety of textural materials. The students will continue to broaden their knowledge of grammar and vocabulary.

The class will use various readings and literary selections as the basis for conversation and writing activities. Topics to be covered include geography, history, literature, film and current events as they deal with the German-speaking world.

**German III** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Elective Credit**

**H1430**

**Grades: 11, 12**

**Prerequisite: "C" average or better in German II or teacher approval**

See above for the course description. **Grades for this course are weighted.**

**German IV** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Elective Credit**

**H1440**

**Grade: 12**

**Prerequisite: "C" average or better in German III or teacher approval**

See above for the course description. **Grades for this course are weighted.**

## **MATHEMATICS**

The importance of mathematics in our scientific world of today cannot be overemphasized. Students should choose the level of mathematics they will need to complete their long-range plans. Students who are planning to continue their education upon completion of their high school work are strongly urged to register for mathematics classes that will prepare them for their future education. The basic enrollment standard for college requires Algebra II. **When registering for classes, all math classes need a signature from the current math teacher.**

**Foundations of Algebra** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math Credit**

**H2111**

**Grade: 9**

**Prerequisite: Only with 8<sup>th</sup> grade Math Teacher Approval**

This introductory course in Algebra will focus on building the skills necessary to succeed in Algebra I. This course will prioritize properties and operations of the real number system and algebraic methods to develop problem-solving skills. Linear and nonlinear equations in one and two variables and functions will be explored. In addition, high-order thinking skills will be used to develop reasoning in these areas to meet the needs of more advanced coursework.

**Algebra I** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math Credit**

**H2210**

**Grades: 9, 10**

**Prerequisite: C or higher in 8th Grade Math and/or 8<sup>th</sup> grade Math Teacher Approval**

This introductory course in Algebra is designed to emphasize the study of multiple representations of linear and nonlinear functions. It includes mathematical concepts for working with rational numbers, various expressions, analyzing and solving linear equations & inequalities, data analysis, probability, statistics, and polynomials. It is designed to help the student meet higher-order thinking skills and develop reasoning and communication skills applicable to any discipline. Students will take the Algebra 1 End of Course Exam (EOC) upon completion of this course. To remain eligible for the A+ program, students must score proficient or advanced on the EOC.

**Informal Geometry** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math Credit**

**H2211**

**Grades: 10, 11**

**Prerequisite: Algebra I and recommendation from current math teacher.**

Informal geometry is a year-long course, which focuses on learning geometric concepts through hands-on activities, visualization exercises, cooperative learning activities and discussion exercises. Connections are made to algebra, probability, statistics and the real world through applications and laboratory activities.

**Geometry** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math Credit**

**H2215**

**Grades: 9, 10, 11**

**Prerequisite: Algebra I and recommendation from current math teacher.**

This course is designed to promote logical thought processes with an emphasis on theorems and proofs. It includes the study of areas and volumes of special solids, right triangle relationships and algebraic applications in coordinate geometry.

**Intermediate Algebra** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math Credit**

**H2224**

**Grades: 11, 12**

**Prerequisite: Algebra I and Geometry (or their equivalents) and recommendation of current math teacher.**

This course expands on the Algebra I concepts of the real number system, expressions, linear equations and functions, exponents, and systems of equations. This course also introduces the Algebra II concepts of quadratic and polynomial functions. Completion of this course will prepare a student for Algebra II.

**Algebra II** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math Credit**

**H2220**

**Grades: 10, 11, 12**

**Prerequisite: Geometry/Informal Geometry or Intermediate Algebra with a “C” or better average.**

This is an important course for college-bound students and those wanting to advance into higher-level mathematics. The topics covered in this course will include linear, quadratic, exponential, logarithmic, polynomial, rational, and radical functions. Also systems of equations and inequalities, complex numbers, probability, statistics, and matrices.

**College Prep Math** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math or Elective Credit**

**H2402**

**Grades: 11, 12**

**Prerequisite: Algebra II and recommendation of current math teacher.**

This course is intended for students who are working toward college-level math courses but don't qualify or don't wish to take a dual enrollment course at this time. This course will strengthen students' math abilities to make them more likely to succeed in subsequent college-level math courses. The primary focus of this course will be to prepare students for College Algebra, but the course will also incorporate some preparation for Precalculus, Trigonometry, and Statistics. Topics of study will include functions, inverses, matrices, quadratics, radical and rational expressions, exponents, logarithms, right triangle trigonometry, the unit circle, and statistics.

**Applied Math** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math or Elective Credit**

**H2403**

**Grade: 12**

**Prerequisite: Recommendation of current math teacher**

Applied Math is designed for students with an interest in learning the math associated with real-world situations. Students will learn how to apply the fundamental skills of mathematics in real-world applications. These applications include skills such as the ability to calculate the costs involved in shopping, utilizing ratios and proportions for nutrition and food preparation, calculating the costs associated with buying and maintaining a residence and car, and cost and planning associated with travel and recreation.

**Mathematical Ideas 1** - Semester 1 Course ( $\frac{1}{2}$  credit)

**Math or Elective Credit**

**H2404**

**Grades: 11, 12**

**Prerequisite: Intermediate Algebra or Algebra II and recommendation of current math teacher.**

Mathematical Ideas 1 is a semester math elective course that will study mathematical concepts and ideas not traditionally found in the high school math curriculum. This course will study the mathematics hidden in the world around us. The content may include using math reasoning to find patterns in math puzzles, using set theory to study ad tracking, blood typing, and facial recognition, studying logic to understand how computer programs work, investigate graph theory to plan public transportation and study virus spread, learning the history of number systems including babylonian, chinese, Mayan, and Hindu-Arabic, understanding UPC codes and cyber security.

**Mathematical Ideas 2** - Semester 2 Course ( $\frac{1}{2}$  credit)

**Math or Elective Credit**

## H2405

**Grades: 11, 12**

**Prerequisite: Intermediate Algebra or Algebra II and recommendation of current math teacher.**

Mathematical Ideas 2 is a semester math elective course that will study mathematical concepts and ideas not traditionally found in the high school math curriculum. This course will study the mathematics hidden in the world around us and also provide an insight into what mathematics has to offer beyond algebra and geometry. The content may include using algebraic models to study and improve our world, understanding taxes, loans, and annuities, studying geometry involved in architecture and surveying, examining fractals to model pollution, irregular heartbeat, and the stock market, learning about voting methods and fairness, studying probability and chance in gambling and lotteries, and use statistics to make wise investments.

**Accelerated College Algebra** - Semester 1 Course ( $\frac{1}{2}$  credit)

**Math or Elective Credit**

## H2498

**Grades: 11, 12**

**Prerequisite: Algebra II with a “C” or better average is recommended and signature of the current math teacher.**

This class concentrates on the study of properties and graphs of polynomial, logarithmic, and exponential functions. Solutions of various polynomial, rational, radical, exponential and logarithmic equations and inequalities will be studied, as well as solutions to systems of inequalities. If time permits, sequences and series will also be topics of study. The pace of the class will be comparable to a college course. **Qualified students may enroll for 3 college credit hours through dual enrollment with East Central College.**

**Pre-Calculus Trig** - Semester 2 Course ( $\frac{1}{2}$  credit)

**Math or Elective Credit**

## H2499

**Grades: 11, 12**

**Prerequisite: Accelerated College Algebra or College Algebra and recommendation of current math teacher.**

This course completes a student's preparation for a sound course in calculus. It involves an in-depth study of polynomial, rational, and trigonometric functions; complex numbers; parametric equations, and discrete mathematics. It also introduces the student to limit theory, integration, and derivation practices. **Qualified students may enroll for 2 college credit hours through dual enrollment with East Central College.**

**AP Calculus AB** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math or Elective Credit**

## H2503

**Grade: 12**

**Prerequisite: Pre-Calculus and recommendation of current math teacher.**

This course is an in-depth study of analytic geometry, differential calculus, and integral calculus. Topics discussed include functions, limits, continuity, derivatives, differentiation, antiderivatives and the definite integral.

**Qualified students may enroll for 5 college credit hours through dual enrollment with East Central College.**

**The AP exam can be taken. Depending on the exam score, up to 6 hours of college credit can be earned at the discretion of the college of choice for that student.**

**College Algebra** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math or Elective Credit**

**H2700**

**Grades: 11, 12**

**Prerequisite: Algebra II with a “C” or better average and recommendation of current math teacher.**

This class concentrates on the study of properties and graphs of polynomial, logarithmic, and exponential functions. Solutions of various polynomial, rational, radical, exponential and logarithmic equations and inequalities will be studied, as well as solutions to systems of inequalities. If time permits, sequences and series will also be topics of study. The pace of the class will be comparable to a college course. **Qualified students may enroll for 3 college credit hours through dual enrollment with East Central College.**

**AP Statistics** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math or Elective Credit**

**H2107**

**Grades: 11, 12**

**Prerequisite: Algebra II with a “C” or better average and recommendation of current math teacher.**

Statistics is an area of mathematics that is neglected in high school but is relevant in many areas—economics, psychology, manufacturing/quality control, and marketing, to name a few. It requires a facility with numbers, and will serve as an elective course for highly motivated, high achieving students. Advanced Algebra skills are required for successful completion of this course, which includes descriptive statistics, probability, normal distribution, and testing hypotheses. **Qualified students may enroll for 3 college credit hours through dual enrollment with East Central College.**

## SCIENCE

The Science department includes the physical and biological sciences. Introductory and advanced level courses are offered. Students should look closely at available classes here, even if their plans do not lead directly to a scientific career. Many areas of study require science classes as prerequisites and students definitely planning scientific careers should take all offered classes.

**Integrated Science** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Science Credit**

**H3000**

**Grade: 9**

**Prerequisite: Consideration for enrollment is based upon recommendation of the 8th grade science teacher.**

Integrated Science will follow the same course description as Physical Science with reading level considerations made in content, textbook selection, and laboratory procedure.

**Physical Science** - *Year Long Course (½ credit per semester)*

**Science Credit**

**H3010**

**Grade: 9**

Physical Science is an introductory course to the concepts of chemistry and physics. It covers atomic theory, physical and chemical properties of matter, Conservation of Matter, energy transformations, thermodynamics, linear motion, forces, Newton's laws, energy, and nuclear properties. Lab experiences, scientific inquiry, and problem-solving are used to emphasize scientific concepts. This course serves as a foundation for the study of other sciences.

**Principles of Biology** - *Year Long Course (½ credit per semester)*

**Science Credit**

**H3302**

**Grades: 10, 11, 12**

**Prerequisite: Current Science Teacher Approval**

Principles of Biology will use laboratory exercises, hands-on activities, and lectures to teach the big ideas of Biology. Specific areas of study include biochemistry, cellular biology, DNA, genetics, ecology, evolution, sustainability, and human impact on the environment. Students will take the Missouri Biology End of Course Exam at the completion of the course.

**Biology** - *Year Long Course (½ credit per semester)*

**Required Science Credit**

**H3310**

**Grades: 9, 10, 11, 12**

**Prerequisite: Completion of Physical Science OR an "A" in 8th grade science IN ADDITION TO an "A" in 8th grade math OR a "B" in 2nd Semester of Algebra I and current Science Teacher Approval.**

Biology examines the various types of living things and the processes which occur within them. Some specific areas studied include: biochemistry, cellular biology, photosynthesis and respiration, genetics, ecology, and evolution. Laboratory experiments supplement the areas studied. Students will take the Missouri Biology End of Course Exam at the completion of this course.

**Geology** - *Semester Course (½ credit)*

**Science or Elective Credit**

**H3315**

**Grades: 11, 12**

**Prerequisite: Successful completion of Biology.**

This is a semester-long course that provides students an opportunity to discover what science is about without moving into highly theoretical and mathematical studies. Many of the basic concepts of science

will be investigated, including the structure of matter and the application of science to the environment and to society. This course uses biology and science as a platform for understanding the environment and environmental issues.

**Astronomy** - Semester Course ( $\frac{1}{2}$  credit)

Science or Elective Credit

H3314

Grades: 11, 12

This course will cover the topics and concepts of astronomy including, planetary science, stars, constellations, astronomical distances and measurement, and methods of study and travel. This course will incorporate the sciences of chemistry and physics, and mathematics as applied to space.

**Zoology** - Semester Course ( $\frac{1}{2}$  credit)

Science or Elective Credit

H3504

Grades: 11, 12

**Prerequisite: Successful completion of Biology**

This semester course will examine taxonomy, invertebrates, and vertebrates. Topics include classification of animals, evolution, the anatomy and physiology of animal phyla and some classes. This course includes dissections.

**\*Dual Credit AP Biology Lecture** - Year Long Course ( $\frac{1}{2}$  credit per semester)

Science or Elective Credit

H3331

Grades: 10, 11, 12

**Prerequisite: Grades of “B” or better (or a “C” or better and signature of instructor) in Biology. Past or concurrent enrollment in Chemistry I. Concurrent enrollment in AP Biology Lab (H3332) is required and current Science teacher approval.**

**\*indicates this is a weighted course.**

AP Biology Lecture is a rigorous college-level course designed for students interested in pursuing college majors in the life sciences and careers such as medicine, biomedical engineering, and/or biological research. This course will investigate the chemical composition of cellular structure and function, how chemical and cellular structure corresponds to function of organisms, the basis of genetics and heredity, current biotechnology, as well as the fundamentals of ecology, evolution, and plant/animal form and function. A significant amount of studying must be completed at home to allow time for discussion, labs, and inquiry during class time. This course places a greater emphasis on scientific and analytical thinking than in previous biology classes. **Additionally, this course will prepare students to take the Advanced Placement Exam in Biology (administered in May) and is also offered as dual credit through Missouri Baptist University (3 credits of General Biology BIOL 113 for Biology Majors). Students are required to enroll in AP Biology Lecture and Lab AP Course concurrently.**

**\*Dual Credit AP Biology Lab** - Year Long Course ( $\frac{1}{2}$  credit per semester)

Science or Elective Credit

H3332

Grades: 10, 11, 12

**Prerequisite: Grades of “B” or better (or a “C” or better and signature of instructor) in Biology & Chemistry I. Concurrent enrollment in AP Biology Lecture (H3331) is required and current Science teacher approval signature is required.**

**\*indicates this is a weighted course**

AP Biology Lab is a college-level laboratory course designed for students interested in pursuing college majors in the life sciences and careers in medicine, biomedical engineering, and/or biological research. This course will emphasize the concepts in AP Biology Lecture with scientific investigations using current biotechnology. The process of analytical thinking and scientific writing will be emphasized. This course will prepare students to take the Advanced Placement Exam in Biology and is also offered as dual credit through Missouri Baptist University (1 credits of BIOL 1245-Principles of Biology 1 LAB for Biology Majors). **Additionally, this course will prepare students to take the Advanced Placement Exam in Biology (administered in May) and is also offered as dual credit through Missouri Baptist University (1 credits of General Biology Laboratory BIOL 111 for Biology Majors). Students are required to enroll in AP Biology Lecture and Lab AP Course concurrently.**

**Forensic Biology** - Semester Course ( $\frac{1}{2}$  credit)

**Science or Elective Credit**

**H3333**

**Grades: 10, 11, 12**

**Prerequisite: Current enrollment or past completion of Biology**

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

**Diseases and Medicine through History** - Semester Course ( $\frac{1}{2}$  credit)

**Science or Elective Credit**

**H3334**

**Grades: 10, 11, 12**

**Prerequisite: Current enrollment or past completion of Biology**

In this course, students will learn about viruses, bacteria, parasites, and the prominent infectious diseases that spread through populations and lead to outbreaks of epidemics. At the end of the course, the focus will shift to prevention of and solutions to control various current emerging diseases. This course will include some lab work and will develop the skills necessary to cultivate and study bacteria in the laboratory.

**MO Ecology and Conservation** - Semester Course ( $\frac{1}{2}$  credit)

**Science or Elective Credit**

**H3335**

**Grades: 10, 11, 12**

**Prerequisite: Successful completion of Biology**

In this course, students will understand the impact of ecology on Missouri specifically and the world through hands-on activities exploring the ecosystems around our school, in our community, and in our state. This course requires outdoor laboratory experiences and science journaling. This course will promote strong problem-solving skills in dealing with conservation on the local, state, national, and worldwide levels.

**Principles of Chemistry** - Year Long Course (*½ credit per semester*)

**Science or Elective Credit**

**H3406**

**Grades: 10, 11, 12**

**Prerequisite: Current Science Teacher signature.**

Principles of Chemistry will focus on the everyday application of chemistry in everyday life through the concepts of matter and its structure, writing chemical formulas, balancing chemical equations, and hands-on problem solving activities and laboratory exercises. This course has occupational relevance and helps students see the chemistry that happens around them daily.

**Chemistry I** - Year Long Course (*½ credit per semester*)

**Science or Elective Credit**

**H3410**

**Grades: 9 (if concurrently enrolled in Biology), 10, 11, 12**

**Prerequisite: Successful completion of Algebra I and signature of current math and science instructor. Current math and science grade must be a “C” or better**

Chemistry I is designed to provide students with a foundational understanding of the fundamental principles and concepts that govern the behavior of matter. Throughout the academic year, students will explore the building blocks of our universe, from the smallest particles to the vast complexities of chemical reactions. Topics covered include Atomic Structure, Periodicity, States of Matter, Intermolecular Forces, Chemical Bonding, Chemical Nomenclature, Chemical Reactions, Stoichiometry, and Solutions. Students will have the opportunity to engage in hands-on experiments, fostering critical thinking and problem-solving skills. Students will also have the chance to showcase their understanding through individual and group projects.

**\*Dual Credit AP Chemistry Lecture** - Year Long Course (*½ credit per semester*)

**Science or Elective Credit**

**H3422**

**Grades: 11, 12**

**Prerequisite: Chemistry I with a “B” or better and Algebra II. Concurrent enrollment in AP Chemistry Lab is required and current Science teacher signature.**

**-9 hours of credit**

**-Credit is through MO State**

**\*indicates this is a weighted class**

In the AP Chemistry Lecture, students are immersed in a rigorous and intellectually stimulating environment that goes beyond the traditional high school chemistry curriculum. This advanced placement course provides a comprehensive exploration of chemical principles covering topics such as atomic theory, chemical bonding, thermodynamics, kinetics, and equilibrium. The course challenges students to think critically and analytically. The lectures not only delve into theoretical concepts but also emphasize the application of these principles in real-world scenarios. Through the AP Chemistry Lecture, students develop a deep understanding of the subject matter, honing their problem-solving skills and preparing them for the challenging AP Chemistry exam. The course fosters a passion for scientific inquiry, laying a solid foundation for further studies and future pursuits in the fields of chemistry and beyond.

**This is an Advanced Placement course that prepares the student to take the Advanced Placement Exam in May. In addition, this course is offered as dual credit through Missouri State University for 9 hours of college credit. This includes 4-hour General Chemistry I Lecture (CHM160), 3-hour General Chemistry II Lecture (CHM170). (Students are required to enroll in AP Chemistry Lab as well, which earns an additional 2 hours of college credit)**

**Students successfully completing AP Chemistry Lecture and Lab will earn 9 hours of college credit through Missouri State University.**

**\*Dual Credit AP Chemistry Lab - Year Long Course (½ credit per semester)**

**Science or Elective Credit**

**H3423**

**Grades: 11, 12**

**Prerequisite: Chemistry I with a “B” or better and Algebra II. Concurrent enrollment in AP Chemistry Lecture is required and current Science teacher signature.**

**\*indicates this is a weighted class**

In the AP Chemistry Lab, students engage in hands-on, inquiry-based experiments designed to complement and enhance the theoretical concepts covered in the AP Chemistry curriculum. This advanced placement laboratory course provides a unique opportunity for students to apply their understanding of chemical principles in a practical setting. From meticulous titrations to complex equilibrium reactions, students develop essential laboratory skills, precision in measurement, and an appreciation for the scientific method. The AP Chemistry Lab experience not only reinforces theoretical knowledge but also cultivates critical thinking and problem-solving abilities crucial for success in higher-level science courses and scientific research. The emphasis on experimental design, data analysis, and drawing meaningful conclusions prepares students for the laboratory component of the AP Chemistry exam and instills a deep appreciation for the experimental foundations of the chemical sciences.

**This is an Advanced Placement course that prepares the student to take the Advanced Placement Exam in May. In addition, this course is offered as dual credit through Missouri State University for 2 hours of college credit. This includes 1-hour General Chemistry I Lab (CH161) and 1-hour General Chemistry II Lab (CH171).**

**Students successfully completing AP Chemistry Lecture and Lab will earn 9 hours of college credit through Missouri State University.**

**Physics I - Year Long Course (½ credit per semester)**

## Science or Elective Credit

H3500

Grades: 10, 11, 12

**Prerequisite: Algebra II with a “C” or better average or concurrent enrollment and signature of the current math or science teacher.**

Physics I is a problem-solving approach to applied mathematics and science principles. Topics of discussion included are constant and accelerated motion, forces, vectors, gravitation, momentum, work and power, energy and rotational motion. Lab demonstrations or investigations supplement the content topics to improve formula application to solve problems.

**\*Principles of Biomedical Science (PLTW)** - Year Long Course (*½ credit per semester*)

## Science or Elective Credit

H3808

Grades: 9, 10

**\*indicates this is a weighted class**

Principles of Biomedical Science is a captivating course that serves as an engaging introduction to the field of biomedical science. Designed as part of the Project Lead The Way (PLTW) curriculum, this course provides high school students with an immersive exploration of the biological and medical sciences. Students will investigate the human body's mysteries, exploring the concepts of anatomy, physiology, genetics, and epidemiology. Through hands-on activities, collaborative projects, and real-world case studies, students will develop critical thinking and problem-solving skills. This course lays the foundation for a deeper understanding of health and medicine, inspiring students to pursue further studies and careers in the ever-evolving biomedical field. Get ready to unravel the complexities of the human body and discover the exciting world of biomedical science! This is a weighted course that requires a larger time commitment.

Students that complete TWO of the four PLTW Biomedical Science courses:

- Principles of Biomedical Science (PBS) - offered at UHS
- Human Body Systems (HBS) - offered at UHS
- Medical Interventions (MI) - offered at FFRC or
- Biomedical Innovation (BI) - offered at FFRC

with a B or better and a stanine score of 6 or higher are eligible for college credit through Missouri S & T for 4 credit hours for BIO SCI 1113 General Biology and BIO SCI 1219 General Biology Lab. The cost is \$400. For more information see:

<https://pltw.mst.edu/undergraduate-credit/biomedicalsciences/>

**\*Human Body Systems/Anatomy (PLTW)** - Year Long Course (*½ credit per semester*)

## Science or Elective Credit

H3809

Grades: 10, 11, 12

**Prerequisite: “B” or better in Biology or “C” or better in PLTW Principles of Biomedical Science and signature of current science instructor.**

**\*indicates this is a weighted course**

Human Body Systems is a dynamic course within the Project Lead The Way (PLTW) curriculum that takes high school students on a fascinating journey into the intricacies of the human body. In this course, students will explore the organization and function of various body systems, including the skeletal, muscular, cardiovascular, respiratory, and nervous systems. Through hands-on activities, virtual simulations, and collaborative projects, students will delve into the physiological processes that sustain life. The integration of biomedical engineering principles enhances the understanding of how technology and innovation contribute to medical advancements. By the end of the course, students will not only have a comprehensive knowledge of human anatomy and physiology but also a deeper appreciation for the interdisciplinary nature of healthcare and the potential for future contributions to the field.

**Students that complete TWO of the four PLTW Biomedical Science courses:**

- **Principles of Biomedical Science (PBS) - offered at UHS**
- **Human Body Systems (HBS) - offered at UHS**
- **Medical Interventions (MI) - offered at FFRC or**
- **Biomedical Innovation (BI) - offered at FFRC**

with a B or better and a stanine score of 6 or higher are eligible for college credit through Missouri S & T for 4 credit hours for BIO SCI 1113 General Biology and BIO SCI 1219 General Biology Lab. The cost is \$400. For more information see:

<https://pltw.mst.edu/undergraduate-credit/biomedicalsciences/>

## **SOCIAL STUDIES**

Social Studies is an important part of any general education requirement. Union High School offers a broad range of social studies courses, including history, civics, and behavioral science. Through study in these areas, students will become better citizens with a deeper understanding of the issues affecting our world and will be better prepared to interact successfully with others.

**American History** - Year Long Course (*1/2 credit per semester*)

**Social Studies Credit**

**H4000**

**Grade: 9**

This course is a history of the United States from 1865 to the present. It includes the study of elections, wars, and economic and social changes taking place during this time period. American History is a required course for ninth grade students.

**American History Honors** - Year Long Course (*1/2 credit per semester*)

**Social Studies Credit**

**H4003**

**Grade: 9**

**Prerequisite: Written recommendations from previous Social Studies teacher at Middle School and departmental approval.**

In this course we will study the history of the United States from 1865 to the present. It will include political, social, economic, military, and other facets of the history of our country. American History is required for all students. The honors course will include multiple writing projects and students will be held to a higher standard in essay composition. In addition, the honors course will include multiple in-depth projects and activities beyond the scope of the non-honors courses.

**World Studies** – *Year Long Course (½ credit per semester)*

**Social Studies Credit**

**H4303**

**Grades: 10, 11, 12**

**Prerequisite: Completion of American History or may be taken concurrently.**

This is a required course for 10th grade students. World Studies focuses on European and Asian History from the Renaissance to the modern events that helped shape our world. History of the Americas, Africa, and the Muslim world will also be examined. Special emphasis will be placed on developing the skills of historical analysis.

**World Studies – Honors** – *Year Long Course (½ credit per semester)*

**Social Studies Credit**

**H43031**

**Grades: 10, 11, 12**

**Prerequisite: Completion of American History, written recommendation from the previous Social Studies instructor and Departmental Approval.**

This is a required course for 10<sup>th</sup> grade students. The class content will focus on European and Asian History from the Renaissance to current world developments. Special emphasis will be placed on developing the skills of historical analysis. Students will complete independent projects throughout the semester that are meant to enrich the standard curriculum. Student enrollment is determined through examination of test score data, previous Social Studies grades, and teacher recommendations.

**Government** - *Year Long Course (½ credit per semester)*

**Social Studies Credit**

**H4204**

**Grades: 11, 12**

**Prerequisite: Completion of World History.**

Government is the required social studies program for 11th grade students, fulfilling the State Department of Elementary and Secondary Education requirements for the study of the United States and Missouri Constitutions. Its primary objectives will be to develop an understanding of how the national, state, and local governments are structured, how the governments function, and of our basic rights and obligations as citizens.

**Comprehensive examinations over the United States and Missouri Constitutions will be given.**

**Passage of the constitution examinations does not guarantee passage of the government class.**

**Passage of the government class does not guarantee passage of the constitution tests. There is also passage of the US Citizenship test that is required for graduation.**

**Government – Honors** - *Year Long Course (½ credit per semester)*

**Social Studies Credit**

**H4202**

**Grades: 11, 12**

**Prerequisite: Completion of World History, written recommendation from previous Social Studies instructor and departmental approval**

Government is the required social studies program for 11<sup>th</sup> grade students, fulfilling the State Department of Elementary and Secondary Education requirements for the study of the United States and Missouri Constitutions. Its primary objectives will be to develop an understanding of how the national, state, and local governments are structured, how the governments function, and of our basic rights and obligations as citizens. Students will take on a more rigorous workload, additional reading of primary documents and writing assignments, and analyzing the information contained in them.

**Comprehensive examinations over the United States and Missouri Constitutions will be given. Passage of the constitution examinations does not guarantee passage of the government class. Passage of the government class does not guarantee passage of the constitution tests. There is also passage of the US Citizenship test that is required for graduation.**

**Psychology** - *Semester Course (½ Credit)*

**Elective Credit**

**H4600**

**Grades: 11, 12**

**Prerequisite: Completion of 2 units of Social Studies credits.**

Psychology is a semester course, designed for juniors and seniors. The objectives of the course are to introduce beginning students to psychology and to provide some insight into human behavior. Students will study the individual, his relationship with others, learning, intelligence, and mental health. Emphasis is placed on communication and discussion as methods of seeking knowledge and understanding of these areas.

**Sociology** - *Semester Course (½ Credit)*

**Elective Credit**

**H4700**

**Grades: 11, 12**

**Prerequisite: Completion of 2 units of Social Studies credits.**

Sociology, a semester course designed for grades eleven and twelve, is the study of human relationships and how these relationships guide our development. Special attention is given to guiding students toward appreciation of the complex network of social relationships in their lives.

**AP United States History** - *Year Long Course (½ credit per semester)*

**Elective Credit**

**H4900**

**Grade: 12**

**Prerequisite: Completion of 9th, 10th, and 11th grade social studies requirement with a “B” average or above and signature of current history teacher.**

AP United States History is open to seniors who are capable of writing at the college freshman level and have demonstrated that ability by scoring appropriately on a writing sample administered by East Central College. This course is designed for serious history students who would like to continue their study of American History. An in-depth study will be conducted by studying modern day events and applying these to past cause-and-effect occurrences. Critical thinking, analytical reasoning and writing skills will be required of each student. This demanding but enriching class will also prepare students to take the Advanced Placement Exam offered each May. A strong showing on the exam can result in as much as five hours of college credit. Discussion with the current social studies teacher and the **AP instructor** is required before enrolling. **Students have the opportunity to enroll in this course for college credit.**

**\*THE FOLLOWING SOCIAL STUDIES COURSES ARE OFFERED ON A ROTATING BASIS.**

**Contemporary Issues** - Semester Course (½ Credit) (**OFFERED 2025/2026**)

**Elective Credit**

**H4511**

**Grades: 11, 12**

**Prerequisite: Enrolled in or Completion of Government**

This is a discussion and project based course covering current issues in the areas of Environment, Immigration, Legal Issues, Politics and social media. This course includes weekly discussions, papers and presentations over current issues that affect students and citizens in our society.

**Geography Through Food** - Semester Course (½ Credit) (**NOT OFFERED 2025/2026**)

**Elective Credit**

**H4103**

**Grades: 10, 11, 12**

**Prerequisite: Completion of Foods I or currently enrolled in Foods I**

This course is a study of World Geography through the foods that people eat while engaged in the many different facets of our lives. Students will focus learning on the human geography of nations throughout the world. The course will also add in aspects of physical geography through the ingredients present in the students' culinary creations. Teacher instruction will focus on the economic, social, cultural, and political geography of regions. Classwork and assessments will be based on this instruction. Students will then use this information to conduct research using primary documents, films, and other selected readings to discover recipes that cover the unit of study and present the recipe and food dish to the class for consumption. Students will be responsible for ingredients and the ability to make each food dish. Units will last approximately two to three weeks (flexibility due to availability of Foods classroom at UHS) and a new dish will be made at the end of each unit. Caution will be taken with students based on allergens present in food dishes.

NOTE: there is a \$30.00 fee for this course

**Study of World Religions** - Semester Course (½ Credit) (**NOT OFFERED 2025/2026**)

**Elective Credit**

**H4007**

**Grades: 11, 12**

**Prerequisite: Completion of American History and World Studies**

This is a semester course that will examine major world religions including Christianity, Judaism, Islam, Hinduism, Buddhism, and Traditional/Confucian Chinese teachings with the aim of promoting religious literacy. Topics covered for each religion studied will be demographic information, history of the religion, major doctrines and teachings, sacred text, major rituals, holidays and traditions

**America in the Cold War** - Semester Course (½ Credit) **(NOT OFFERED 2025/2026)**

**Elective Credit**

**H4005**

**Grades: 11, 12**

**Prerequisite: Completion of American History and World History.**

This course is a history of the United States from 1945 - 1990. We will learn the history of the United States from the end of World War II until the end of the cold war, with a focus on Cold War events. It includes the study of the elections, military actions, the social climate, economic and political policies, and other unique situations that resulted from the involvement of the United States in the Cold War. This course will use primary documents, cold war era films, text books, and other selected readings to discover the role that the United States played in the Cold War. America in the Cold War is an elective course for 11th and 12th grade students.

**Modern US History: 1990 to Today** - Semester Course (½ Credit) **(NOT OFFERED 2025/2026)**

**Elective Credit**

**H4006**

**Grades: 11, 12**

**Prerequisite: Completion of American History and World History.**

This semester course for upperclassmen addresses the social, economic, political, and military aspects of the United States from 1990 to the present. The course will emphasize the important people, issues, and events of the latter half of the 20<sup>th</sup> century through our present day.

**Student Rights and the Constitution** - Semester Course (½ Credit) **(NOT OFFERED 2025/2026)**

**Elective Credit**

**H4008**

**Grades: 11, 12**

**Prerequisite: Completion of American History and World History.**

This is a semester course that will examine the history of student rights in school through a study of the Constitution and court cases at the local, state, and federal level of the judicial system. An emphasis will be placed on issues relating to US Supreme Court cases detailing student rights involving the 1<sup>st</sup> and 4<sup>th</sup> Amendments, while branching out to look at areas covered by other Amendments relating to topics in today's news. The class will be discussion-based with research on issues leading to student participation in role playing scenarios that teach the reason for each decision as well as predictions for future decisions.

## **PERSONAL FINANCE**

**Personal Finance** - Semester Course (½ Credit)

## **Required Credit**

**H5700**

**Grades: 10, 11, 12**

Personal Finance course content includes goal setting for your future, managing our resources, time, consumer education, taxes, money and banking, credit, saving and investing, and insurance. Some of the activities include preparing a budget and keeping records of income and expenses, writing a check, balancing a checkbook, reconciling a bank statement, learning about debit and credit cards, and figuring interest. Most work is completed using the computer. **Juniors and seniors may concurrently enroll in Fin 150 Personal Finance. See Ag Sales & Service for an alternative path for Personal Finance. (This course is a graduation requirement)**

## **PRACTICAL ARTS**

The Practical Arts program, including Agricultural Education, Business, Family and Consumer Science, Industrial Technology, and Theatre emphasizes learning the skills that lead to employment once high school has been completed, or possibly lead to additional study at a vocational-technical school, plus two or four year colleges.

### ***Theatre (Practical Art)***

**Technical Theatre I** - Semester Course ( $\frac{1}{2}$  Credit)

**Practical Art or Elective Credit**

**H1602**

**Grades: 9, 10, 11, 12**

Students will learn about theatre from a backstage perspective. Students will learn theatre terminology as well as the basics of technical theatre in the areas of construction, painting, and lighting. As part of the course, students will be applying their new skills by working on the technical elements of the plays and musicals. Due to this being a hands-on class, good attendance is essential to doing well.

**Technical Theatre II** - Semester Course ( $\frac{1}{2}$  Credit)

**Practical Art or Elective Credit**

**H1603**

**Grades: 9, 10, 11, 12**

**Prerequisite: Technical Theatre I or permission of instructor**

Students will learn about theatre from a backstage perspective. Students will learn theatre terminology as well as the basics of technical theatre in the areas of sound, makeup and costuming. As part of the course, students will be applying their new skills by working on the technical elements of the plays and musicals. Due to this being a hands-on class, good attendance is essential to doing well.

**Technical Theatre III** - Semester Course ( $\frac{1}{2}$  Credit)

**Practical Art or Elective Credit**

**H1604**

**Grades: 10, 11, 12**

**Prerequisite: Technical Theatre I and II or instructor permission**

This class builds upon the fundamentals learned in Technical Theatre I and II. Students will learn elements of design in all areas of technical theatre. As part of the course, students will be applying their new skills by working on the technical elements of the plays and musicals. Due to this being a hands-on class, good attendance is essential to doing well.

## ***Agricultural Education (Practical Art)***

Do you like animals, plants, nature, building projects or even eating? Then agriculture classes are for you. The Agricultural Industry is the world's largest employer with 20% of the workforce and is growing every year. These hands-on classes are designed to help you learn more about Food Fiber and Natural Resources. Everyone uses agriculture everyday and should know something about it. There are several benefits of being in an agriculture class:

- **Only students in an agriculture class may join the FFA.**
- Keep in mind that you must pass Ag I in order to take any other Ag classes.
- A student may substitute three (3) Ag Science classes for one (1) unit of science after physical science and biology are successfully completed. Denoted by (\*)
- Completion of 3 Ag classes (one must be Ag Sales) will fulfill the Personal Finance requirement
- Some classes qualify for college preparatory work. Denoted by (\*\*)
- College credit is available for specific classes
- Classes involve labs in the greenhouse, metals shop, small engines shop, and animal science.
- WE HAVE FUN and learn about REAL LIFE ISSUES!

### **Class Rotations:**

<b>Odd Year 2026/2027</b>	<b>Even Year 2025/2026</b>
Intro to Agriculture (3 blocks)	Intro to Agriculture (3 blocks)
Food Science	Food Science
Backyard Ag	Backyard Ag
Greenhouse Operations	Greenhouse Operations
Ag Construction 1	Ag Construction 1
Ag Construction 2	Ag Construction 2
Ag Power	Ag Structures 1 (½)
Floriculture (½) Advanced Floriculture (½)	Ag Structures 2 (½)
Turf and Landscape (½)	Companion Animals (½)
Fish and Wildlife (½)	Advanced Companion Animals (½)
Advanced Fish and Wildlife (½)	Plant Science
Animal Science	Ag Sales
SAE CO-OP	SAE CO-OP

**Intro to Agriculture (\*)** - Year Long Course (½ Credit per Semester) offered both even and odd years  
Practical Art or Elective Credit

**H5011**

**Grades: 9, 10, 11, 12**

**Intro to Agriculture is the first Ag class you can take and is a prerequisite for ALL other Ag**

**classes.** Have you ever wondered about where your food comes from or the clothes on your back? Have you ever wondered about how an engine works or why animals act the way they do? If so, then Ag I is for you. This is an introductory class therefore, each unit focuses on a different section of agriculture. Units include: Plant Science, Ag Mechanics, Small Engines, Floriculture, Fish & Wildlife, Food Science, and Adulting. Class activities include everything from making ice cream to identifying types of cheeses by taste, stick welding, tearing down a carburetor, creating a floral arrangement and determining which ground beef makes the best tacos. During class students will get leadership and personal development training while having the opportunity to join the FFA. Leadership development will be provided through FFA and membership is highly encouraged. FFA activities include trips in and out of state, contests, and fun monthly activities like “slip n’ slide kickball” or washers tournaments. Each student will be expected to develop a supervised agricultural experience program and keep appropriate records.

**Backyard Ag (\*)** - Year Long Course (½ Credit per Semester) offered both even and odd years  
Practical Art or Elective Credit

**H5013**

**Grades: 11, 12**

### **NO PREREQUISITE REQUIRED**

Backyard Ag is a class for those interested in learning about how they can use agriculture in their everyday lives. The class will focus on how each of us are affected by agriculture and examine how we can use something as simple as our backyards to be more self-reliant. Students will work on projects that focus on subsistence agriculture such as hydroponics, composting, food processing, small animal production, and gardening. Students are encouraged to become members of the FFA and to continue working on their SAE.

**Food Science and Technology (\*)** - Year Long Course (½ Credit per Semester) offered both even and odd years

Practical Art or Elective Credit

**H5012**

**Grades: 10, 11, 12**

**Prerequisite: Intro to Agriculture**

In this class students will evaluate the effects of processing, preparation, and storage on the quality, safety, wholesomeness, and nutritive value of foods. Both industrial and home food processing techniques will be explored. Activities could include making jerky, curing hams, or canning garden vegetables. On a regular basis you will be asked to taste and sample different food items prepared in class, as well as products ready to eat from the supermarket. Leadership development will be provided

through FFA and membership is highly encouraged. Each student will be expected to have a supervised agricultural experience program and keep appropriate records.

**Greenhouse Operations Management (\*) (\*\*)** - Year Long Course (½ Credit per Semester) Offered both even and odd years.

**Practical Art or Elective Credit**

**H5255**

**Grades: 11, 12**

**Prerequisite: Intro to Agriculture and Backyard Ag or Plant Science**

Greenhouse Operation and Management will focus on competencies in these major areas: Leadership and Personal Development, Supervised Agricultural Experience Programs, Record Keeping, Greenhouse Structures, Irrigation Systems, Soils, Watering and Fertilization, Propagation, and Integrated Pest Management. The students in this class are also responsible for running our spring plant sale, Mum sale and Poinsettia sale. It is required that students will continue their SAE programs.

**FFA membership is highly encouraged**

**Agricultural Construction I** - Year Long Course (½ Credit per Semester) Offered both even and odd years

**Practical Art or Elective Credit**

**H5230**

**Grades: 11, 12**

**Prerequisite: Intro to Agriculture**

About 90 hours will be spent on demonstrations and shop procedures. The course deals primarily with arc welding, wood and metal equipment, and the construction of shop projects, both metal and wood.

All students are required to work in the shop on projects throughout the year. They will be expected to have a project at all times during the year. That project may be for the student, others, or assigned. It is required that students will continue their SAE programs. **FFA membership is highly encouraged**

**Agricultural Construction II** - Year Long Course (½ Credit per Semester) Offered both even and odd years.

**Practical Art or Elective Credit**

**H5240**

**Grade: 11, 12**

**Prerequisite: Intro to Agricultural**

About 45 hours will be spent on shop procedures and demonstrations. The course deals primarily with arc, oxy-acetylene, and MIG welding, as well as wood and metal equipment. Project design and layout procedures are reinforced through project construction of both metal and wood projects. All students are required to work in the shop on projects throughout the year. They will be expected to have a project at all times during the year. That project may be for the student, others, or assigned. It is required that students will continue their SAE programs. **FFA membership is highly encouraged**

**SAE Co-Operative Experience** – ½ - 2 Credits Offered both odd and even years.

**Practical Art or Elective Credit**

**H5266**

## Grade: 12

**Prerequisite: Must have been enrolled in Ag classes for the previous 3 years, have an established SAE/Record Book with at least 2 years of records and be currently enrolled in an Agricultural Education Class**

The SAE Co-Op hour is designed for Seniors in the Agricultural Education Department who have an established SAE program. Experiential learning (SAE) programs prepare students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber and natural resources sectors. SAE programs are teacher-supervised, individualized, hands-on and student-developed; and provide students with real-world experience to help them select a career, secure employment and/or prepare for further education in the field of agriculture. In order to qualify for this course the following is necessary:

1. Obtain an application for the class from Ms. Blair.
2. Return the application to Ms. Blair for an interview (with your record book) before acquiring a signature for the class.
3. The student **MUST** be enrolled in an additional Agriculture Education class
4. Work at least 10 hours per week at an **APPROVED**, established training location per credit. Students may enroll for a total of 2 credits of SAE Co-Op (this would require 20 hours per week of work).
5. Students are required to have an employer signed training agreement.
6. All paperwork including parent and student agreements must be submitted before being allowed to leave school for work.
7. Keep an **ACCURATE** record of hours, receipts and expenditures in the Secondary Student Record Book.
8. Students are required to complete both a Proficiency and State FFA Degree Application as part of their coursework.

If conduct or work is not satisfactory at school or on the job, the opportunity to participate in the SAE Co-Op program will end and students will be required to report to school during their class time. **This class requires an application, interview and signature from the Agriculture Education Instructor before enrollment.**

### **2025/2026**

**Plant Science – (\*)- Year Long Course (½ credit per semester)**

**Practical Art or Elective Credit**

**H5033**

**Grades: 10, 11, 12**

**Prerequisite: Introduction to Ag**

This course focuses on plant sciences and its role in Agriculture. Students will spend most of their time completing labs focusing on soil properties, soil chemistry, soilless growing systems, plant health and more! This course is very hands-on and helps to solidify the understanding of where our plant based foods come from. In addition, students will continue to develop leadership potential through the FFA, establish a Supervised Agricultural Experience Program, Record Book and explore career opportunities.

**FFA membership is highly encouraged**

**Ag Sales & Service (\*\*)- Year Long Course (½ credit per semester)**

**Practical Art or Elective Credit****H5265****Grades: 11, 12****Prerequisite: Introduction to Ag and Agricultural Science II**

Interested in learning more about agricultural business and marketing or becoming an entrepreneur? Then Ag Sales is the class for you. This class addresses real world problems in the business field. Students learn more about advertising and marketing along with how to conduct a sales presentation during the variety of class projects. The Sales Project will have you creating an agricultural product and then developing a marketing plan and sales pitch to sell it. Business relations such as job interview skills, resumes, communications, human relations and leadership will be further developed. If you complete Ag I, AgII and Ag Sales you will fulfill the Personal Finance requirement for graduation. Students will be required to continue their SAE programs and are encouraged to become members of the Union FFA Chapter.

**Companion Animals (\*) - Semester Course (½ Credit)****Practical Art or Elective Credit****H5029****Grades: 10, 11, 12****Prerequisite: Introduction to Ag**

Do you have a pet? Do you love animals... especially dogs and cats? Then this course is for you. It builds on the material learned in Agricultural Science I by focusing on the care and management of companion animals. Companion animals are those domesticated animals people keep as pets. Units in animal care and safety, animal welfare, keeping animals as pets, careers in the industry, animal nutrition and dog care and cat care are covered. Activities include presentations of unique pets and students have the opportunity to volunteer weekly at the Franklin County Humane Society during class. This allows students to gain hands-on experience with small animals. Students will be required to continue their SAE programs and are encouraged to become members of the Union FFA Chapter.

**Advanced Companion Animals (\*) - Semester Course (½ Credit)****Practical Art or Elective Credit****H5028****Grades: 10, 11, 12****Prerequisite: Introduction to Ag and Companion Animals**

If you loved Introduction to Companion Animals class you are going to want to take this course. This advanced course will focus on specialty and companion animals not covered in the introductory course. We will study various aspects of the companion animal industry including: Horses, Aquatic, Laboratory, and Exotic or Specialty companion animals. Small animals covered may include: Chinchillas, Ferrets, Amphibians, Reptiles, Fish, Birds and Bees. Students may have the opportunity to continue their experiences at the Franklin County Humane Society. Students will be required to continue their SAE programs and are encouraged to become members of the Union FFA Chapter.

**Agricultural Structures I - Semester Course (½ Credit)****Practical Art or Elective Credit****H5210****Grades: 10, 11, 12**

**Prerequisite: Introduction to Ag**

**The first semester course in Agricultural Structures I** will be the basic hands-on study of farmstead/agribusiness design and planning. This design work will develop skills involving zone considerations and concerns for waste management, air and water standards, plus overall quality-of-life issues. The course will also be doing hands-on work on concrete in mixing, proportioning, site selection and development, and pour/finish work. Also included will be basic units in tool/fastener identification and/or farm fencing, plus a hands-on unit in floor and wall framing. It is required that students will continue their SAE programs. **FFA membership is highly encouraged**

**Agricultural Structures II** - Semester Course (½ Credit)

**Practical Art or Elective Credit**

**H5220**

**Grades: 10, 11, 12**

**Prerequisite: Agricultural Structures I**

**This second semester course** is the advanced course in Agricultural Structures, and will include hands-on training in basic farm electrical wiring plus agricultural electrification applications, framing square usage, building construction techniques, and a specific building project to emphasize siding, plus various types of rafters, trusses and roofing. It is required that students will continue their SAE programs. **FFA membership is highly encouraged**

**2026/2027**

**Animal Science -(\*) (\*\*)** - Year Long Course (½ credit per semester)

**Practical Art or Elective Credit**

**H5032**

**Grades: 10, 11, 12**

**Prerequisite: Introduction to Ag**

If you enjoyed learning about animals in Ag Science I then get ready for an advanced class full of hands-on labs and activities used to explore the world of animal agriculture. Animal Science focuses on the anatomy, physiology, reproduction, nutrition, health and selection of production animals. Activities include creating models of production operations, dissecting animals/ reproductive tracts, a biosecurity lab where bacteria is grown, determining a feed's nutrient level by setting it on fire, creating a "feed ration" trail mix or using roly polly's to determine basic animal behaviors. These labs are used to help students solve problems similar to those that veterinarians, zoologists or livestock producers face every day. Students will be required to continue their SAE programs and are encouraged to become members of the Union FFA Chapter.

**Fish & Wildlife Management (\*)** - Semester Course (½ Credit)

**Practical Art or Elective Credit**

**H5025**

**Grades: 10, 11, 12**

**Prerequisite: Introduction to Ag**

Fish and Wildlife is a class for those interested in conservation and natural resources. The class will focus on how conservation has changed over the years and the creation of the Missouri Department of Conservation. Examine the current rules and regulations for hunting and fishing in MO. Students are able to obtain their “Hunters Education Certification” or the “Bow Hunters Safety Certification”. Wildlife studied include: entomology, deer, elk, small mammals and furbearers along with their habitats. Activities include scoring deer antlers and wild game cooking techniques. Students are encouraged to become members of the FFA and to continue working on their SAE.

**Advanced Fish & Wildlife Management (\*)** - Semester Course (½ Credit)

**Practical Art or Elective Credit**

**H5026**

**Grades: 10, 11, 12**

**Prerequisite: Introduction to Ag and Fish and Wildlife Management**

This advanced course will pick up where Fish and Wildlife Management left off. During class we will focus on Missouri’s fish and fishing techniques along with being able to obtain the “Missouri Boating License” through the boat safety course. Forest management will also be discussed through tree identification, timber cruising and map reading. Wild Turkey management and hunting techniques will be examined. Outdoor skills and plant identification will also be emphasized. Students will be required to continue their SAE programs and are encouraged to become members of the Union FFA Chapter.

**Agricultural Power and Technology (\*)** - Semester Course (½ Credit)

**Practical Art or Elective Credit**

**H5202**

**Grades: 10, 11, 12**

**Prerequisite: Introduction to Ag**

Agricultural Power and Technology exposes students to mechanics, power, technology, and career options in the world of agriculture. Students participating in the APT course will have experiences in various mechanical and engineering concepts with exciting hands-on activities, projects, and problems. Student’s experiences will involve the study of energy, tool operation and safety, material properties, machine operation, and structural components. Students will acquire the basic skills to operate, repair, engineer, and design agricultural tools and equipment. Throughout the course, students will apply the engineering principles to the construction of machines and structures. This class will also cover the basic principles and organization of 2 and 4 cycle engines. It will also involve skills in the repair, adjustment and overhauling of small gas engines. Students will be expected to maintain their supervised farming or off-farm projects (SAEP). **FFA membership is highly encouraged.**

**Floriculture (\*) (Sem. 1)** - Semester Course (½ Credit)

**Practical Art or Elective Credit**

**H5258**

**Grades: 10, 11, 12**

**Prerequisite: Introduction to Ag**

Floriculture will focus on competencies in these major areas: Leadership and Personal Development, Supervised Agricultural Experience Programs, Record Keeping, Floristry Industry, Plant Production, Plant Identification, Floral Design, and Retailing. It is required that students will continue their SAE programs.

**FFA membership is highly encouraged**

**Advanced Floriculture (\*) (Sem. 2) – ½ CR**

**H52591**

**Grades: 10, 11, 12**

**Prerequisite: Introduction to Ag and Floriculture I**

**This second semester course** is the advanced course in Floriculture and will focus on competencies in these major areas: Leadership and Personal Development, Supervised Agricultural Experience Programs, Record Keeping, Floristry Industry, Plant Productions, Plant Identification, Floral Design, and Retailing. Students will use their knowledge gained during Floriculture for advanced projects. ***It is required that students will continue the SAE programs.***

**FFA membership is highly encouraged**

**Turf & Landscape (\*) - Semester Course (½ Credit)**

**Practical Art or Elective Credit**

**H5260**

**Grades: 10, 11, 12**

**Prerequisite: Introduction to Ag**

Turf and Landscape will focus on competencies in these major areas: Leadership and Personal Development, Supervised Agricultural Experience Programs, Record Keeping, Turf Grass, Nursery and Landscaping Plants, Landscape Design, and Maintenance. It is required that students will continue their SAE programs.

**FFA membership is highly encouraged**

## ***Business (Practical Art)***

**Introduction to Business - Semester Course (½ Credit)**

**Practical Art or Elective Credit**

**H58341**

**Grades: 9, 10**

This is a basic business course designed to acquaint students with the activities associated with a business. Students will gather a basic understanding of general business, economics, entrepreneurship, business communications, business ethics, the government's role in business, marketing, and business finance. Each of these topics is then covered in further detail in Union High School business offerings. Overall, the course gives students a broad exposure to business operations and a solid background for additional courses.

**Computer Application - Semester Course (½ Credit)**

**Practical Art or Elective Credit****H5715****Grades: 9, 10, 11, 12**

Students will improve keyboarding word processing skills using Microsoft Word. They will also learn how to plan a presentation and work on presenting skills using Microsoft Powerpoint. Using Microsoft Excel, students will learn how to write cell formulas and compile simple to complex spreadsheets. They will learn how to convert spreadsheets into graphics, and import spreadsheets and databases into word processing documents. Students will learn to conduct research using the Internet. This class will use Microsoft Office 2019 to complete assignments.

**Computer Science Principles(PLTW)- Year Long Course (½ credit per semester) (Offered 25/26)****Practical Art or Elective Credit****H5709****Grades: 9, 10, 11, 12****Prerequisite: Currently enrolled in Algebra 1 or higher**

Students develop the in-demand computer science skills critical to thrive in any of today's and tomorrow's careers. The course promotes computational thinking and coding fundamentals and introduces computational tools that foster creativity. It aims to build students' awareness of the tremendous demand for computer scientists and those who have computational thinking skills, and engages students to consider issues raised by the impact of computing on society.

**Banking and Finance- Year Long Course (½ credit per semester)****Practical Art or Elective Credit****H5909****Grades: 11, 12**

Banking and Finance explores the dynamic, fast-paced world of money, shares, credit and investments. Finance is an essential part of our economy as it provides the liquidity in terms of money or assets required for individuals and businesses to invest for the future. Passing this course and with the completion of the EOC, the Personal Finance credit required for graduation will be fulfilled.

**Accounting- Year Long Course (½ credit per semester)****Practical Art or Elective Credit****H5910****Grades: 10, 11, 12****Prerequisite: Juniors and Seniors are encouraged to take this course.**

Accounting involves recording and balancing financial transactions. The first year course provides a foundation and background for college accounting, vocational employment, or record keeping for personal use. Students will learn and practice accounting principles for sole proprietorships, partnerships, and corporations. Students will have opportunities to actually keep the books for businesses. The average or above-average student will find this course interesting and challenging.

**Exploring Web Design- Year Long Course (½ credit per semester)****Practical Art or Elective Credit****H5843****Grades: 10, 11, 12**

This course curriculum is an introduction to the design, creation, and maintenance of web pages and websites. With it, you will learn how to critically evaluate website quality; learn how to create and maintain quality web pages; learn about web design standards and why they are important; and learn to create and manipulate images.

**Supervised Bus. Experience I** –Year Long Course ( $\frac{1}{2}$  - 2 Credits)

**Practical Art or Elective Credit**

**H5945**

**Grades: 11, 12**

**Prerequisite: Reached the age of 16, must be currently enrolled in a Business class, GPA minimum of 2.0 (Accounting, Computer Applications, Web Design, Wit Media, Wildcat Instructional Technology or Introduction to Business Law).**

This course provides students with an opportunity to apply business concepts, skills, and attitudes in an industry based setting. It is necessary for the student to be enrolled in a business course above and work **10 to 20 hours per week. A student can earn 1/2 to 2 credit hours.** This course gives students a competitive edge as they acquire practical knowledge and skills useful in college and their chosen career field. Supervised employment in a related work environment will help protect the student's academic progress as they receive work experience.

**Marketing-** Year Long Course ( $\frac{1}{2}$  credit per semester)

**Practical Art or Elective Credit**

**H5941**

**Grades: 10, 11, 12**

In today's changing marketplace, careers in the marketing field are in high demand. This class will introduce students to topics such as, the elements of marketing (product, price, place, and promotion), identifying and researching various markets, competition and technology in today's marketplace, and careers. Students will read, discuss, work application problems, design creative projects, and solutions to common business problems. This course also provides a strong foundation for post-secondary education in a business-related field. **Participation in DECA is HIGHLY encouraged. (College credit available through East Central College)**

**Digital/Advanced Marketing-** Year Long Course ( $\frac{1}{2}$  credit per semester) **Even Years only - Not in 2024-2025**

**Practical Art or Elective Credit**

**H59413**

**Grades: 11, 12**

**Prerequisites: Successful completion of Business Management or Marketing**

Advanced Marketing builds on the concepts learned in Marketing and further develops the students' ability to understand critical strategic marketing issues as applied to real-life business problems. The primary objective of this course is to help students develop skills and gain experience in analyzing a business's situation and then formulate, implement, and monitor marketing strategies to meet a company's needs. The majority of the work in the class will be project-based learning based on written projects from DECA, Inc. Advertising, Sports and Entertainment, and Fashion Promotion plans as well as Professional Selling projects will guide the students' learning throughout the year. **Participation in DECA is HIGHLY encouraged. (College credit available through East Central College)**

**Business Management**- *Year Long Course (½ credit per semester)*

**Practical Art or Elective Credit**

**H5942**

**Grades: 10, 11, 12**

This course is designed to help students develop an understanding of basic business principles and the skills and resources needed to manage a business. Instruction includes a general overview of American business, the practice of managing an organization, management roles, hiring/training/retaining employees, labor-management relations, ethics and responsibility, finance, marketing, international trade, taxation, and government regulations. Project based learning will be used as the primary method of teaching and assessment. The use of computers and software as tools in making business decisions is also introduced. **Participation in DECA is highly encouraged. (College credit available through East Central College)**

**Entrepreneurship**- *Year Long Course (½ credit per semester)* **Odd years only - Offered 2026-2027**

**Practical Art or Elective Credit**

**H5966**

**Grades: 11, 12**

Become the next Shark Tank Entrepreneur! This course provides independent minded and creative students with the skills necessary to succeed as an entrepreneur/small business owner. The fundamentals of starting and operating a business, developing a business plan, obtaining financing, marketing a product or service and developing an effective financial system will be covered. Most of the curriculum taught is taught through the use of Project Based Learning and the outcomes for each student will be based on a student's own interests. Participation in DECA is highly encouraged.

**Business Management Den Manager** - *Semester Course (½ Credit)*

**Practical Art or Elective Credit**

**H5937**

**Grade: 12**

This course will be an independent study before school each morning (approximately 7:30 a.m.) to operate and manage THE DEN coffee shop in the UHS Library/Media Center. Students will be responsible for opening and closing duties for the shop, managing inventory and human resources, making and marketing the products sold in the shop, and managing the finances associated with the operation of the shop. Students will be chosen by Mrs. Gehlauf based on application, previous Marketing and Management courses taken, and demonstrated willingness and ability to take on responsibility. Membership in DECA is required as will all proceeds from the sale of products are a fundraiser for DECA.

**Marketing Internship – ½ to 2 Credits**

**Practical Art or Elective Credit**

**H5943**

**Grades: 11, 12**

**Prerequisite: Dual enrollment with either Marketing, Business Management, Advanced Marketing, or Entrepreneurship and instructor signature.**

This course provides students with an opportunity to apply marketing concepts, skills, and attitudes in an industry based setting. It is necessary for the student to be enrolled in either course above, and work a

minimum of 10-20 hours per week depending on the desired number of credits. This course gives students a competitive edge as they acquire practical knowledge and skills useful in college and their chosen career field. Supervised employment in a related work environment will help protect the student's academic progress as they receive work experience.

**Wildcat Instructional Technology**- *Year Long Course (½ credit per semester)*

**Practical Art or Elective Credit**

**H5847**

**Grades: 11, 12**

**Prerequisite: 1) Must have the ability/authorization to leave campus during the school day to assist teachers in other buildings. 2) Must be pre-approved by the technology committee through an application process. 3) Must be a responsible and independent learner with a passion for helping others. 4) Must be willing to spend time outside of the school day to assist students and teachers. 5) Signature of the instructor**

This class is designed to help students collaborate with teachers in a setting that benefits both teachers and students. Students will spend a large block of time repairing Chromebooks throughout the district. Students will also spend time researching and troubleshooting various educational tools as assigned by the instructor. Tools could include the following: websites, teacher and student apps, specific devices, video conferencing, flipping classrooms, special education assistive tools and much more.

This class will synthesize the pre-knowledge of students with their new knowledge to establish an expertise in instructional technology. Students will develop and improve upon many important skills such as problem-solving, collaboration, critical thinking, self-evaluation and communication.

**WIT Media (WIT Broadcasting)**- *Year Long Course (½ credit per semester)*

**Practical Art or Elective Credit**

**H5848**

**Grades: 11, 12**

**Prerequisite: Signature of Instructor**

WIT Media is a media-centered class designed to empower students with a variety of self-learning and self-paced tasks. In this class, students will learn how to brainstorm ideas, write scripts, film, and edit individual and group video projects using Adobe Premiere Pro. Students may also have the opportunity to create graphics, operate cameras, and help produce content for the video displays in Stierberger Stadium and 'The Palace' (New Gym) at many Varsity sporting events. Other projects may include commercials/promotional materials for local businesses & organizations, live streaming school events, podcasting, and participating in video contests. Teacher recommendations will be used to determine student eligibility.

**Sports Media Production**- *Year Long Course (½ credit per semester)*

**Practical Art or Elective Credit**

**H5849**

**Grades: 10, 11, 12**

**Prerequisite: Teacher Recommendation**

Sports Media Production is a new course at UHS focused on the multimedia surrounding sporting events at Union High School. In this class, students will work independently and collaboratively to create highlight videos, digital images, audio clips, and graphics to be displayed on the digital media boards at

Stierberger Stadium and the big gym at UHS. Students will be expected to assist in filming athletic contests and managing the video boards. Students will be compensated for the time spent outside of class working at the sporting events. Teacher recommendations will be used to determine student eligibility.

## ***Industrial Technology Education (Practical Art)***

The Industrial Technology Department includes areas of study in woodworking, machine maintenance, CAD, and CAM.

**Woodworking I** - *Year Long Course (½ credit per semester)*

**Practical Art or Elective Credit**

**H5310**

**Grades: 09, 10, 11, 12**

This is the basic course in woodworking. In this course, emphasis is placed on the terminology, principles and basic skills of the woodworking field. Machine woodworking basics and safety are stressed. All students will be required to figure the board feet cost for each class project and will use their own skills to complete projects assigned to this class. The ability to read a ruler, work in a responsible and safe manner, and to figure basic math is necessary for successful completion of this course. **There is a \$25.00 fee for the cost of pre-purchased materials. Financial assistance is available.**

**Woodworking II**- *Year Long Course (½ credit per semester)*

**Practical Art or Elective Credit**

**H5320**

**Grades: 10, 11, 12**

**Prerequisite: Woodworking I**

Woodworking II is an advanced course utilizing and expanding on the fundamental fine woodworking skills, principles, and terminology taught in Woodworking I. A major emphasis is the completion of a major project(s) utilizing higher level woodworking techniques. Project selection is of the student's choice, within the limitations and requirements of the course. **Purchase of materials for this course is required.**

**Woodworking III**- *Year Long Course (½ credit per semester)*

**Practical Art or Elective Credit**

**H5330**

**Grades: 11, 12**

**Prerequisite: Woodworking II and permission of instructor**

Woodworking III is an advanced fine woodworking course to expand on the intermediate skills developed in Woodworking II. A Major emphasis is the completion of a major project(s) utilizing advanced techniques in its construction as well as the use of hand tools and complex joinery. **Purchase of materials for this course is required. Instructor's permission is required to enroll.**

## ***Family & Consumer Science (Practical Art)***

The Family and Consumer Sciences department has basic as well as advanced training in the many arts of Family and Consumer Sciences. The courses are designed to prepare youth for the role of independent living or to contribute to their employability in the dual role. Semester courses are designed to provide opportunities for the student to pursue the various subject matter areas of Family and Consumer Sciences in depth.

**Foods**- *Semester Course (½ credit)*

**Practical Art or Elective Credit**

**H5652**

**Grades: 10, 11, 12**

Foods 1 is a laboratory based class where you will learn about a variety of foods and how best to prepare them. We will focus on foods for health as well as baking principles. In this class students will learn and consistently practice kitchen safety skills, accurate weighing techniques, and measurement skills. Students will utilize time and temperature food safety guidelines. Students will learn basic cooking skills and terminology. Students will become familiar with the tools of the kitchen and their proper use. Students will learn about the chemical interactions between ingredients and how to use these reactions to form a better end product.

**NOTE: There is a course fee for this class ranging from \$15-\$25.**

**International Foods**- *Semester Course (½ credit)*

**Practical Art or Elective Credit**

**H56530**

**Grades: 10, 11, 12**

**Prerequisite: Foods (If interest exceeds capacity, enrollment will be determined by performance in Foods)**

International Foods is a laboratory based class where you will learn about a variety of foods and how best to prepare them. This course focuses on the flavors, aromas, cooking techniques, foods, and cultural traditions of world cuisines. Students will explore the origins of and developments in diverse food traditions. They will demonstrate the ability to cook with ingredients and equipment from a variety of cultures, and explain how American food choices and traditions have been influenced by other cultures. Students will develop practical skills and apply social science research methods while investigating foods and food practices from around the world.

**NOTE: There is a course fee for this class ranging from \$25-\$35.**

**Culinary Arts I**- *Semester Course (2 x ½ credit)* **This is a Lecture and Lab course and uses 2 consecutive periods Sem. 1**

**Practical Art or Elective Credit**

**H5657**

**Grades: 10, 11, 12**

**This course will be offered even years (2025-2026)**

**Prerequisite: Foods with a “C” or better and teacher approval**

Welcome to the world of professional cooking. In this class you will learn sanitation, knife cuts, vegetable and starch cookery, soups, and moist and dry cooking methods. We will explore every facet of culinary arts, as well as learn the vital practice of quality food prep. Students gain valuable restaurant and food service skills through their academic and workplace experiences. Career opportunities in the culinary arts are identified and discussed.

**NOTE: There is a course fee for this class ranging from \$35-\$45.**

**Culinary Arts II** - Semester Course (2 x ½ credit) **This is a Lecture and Lab course and uses 2 consecutive periods Sem. 2**

**Practical Art or Elective Credit**

**H5655**

**Grades: 10, 11, 12**

**Prerequisite: Culinary Arts I and teacher approval**

This course will focus on advanced skills necessary in the culinary arts. This course will allow students to gain valuable restaurant and food service skills through their academic and workplace experiences.

Each point along this path is one step closer to achieving a successful rewarding career in the industry. Focus of this class will be advanced cooking and preparation techniques.

**NOTE: There is a course fee for this class ranging from \$35-\$45.**

**Baking and Pastry Arts**- Semester Course (2 x ½ credit) **This is a Lecture and Lab course and uses 2 consecutive periods Sem. 2**

**Practical Art or Elective Credit**

**H5649**

**Grades: 10, 11, 12**

**This course will be offered odd years (2026-2027)**

**Prerequisite: Foods with a “C” or better and teacher approval**

Baking and Pastry Arts prepares students for successful careers as baking and pastry professionals through building a foundation of principles and skills, and then using specific applications and recipes. Students will be able to prepare a wide array of baked goods, pastries, and confections. Students will explore gluten-free baking recipe planning and preparation, altering & preparing recipes to address other allergy/dietary restrictions.

**Note: There is a \$25 course fee for this class.**

**Child Development I**- Semester Course (½ credit)

**Practical Art or Elective Credit**

**H5640**

**Grades: 11, 12**

Child Development is an instructional program that describes the study of the intellectual, social, emotional, and biological development of children and the planning and design of related human services. This course includes instruction in parent-child relations; prenatal development, parenting practices; special needs of children; parental and environmental influences on child development; external support services; and related public policy issues.

**Child Development II**- Semester Course (½ credit)

**Practical Art or Elective Credit**

**H5641****Grades: 11, 12****Prerequisite: Child Development I**

This course focuses on the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families. Students will analyze roles and responsibilities of parenting, evaluate parenting practices that maximize human growth and development, and evaluate support systems and community resources that provide services for parents. Careers related to parenting will be investigated. Instruction emphasizes leadership, problem solving, and communication skills.

**Apparel, Textiles, and Fashion** - Semester Course (*½ credit*)**Practical Art or Elective Credit****H5607****Grades: 9, 10, 11, 12**

Apparel, Textiles & Fashion is an instructional program that prepares individuals to understand the social, psychological and physiological aspects of clothing and textiles. The nature, acquisition and use of clothing and textiles products: the selection, maintenance and alteration of clothing and textile products; and the effect of consumer choices on the individual family, as well as the clothing and textile industry are included. The construction of clothing and decorating items are also included.

**Apparel, Textiles and Fashion Advanced**- Semester Course (*½ credit*)**Practical Art or Elective Credit****H5608****Grades: 9, 10, 11, 12**

Apparel, Textiles, & Fashion Advanced develops a more advanced knowledge and application of sewing skills. It is designed for the student interested in a career in fashion apparel, accessory design, costume design, interior design and more. This course utilizes more advanced garment construction techniques, basic pattern making/draping and an expansion of applied textiles knowledge. Several garments and skills examples will be constructed during the semester. Successful completion of this class provides students with an understanding of textile application and construction with an emphasis on quality. Self-initiative, motivation, time management, planning, independent work, following directions and evaluating are crucial skills in this course in which art, communication, mathematics, science and technology are applied.

**Interpersonal Relationships**- Semester Course (*½ credit*)**Practical Art or Elective Credit****H5642****Grades: 9, 10, 11, 12**

In this course, students will demonstrate real world soft skills like conflict resolution, communication, and decision making all while discussing the various relationships within their life (friendships, family, and workplace). Students will discuss the roles of major milestones in relationships such as dating, engagement, marriage, and parenthood in a variety of hands-on activities. This course will help students more easily transition into all of these major milestones in their own lives someday.

**Interior Design** - Semester Course ( $\frac{1}{2}$  credit)

**Practical Art or Elective Credit**

**H5656**

**Grades: 9, 10, 11, 12**

Design your own space! Learn the basics of researching and utilizing design resources, housing choices, floor plan drafting, scaled drawings and furniture placement. Principles and elements of design will be incorporated with many individual student driven projects that demonstrate design skills. Students will learn how to use an architectural ruler, design templates and graph paper while creating floor plans and elevations. Students will also hear from those in the industry and will become aware of programs that offer Interior Design as a course of study.

## ***Engineering (Practical Art)***

**Intro to Engineering Design (PLTW)** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Elective Credit**

**H3814**

**Grades: 9, 10, 11, 12**

**Prerequisite: Enrollment in Algebra I or higher**

This course is offered through the Project Lead the Way Engineering program. Students dig deep into the engineering design process, applying math, science, and engineering standards to hand-on projects. They work both individually and in teams to design solutions to a variety of problems using 3-D modeling software and use an engineering notebook to document their work. **Students are eligible for college credit if both Intro to Engineering Design and Principles of Engineering are completed with a B average or higher and PLTW EOC scores of “accomplished” are earned. Credit is for MECH ENG 1720 Introduction to Engineering Design (LAB 1.0 and LEC 2.0) through Missouri S & T. The cost is \$200.00.**

**Principles of Engineering (PLTW)** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Elective Credit**

**H3815**

**Grades: 10, 11**

**Prerequisite: Introduction to Engineering Design**

This course is offered through the Project Lead the Way Engineering program. Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.

**Students are eligible for college credit if both Intro to Engineering Design and Principles of Engineering are completed with a B average or higher, and the PLTW EOC scores of “accomplished” are earned. Credit is the MEH ENG 1720 Introduction to Engineering Design (LAB 1.0 and LEC 2.0) through Missouri S & T. The cost is \$200.00.**

**Civil Engineering and Architecture**- Year Long Course (½ credit per semester) (Offered 26/27)  
**Practical Art or Elective Credit**



**Grades: 9, 10, 11, 12**

Students learn the fundamentals of building design, site design, and development. They apply math, science and standard engineering practices to design both residential and commercial projects and document their work using 3D architectural design software.

**EAST CENTRAL COLLEGE – HEATING, VENTILATION, AIR CONDITIONING  
AND REFRIGERATION**

**HVAC/R - 3 Credits**

**Elective Credit**

**H8700**

**Grade: 12**

The program prepares individuals as field ready apprentices on residential and commercial equipment systems with instruction on new installations, as well as retrofitting existing systems. Students also learn how to design, fabricate, and install many types of HVAC/R components. Coursework involves troubleshooting and repairing advanced residential and commercial systems. Please view the link below for more information. There will be ½ embedded credit in both Applied Math and English IV per year.

**EAST CENTRAL COLLEGE – INDUSTRIAL ENGINEERING TECHNOLOGY**

**IEC – 3 Credits**

**Elective Credit**

**H8701**

**Grade: 12**

The Industrial Engineering Technology Certificate of Specialization prepares individuals to function as maintenance technicians and engineering assistants; installing, maintaining, and programming advanced manufacturing equipment. Students receive training in machinery maintenance and repair, basic electrical wiring principles, motor controls, process controls, hydraulics, pneumatics, PLCs, robotics, computers, basic machine tools and welding skills. Please view the link below for more information. There will be ½ embedded credit in both Applied Math and English IV per year.

<https://www.eastcentral.edu/dualcredit/iet-certificate-of-specialization/>

**PHYSICAL EDUCATION**

Physical Education classes are semester classes that focus on participation and preparing students to live healthy, active lives. **All classes – required or elective – will participate in a daily cardiovascular workout.**

One (1) credit of Physical Education is required for graduation. One-half (1/2) credit is the required Physical Education and is recommended to be taken in the 9<sup>th</sup> grade. In 9<sup>th</sup> through 12<sup>th</sup> grade, students must take at least one semester of any of the following: Strength and Conditioning, Advanced Strength and Conditioning, Lifetime Activities or Walking for Fitness.

**\*\*IT IS HIGHLY RECOMMENDED THAT “PHYSICAL EDUCATION” AND “HEALTH” BE TAKEN IN ALTERNATE SEMESTERS DURING THE 9<sup>TH</sup> GRADE YEAR\*\***

**Health-** *Semester Course (½ credit)*

**Required Credit**

**H6000**

**Grade: 9**

Health is designed to provide students with accurate information needed to make positive decisions about their health. The topics covered address the needs of today’s adolescents, taking into consideration their lifestyles and environment. The health information presented and the health skills stressed will prepare each student to assume responsibility for his or her own health.

**Physical Education-** *Semester Course (½ credit)*

**Required Credit**

**H6012**

**Grade: 9**

This course offers the opportunity to participate in a co-educational Freshman Physical Education. The class will focus on Fitness Testing and Cardio and Muscular Endurance. The activities will include Fitness Stations, Fitness Videos, Flexibility Training, Circuit Training, and Assessments.

**Walking for Fitness-** *Semester Course (½ credit)*

**Elective Credit**

**H6112**

**Grade: 9, 10, 11, 12**

**Prerequisite: Physical Education**

This course offers the opportunity to participate in co-educational physical activity that is strictly walking based to gain knowledge on the many benefits walking does for the body.

**Lifetime Activities-** *Semester Course (½ credit)*

**Elective Credit**

**H6201**

**Grades: 9, 10, 11, 12**

**Prerequisite: Physical Education.**

This course offers the opportunity to participate in co-educational activities that students can participate in for a lifetime. These activities include yard games, diamond games, and net games.

**Strength and Conditioning-** *Semester Course (½ credit)*

**Elective Credit**

**H6403**

**Grades: 9, 10, 11, 12**

This class is geared towards beginner strength and conditioning experience and knowledge base. This class will develop your knowledge and selection of strength training exercises, technique, safety, utilization of linear periodization, and workout design.

**Advanced Strength and Conditioning**- Semester Course ( $\frac{1}{2}$  credit)

**Elective Credit**

**H6404**

**Grades: 9, 10, 11, 12**

**Prerequisite: Signature from Instructor**

This class reinforces the proper guidelines, principles and techniques of weight lifting, and the development of muscular strength, endurance, and power at an advanced level. Students will be introduced to Olympic lifting techniques, implementation of accommodating resistance, utilization of non-linear, and undulating periodization. Continues development of individual weight training programs and advanced evaluation techniques.

**Zero Hour Weight Training**- Semester Course ( $\frac{1}{2}$  credit)

**Elective Credit**

**H6405**

**Grades: 9, 10, 11, 12**

**Prerequisite: Concurrent enrollment in Athletic Performance**

This class reinforces the proper guidelines, principles and techniques of weight lifting, and the development of muscular strength, endurance, and power at an advanced level. Students will be introduced to Olympic lifting techniques, implementation of accommodating resistance, utilization of non-linear, and undulating periodization. Continues development of individual weight training programs and advanced evaluation techniques. **\*\*SEE PREREQUISITE**

**Athletic Performance**- Semester Course ( $\frac{1}{4}$  credit per semester)

**H6406**

**Grades: 9, 10, 11, 12**

**Prerequisite: Concurrent enrollment in Zero Hour Advanced Strength and Conditioning**

**Time: Mon.-Friday 7:00-8:10 a.m.**

This class will begin at 7:00am before the start of the standard school day, continuing through 1<sup>st</sup> hour, and ending fifteen minutes prior to the end of 1<sup>st</sup> hour. Lifting and speed, agility, and conditioning (SAC) will typically be held on Monday, Wednesday, and Fridays. However, the schedule is subject to change due to holidays and inclement weather. On lifting and SAC days the class will provide the opportunity for students to eat breakfast. On non-lifting and SAC days, which will typically be held on Tuesdays and Thursdays, the Athletic Performance class must be in the old gym by 8:20am. During non-lifting and SAC days the class will be used for mobility, activation, flexibility, balance & rhythm, coordination, myofascial release, diaphragmatic breathing work for injury reduction, and to facilitate recovery. This class provides the maximum amount of training time of any strength and conditioning class, and is the most physically demanding course offered. It is designed to expose students to variety of complex resistance training, speed, agility, and conditioning concepts and methods for the purpose to maximize physical performance and overall physical health at an advanced level.

Fine art is a general term that is applied to the visual and performing arts area -- painting, sculpting, music, drama, dance, and creative crafts. The fine arts classes are designed to improve the student's self-image and to develop an aesthetic awareness of the world around him. The ultimate goal is to help the student enrich his life through developing techniques that are appropriate to his maturity.

## **Theatre**

**Intro to Theatre**- *Semester Course (½ credit)*

**Fine Art or Elective Credit**

**H1611**

**Grades: 9, 10, 11, 12**

This course will offer students an introductory study to all aspects of theatre. Students will read, analyze, view and evaluate plays in addition to learning the basics of performance and technical theatre. Students will also explore career opportunities in theatre. The course is designed to increase appreciation of theatre as a performer, technician, and/or audience member.

**Theatre Appreciation**- *Semester Course (½ credit)*

**Fine Art or Elective Credit**

**H1620**

**Grades: 11, 12**

**Prerequisite: Intro to Theatre**

An appreciation course designed to give an introduction to contemporary theatre literature and design. This class will expose the student to the theatre experience through the reading and discussion of various scripts, viewing of productions and the design and creation of theatrical projects. This is not a performance based class. Literature selection is at the discretion of the instructor. **Dual Credit through ECC (3 credits)**

**Acting and Improvisation**- *Semester Course (½ credit)*

**Fine Art or Elective Credit**

**H1621**

**Grades: 9, 10, 11, 12**

**Prerequisite: Intro to Theatre/8th grade Theatre or instructor permission.**

Acting and Improvisation offers a deeper study into the world of performance, including the improvisational techniques required to inspire spontaneity and creativity. Students will study performance through exercises that help to develop strong ensemble and character work as well as a respect for other performers and their creativity. Students will be able to create characters, relationships, scenes, and performance pieces based on the truth of the moment by following the CORE model – Character, Objective, Relationship, and Environment.

**Directing**- *Semester Course (½ credit)*

**Fine Art or Elective Credit**

**H1622**

**Grades: 10, 11, 12**

### **Prerequisite: Acting and Improvisation or instructor permission**

Students will work in depth on script analysis and dramaturgy to break down a script for staging. Students learn how to select, organize, and mount formal and informal staged productions by means of exploring the leadership roles of directors. Students focus on the nature and responsibilities of the director in relation to the entire production team; the effect of the director's concept on the overall production; vocabulary and principles of the various elements of play production; techniques used to create an effective theatre work; and basic knowledge and application of staging. Students will serve as both directors and performers in various activities and scene work.

## ***Visual Art***

**Art I**- Semester Course (*½ credit*)

**Fine Art or Elective Credit**

**H7110**

**Grades: 9, 10, 11, 12**

Art I is a beginning art course that concentrates on the utilization and understanding of the elements of Line, Shape, Form, Value, Color, Space, and Texture for expression. This is primarily a studio-type course with emphasis on techniques of drawing, painting, and art appreciation. Students will explore a variety of media in creative design. A variety of tools and materials will be utilized and introduced during production of artwork.

**Art II**- Semester Course (*½ credit*)

**Fine Art or Elective Credit**

**H7111**

**Grades: 9, 10, 11, 12**

**Prerequisite: Art I**

Art II continues as a beginning course that concentrates on the methods and Principles of Variety, Emphasis, Movement, Rhythm, Pattern, Proportion, Balance, and Unity that successfully arrange the “Elements of Art” and influence creativity, artistic expression, and aesthetic judgment. This is primarily a studio-type course that emphasizes techniques of drawing, painting, and art appreciation. Students will further explore a variety of media in creative design. A variety of tools and materials will be utilized and introduced during production of art work as well as improving previously learned skills. Mounting and other methods of presenting final art works for exhibit are emphasized.

**Art III**- Semester Course (*½ credit*)

**Fine Art or Elective Credit**

**H7112**

**Grades: 10, 11, 12**

**Prerequisite: Art II**

Art III concentrates on a working knowledge of the Elements and Principles of Art for creativity, personal expression, and successful artistic production. This course emphasizes awareness of unique expressive styles, aesthetic skills and abilities to solve artistic problems and to make value judgments about works of art by past and present artists. Studio work will emphasize advanced techniques of drawing and painting utilizing mixed media and improving skills using tools and materials.

**\*Studio Fees Apply**

**Art IV**- Semester Course (*½ credit*)

**Fine Art or Elective Credit**

**H7113**

**Grades: 10, 11, 12**

**Prerequisite: Art III and Teacher approval**

Art IV emphasizes the serious art student and stresses experimentation, creativity, and artistic expression through a variety of media and techniques. Refinement of skills using tools and materials will be stressed in all design work. The course will explore various careers and vocations utilizing the areas of art and contemporary trends. Portfolios will be encouraged.

**\*Studio Fees apply**

**Art Appreciation**- Semester Course (*½ credit*)

**Fine Art or Elective Credit**

**H7107**

**Grades: 9, 10, 11, 12**

Art Appreciation is a project based course that will take students to the historical contexts in which works of art are created. Following major timelines students will take notes, participate in class discussions and create projects based on historical examples being discussed. Some time period examples would be Ancient Egypt, Ancient Greece, Middle Ages, Renaissance and Early and late 20th Century.

**Ceramics/Sculpture I**- Semester Course (*½ credit*)

**Fine Art or Elective Credit**

**H7116**

**Grades: 9, 10, 11, 12**

**Prerequisite: Art I**

In this semester course students will further explore 3-dimensional projects that include, but are not limited to plaster, cardboard, paper mache', and found objects.\*

**\*Studio Fees apply**

**Ceramics/Sculpture II**- Semester Course (*½ credit*)

**Fine Art or Elective Credit**

**H71161**

**Grades: 10, 11, 12**

**Prerequisite: Ceramics/Sculpture I**

Ceramics/Sculpture II is an advanced course for the student with an interest in working with clay and creating sculpture. Students will use a potter's wheel and experiment using a subtractive sculpture technique.

**\*Studio Fees apply**

**Graphic Design I**- Semester Course (*½ credit*)

**Fine Art or Elective Credit**

**H71322**

**Grades: 10, 11, 12**

**Prerequisite: Art I**

In Graphic Design I, students will learn how to apply their knowledge of the elements of art and the principles of design to create computer generated artworks. Adobe Photoshop, Illustrator and InDesign will be the main programs used.\*

**Graphic Design II- Semester Course (½ credit)**

**Fine Art or Elective Credit**

**H71323**

**Grades: 10, 11, 12**

**Prerequisite: Graphic Design I**

Students in Graphic Design II will build upon the basic skills and knowledge gained in Graphic Design I. Projects will be more in depth and allow for a greater range of creativity. Real world/job situations will be presented for students to work through and solve client/artist problems.

**Digital Art- Semester Course (½ credit)**

**Fine Art or Elective Credit**

**H7134**

**Grades: 9, 10, 11, 12**

**Prerequisite: Art I**

This introductory course uses computer-based technologies and its application for digital drawings and paintings. Students will develop digital images that showcase perceptual skills, conceptual strategies, production methods and narrative compositions using various software.

**Studio Art Independent Topic- Semester Course (½ credit)**

**Fine Art or Elective Credit**

**H7131**

**Grades: 11, 12**

**Prerequisite: Teacher approval**

Three focus Areas 2-D Studio Art, 3-D Studio Art (ceramics/sculpture), Digital Design. Implemented to help advanced art students to further grow and to accommodate scheduling.

## ***Vocal Music (Fine Art)***

The vocal music department consists of three choirs: Noteworthy, Grace Notes, and Chamber Choir. The choirs are organized according to the students' different levels of ability, dedication, and desire to sing. All three choirs offer the opportunity for making music at many levels.

**Please note: Poor grades may prevent participation in the spring semester as per MHSAA grade requirement guidelines for Musical Festival participation: *“Semester Prior to Participation: The student shall have earned, the preceding semester of attendance, a minimum of 3.0 units of credit or have earned credit in 80% of the maximum allowable classes in which a student can be enrolled in the semester, whichever is greater, or a student must have made standard progress for his or her level***

*the preceding semester in a special education program for the handicapped approved by the Missouri State Department of Education which, though un-graded, enrolls pupils of equivalent age.” Not meeting these requirements could result in a schedule change removing you from this course. This pertains to all choir courses.*

**Noteworthy (Men’s Choir)** - Year Long Course (*½ credit per semester*)

**Fine Art or Elective Credit**

**H7211**

**Grades: 9, 10, 11, 12**

**Prerequisite: Application and Voice Placement \*Freshman that have not sung in 8th grade choir may arrange a time to sing for the choir director during the end of their 8th grade year.**

Noteworthy is offered to students with a tenor or bass vocal range who wish to sing and have high expectations in regard to musical ability and especially personal maturity. Students in this choir will be expected to develop basic to intermediate levels of musical skills and knowledge through written work, sight-reading, and the study and performance of a variety of TTB and TTBB music literature including music from all music periods, both sacred and secular. All concerts are required, including but not limited to Veteran’s Day, Winter, Spring, and Music Festival. Singers in this choir are encouraged to participate in auditioning for All-District Choir, All-Conference Choir, and are encouraged to participate in a solo or small ensemble at District and State Music Festival. By applying and singing for voice placement, the student accepts responsibility for all scheduled rehearsals and performances of the group and understands that some outside of school activity is required to earn full credit for this course. Students are required to enroll for the full year. However, poor grades may prevent participation in the spring semester as per MHSAA grade requirement guidelines for Music Festival Participation. **Uniform cost will apply.**

**Grace Notes (Women’s Chorus)** - Year Long Course (*½ credit per semester*)

**Fine Art or Elective Credit**

**H7212**

**Grades: 9, 10, 11, 12**

**Prerequisite: Application and Voice Placement \*Freshman that have sung in choir in 8<sup>th</sup> grade are eligible to audition for this ensemble.**

Grace Notes is offered to students with a soprano or alto vocal range who wish to sing and have high expectations in regard to musical ability and especially personal maturity. Students in this choir will be expected to develop basic to intermediate levels of musical skills and knowledge through written work, sight-reading, and the study and performance of a variety of SSA and SSAA music literature including music from all music periods, both sacred and secular. All concerts are required, including but not limited to Veteran’s Day, Winter, Spring, and Music Festival. Singers in this choir are encouraged to participate in auditioning for All-District Choir, All-Conference Choir, and are encouraged to participate in a solo or small ensemble at District and State Music Festival. By applying and singing for voice placement, the student accepts responsibility for all scheduled rehearsals and performances of the group and understands that some outside of school activity is required to earn full credit for this course. Students are required to enroll for the full year. However, poor grades may prevent participation in the spring semester as per MHSAA grade requirement guidelines for Music Festival Participation. **Uniform cost will apply**

**Wildcat Choir** - Year Long Course (*½ credit per semester*)

**Fine Art or Elective Credit**

**H7213****Grades: 9, 10, 11, 12****Prerequisite: Approval of Instructor**

Wildcat Choir is a course for students who want to sing and experience music but may not yet have the skill set to be able to be a part of Noteworthy, Grace Notes, or Chamber Choir. This choir provides students with the opportunities to develop their singing abilities, find joy in making music, learn basic music skills, and become familiar with a variety of choral repertoire of contrasting styles. Participation in performances outside of class is required. Uniform attire is required for performances and will consist of a T-shirt designed by the students. Attendance and participation in all concerts is mandatory for a satisfactory grade. This class may be taken multiple times.

**Chamber Choir** - Year Long Course (*½ credit per semester*)**Fine Art or Elective Credit****7240****Grades: 10, 11, 12****Prerequisite: Application and Audition** \*Only freshmen that have sung in choir in 8<sup>th</sup> grade are eligible to audition for this ensemble.

The Chamber Choir is the most advanced choral group offered at Union High School in the regular academic schedule. Superior knowledge of basic music theory and vocal techniques are required. Chamber Choir membership is chosen by audition only and a high level of personal maturity and vocal confidence are required. Students in Chamber Choir will be expected to develop intermediate to advanced musical skills and knowledge through written work, sight-reading and the study and performance of a variety of moderately difficult to difficult music literature, including music from all music periods, both sacred and secular. Chamber Choir students are expected to participate in auditioning for All-District Choir, Conference Choir, and encouraged to participate in a solo or small ensemble at District and State Music Festival. All concerts are required, including but not limited to Fall, Winter, Spring, Music Festival and performances for social and civic organizations during the school day and evenings. By auditioning, the student accepts responsibility for all scheduled rehearsals and performances of the group and understands that some outside of school activity is required to earn full credit for this course. Students are required to enroll for the full year. However, poor grades may prevent participation in the spring semester as per MHSAA grade requirement guidelines for Music Festival participation. **Uniform cost will apply.** *This class may be taken for a weighted grade during junior or senior year. See teacher for weighted requirements and details.*

**Music Theory/Ear Training and Technology**- Semester Course (*½ credit*)**Fine Art or Elective Credit****H7551****Grades: 10, 11, 12****Prerequisite: Permission of the band or choir instructor****Spring semester (Even years)      Class size cap = 15**

This course will be designed after the first semester of a college Music Theory course. This class is offered for students with a strong interest in music and how it is formed and developed, as well as for

students wanting a better knowledge of music theory to improve performance and/or compositional skills. Content includes a basic understanding of musical notation, musical terms, intervals, chord structure, harmonic structure, and music analysis. There may be opportunities to use computerized theory and ear training programs. **(Minimal cost may apply)**

## ***Instrumental Music (Fine Art)***

**Marching Band** - Semester 1 Course ( $\frac{1}{2}$  credit)

**Fine Art or Elective Credit**

**H7533**

**Grades: 9, 10, 11, 12**

**Prerequisite: One year of band experience or permission from the instructor AND concurrent enrollment in symphonic band or wind ensemble and summer band camps.**

**Time: 7:15-8:00 a.m. Mon.-Friday and 6:30-8:30 p.m. 1 night per week (as per schedule)**

**The Red N' Black Brigade Marching Band.** The marching band performs at all home games and at 3-5 marching festivals. Rehearsals begin the second day of school and continue until the last week of October. Practices and performances outside regular school hours are required, and the class is graded on a pass/fail basis. This band is primarily concerned with performance; however, the daily practice schedule includes drills in basic marching fundamentals, body movement and music techniques for the individual and the ensemble performance. Grades are issued on a Pass/Fail attendance basis.

**Symphonic Band** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Fine Art or Elective Credit**

**H7510**

**Grade: 9, 10, 11, 12**

**Prerequisite: Concurrent enrollment in Red & Black Brigade Marching Band and summer band camps.**

The symphonic band performs concerts throughout the year and competes at state music contests. All rehearsals and performances (such as concerts, festivals, graduation, etc.) outside the school schedule are required. The symphonic band is primarily concerned with developing the fundamental skills required to read music at levels of grade 2 and 3. The daily practice schedule includes individual and ensemble drills on technique, tone, balance, blend and other elements of group cooperation toward a combined performance. Students are encouraged to try out for conference and district band or take a solo or ensemble to district contests.

**Wind Ensemble** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Fine Art or Elective Credit**

**H7511**

**Grades: 9, 10, 11, 12**

**Prerequisite: Passing grade on instrumental audition, concurrent enrollment in the Red & Black Brigade Marching and summer band.**

This ensemble is concerned with learning advanced wind and percussion literature and studying stylistic concepts associated with performing grade 3, 4, and 5 instrumental music. This is the top instrumental musical product in the R-XI School District and is expected to perform at extra venues such as musical

pit orchestra, band contests, and festivals as well as graduation. Students are encouraged to try out for district or conference bands and play a solo or ensemble at district contests.

*This class may be taken for a weighted grade during junior or senior year. See teacher for weighted requirements and details.*

**Jazz Studies** - Semester Course (½ credit)

**Fine Art or Elective Credit**

**H7516**

**Grades: 9, 10, 11, 12**

**Prerequisite: Concurrent enrollment in Wind Ensemble or Symphonic Band or by audition or by Director Approval.**

**This class can be taken multiple semesters.**

**\*Students must have experience on a musical instrument commensurate with the demands of performing from sheet music (note reading) and must play with an age appropriate tone on that instrument. Students not enrolled in Wind Ensemble or Symphonic Band will need to pass a playing audition for permission to take the class.**

This class will primarily focus on developing the theory and aural skills required to perform and improvise music in various jazz styles. Including but not limited to – Swing, Bebop, Bossa Nova, Latin, Funk, etc. Students will learn the basics of improvisation, common chord structures, articulations specific to the genre, and communicating with others in a small group jazz setting.

**Guitar 1**- Semester Course (½ credit)

**Fine Art or Elective Credit**

**H7512**

**Grades: 9, 10, 11, 12**

**BOOK FEE: \$10.00-\$20.00**

This is an elective Fine Arts course for any student interested in learning how to play this versatile instrument. Students will learn chords, power chords, chord shapes, single note (melody) playing and a variety of styles, both with and without a pick. Students will also be introduced to music fundamentals, literature, standard music notation and tablature. Students will also learn basic guitar maintenance and care. Students will be expected to practice outside of class and take performance tests many times during this course. There will be instruments available for use during class time. A student may bring their own instrument to school to use, but they will need to take it home with them everyday and will not be allowed to store it at school. Owning an instrument is not required.

**Guitar 2**- Semester Course (½ credit)

**Fine Art or Elective Credit**

**H7513**

**Grades: 9, 10, 11, 12**

**Prerequisite: “C” or higher in Guitar 1 OR approval of instructor**

This is an elective Fine Arts course that will build on skills learned in Guitar 1. In order to succeed in this course, students must already have a basic working knowledge of the guitar. Students will hone their skills in music fundamentals, reading standard music notation, and reading tablature. They will

also continue to build on their knowledge of chords and playing single note melodies. Students are highly encouraged to have their own instrument available to practice at home. Much of this course will be self-guided practice and learning. Students that take this course will be required to demonstrate a high level of self-motivation and a strong work ethic in order to succeed. There will be instruments available for use during class time. A student may bring their own instrument to school to use, but they will need to take it home with them everyday and will not be allowed to store it at school. Owning an instrument is highly recommended, but not required.

**Fall Guard** - *Semester 1 Course (½ credit)*

**Fine Art or Elective Credit**

**H7560**

**Grades: 9, 10, 11, 12**

**Prerequisite: Passing audition held in April, permission of instructor AND concurrent enrollment in summer school camps.**

**Time: 7:15-8:00 a.m. Mon.-Friday and 6:30-8:30 1 night per week (as per schedule)**

Fall Guard is the marching unit providing movement, dance, equipment work (such as flag, rifle and saber) and visual enhancement of the wind and percussion players of the marching band program. This group is an important part of the total ensemble, so all performances and rehearsals are required. This group mainly performs at marching contests and home football games. This season lasts until the last week of October or until the end of marching season. Grades are issued on a Pass/Fail attendance basis.

## **ELECTIVES**

**A+ Mentor/Tutor** - *Semester Course (½ credit)*

**Elective Credit**

**H9002**

**Grades: 11, 12**

**Prerequisite: Enrollment in A+ program, consent of A+ coordinator 2.25 cum. GPA and be in good standing with the A+ program.**

The A+ Mentor/Tutor course will provide A+ students with the opportunity to assist younger students with various subjects while earning hours toward the A+ program requirements. Students will work with teachers at all buildings in the district to assist with the one-on-one education of students. Participants will be required to attend initial orientation sessions that will be scheduled at the beginning of the semester, keep daily and monthly logs, and complete writing assignments related to their experiences. Students disqualified from the A+ program are not eligible to take this course.

**Leadership** - *Year Long Course (½ credit per semester)*

**Elective Credit**

**H93002**

**Grades: 11, 12**

**Prerequisite: Application that includes teacher recommendation**

Leadership class is designed for students who would like to refine their personal leadership skills and ability to work with others in and out of the classroom. Leadership class students will work on individual and group projects to help improve interpersonal, communication, teamwork, and decision-making skills. These are important traits for success in high school, college, and/or the workforce.

**Yearbook** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**H1070 Elective Credit for Grades 9, 10, 11**

**H1071 English or Elective Credit for Grade 12**

**Prerequisite: Instructor approval. 9th grade students must have the recommendation of 8th grade English teacher**

This course helps produce The American, the Union High School yearbook. In this course, students will gain skills in the following areas: page design, publishing techniques, copywriting, editing, photography, record keeping, time management, teamwork, marketing, and leadership skills. Students are tasked with producing a timeless and creative multimedia publication that will record our school's community, memories, and events. Due to the nature of publishing deadlines, students may be expected to work periodically after school and to attend extracurricular events.

**Robotics and Design I** - Semester Course ( $\frac{1}{2}$  credit)

**Elective Credit**

**H3336**

**Grades: 10,11, 12**

In this course students will explore the basics of robotics and the basic principles of coding. Additionally, students will explore the fundamentals of design and the application of STEM (science, technology, engineering, and math) concepts.

**Robotics and Design II**- Semester Course ( $\frac{1}{2}$  credit)

**Elective Credit**

**H3337**

**Grades: 10, 11, 12**

**Prerequisite: Successful completion of Robotics and Design I**

In this course students will continue the exploration of robotics and coding. Additionally, students will demonstrate functional knowledge of the design process and the application of STEM (science technology, engineering and math) concepts to find solutions to authentic situations.

**Advanced Robotics**- Year Long Course ( $\frac{1}{2}$  credit per Semester)

**Elective Credit**

**H3338**

**Grades: 11, 12**

**Prerequisite: Successful completion of Robotics I & Robotics II**

**Advanced Robotics** is an advanced course designed to help students build complex robots, with a focus on competitive builds and career and technical education. Students will utilize the design process throughout this course and the application of STEM (science technology, engineering and math) concepts to find solutions to authentic situations.

**\*Participation in a robotics course is a requirement to join the UHS Robotics Team.**

**Accelerated Test Prep & Scholarship Writing- Semester Course (½ credit)**

**Elective Credit**

**H8999**

**Grades: 10, 11, 12**

This course aims to provide study tips and content-area knowledge for both the ACT and SAT tests. Extensive practice with authentic ACT and SAT tests will occur inside and outside of the classroom. English and reading practice will be the focus, but students will have access to science and math tests as well. A thorough understanding of grammar will be a component of this course with practice in sentence diagramming. Additionally, students will take weekly vocabulary quizzes to boost their English-language knowledge. This course will also include tips for how to structure unique scholarship essay responses. The development of an authentic writer's voice will be an outcome. Finally, a full-length ACT or SAT test will be administered by the end of this course.

**Self-Renewal- Semester Course (½ credit)**

**Elective Credit**

**H9009**

**Grades: 9, 10, 11, 12**

**Prerequisite: Enrollment in the Wildcat Extension Program**

Self-Renewal provides an opportunity for students to enhance their ability to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, make responsible decisions, and establish steps to achieve and realize their dreams.

**Project 180- Semester Course (½ credit)**

**Elective Credit**

**H0501**

**Grades: 9, 10, 11, 12**

**Students are selected for this course.**

Project 180 provides personalized assistance in developing essential skills in study habits, problem-solving, communication, interpersonal decision making, and time management. The course is designed to enhance their ability to communicate effectively with teachers and complete quality work in a timely manner. The class will provide students time to work on assignments and guidance with monitoring assignments/assessments, composing quality emails, tracking personal progress using data, and developing good habits.

**NJROTC (Elective)**

**Only twelve students from UHS can participate in NJROTC.**

**Naval Science I - Year Long Course (½ credit per semester)**

**Elective Credit**

**H7601**

**Grades: 9, 10, 11, 12**

This course teaches the skills necessary to become a successful cadet. Primary focus is on self-discipline, self-respect, respect for others and teamwork. Learning activities include Close Order Drill, Uniform Regulations and Inspection, Orders to the Sentry, Chain of Command, Military Time, Phonetic Alphabet and Physical Fitness. Proper and timely wearing of the uniform and participation in physical fitness are vital elements of being successful in the NJROTC program. Males are required to shave daily and meet acceptable grooming standards during uniform inspections. Females must wear their hair in accordance with U.S. Navy grooming standards while in uniform. Students may be responsible for the cost of uniforms. Students will be expected to follow all requirements of the program.

**Naval Science II** - Year Long Course (*½ credit per semester*)

**Elective Credit**

**H7602**

**Grades: 10, 11, 12**

This course continues to build on the general introduction provided in Naval Science I. Introduction to leadership traits and principles of leadership begin in this course. A huge part of this curriculum is Maritime History from the American Revolution through our current conflicts. Cadets will begin to assume a few of the leadership opportunities available including, but not limited to, marching a squad and leading physical fitness. Some after-school participation is expected to assist in developing a sense of citizenship to our community. Proper and timely wearing of the uniform and participation in physical fitness are vital elements of being successful in the NJROTC program. Males are required to shave daily and meet acceptable grooming standards during uniform inspections. Females must wear their hair in accordance with U.S. Navy grooming standards while in uniform. Students may be responsible for the cost of uniforms. Students will be expected to follow all requirements of the program.

**Naval Science III** - Year Long Course (*½ credit per semester*)

**Elective Credit**

**H7603**

**Grades: 11, 12**

This course begins by broadening the cadets' understanding in operative principles of military leadership, the concept and significance of teamwork, and the intrinsic value of good order and discipline in the accomplishment of objectives and tasks. Cadets gain a more in-depth knowledge of seamanship. Instruction includes National Security and Military Law. Cadets will be responsible for conducting uniform inspections, developing a plan or physical fitness and overseeing the implementation of the plan. Some after-school participation is required to display citizenship to members of our community. Proper and timely wearing of the uniform and participation in physical fitness are vital elements of being successful in the NJROTC program. Males are required to shave daily and meet acceptable grooming standards during uniform inspections. Females must wear their hair in accordance with U.S. Navy grooming standards while in uniform. Students may be responsible for the cost of uniforms. Students will be expected to follow all requirements of the program.

**Naval Science IV** - Year Long Course (*½ credit per semester*)

**Elective Credit**

**H7604**

**Grades: 12**

This course is primarily focused on practical leadership. The intent is to provide seniors an opportunity for understanding leadership and improving their leadership skills by putting them in positions of leadership. Classwork will primarily revolve around practical work with younger cadets. Seniors will be mentored in preparation for life after high school whether joining the job force, attending community

college, attending a university, or entering the military. Assistance will be provided for those wishing to apply to ROTC scholarships or military academy appointments. Supervision and participation in after-school activities is required. Twenty percent of the grade will come from after-school participation. Proper and timely wearing of the uniform and participation in physical fitness are vital elements of being successful in the NJROTC program. Males are required to shave daily and meet acceptable grooming standards during uniform inspections. Females must wear their hair in accordance with U.S. Navy grooming standards while in uniform. Students may be responsible for the cost of uniforms. Students will be expected to follow all requirements of the program.

## AIDES

**Student aide positions are available to JUNIORS and SENIORS and only with signature of the staff person with whom the student will be working.**

**Grades will be issued as Pass or Fail. This will not affect your grade point average.  
Elective credit is issued.**

**ALL** aide positions require the following: written approval from appropriate secretary or teacher, proper manners, good attendance, a good work ethic, good citizenship skills, appropriate dress, and be polite and discrete. **In addition, students must have received no failing grades the previous semester, must have a minimum cumulative grade point average of 2.5 or better, and no misconduct resulting in Out of School Suspension.** Aides in the guidance office, principal's office, and library can expect to do copy work, filing, and in-school errands. **Students may be an aide for only one teacher or office per semester and receive only 1 unit of credit per year.**

**Guidance Office Aide-** *Semester Course (½ credit)*

Elective Credit

**H94100**

**Grades: 11, 12**

**Principal Office Aide-** *Semester Course (½ credit)*

Elective Credit

**H95100**

**Grades: 11, 12**

**Teacher Aide-** *Semester Course (½ credit)*

Elective Credit

**H97100**

**Grades: 11, 12**

**Library Aide-** *Semester Course (½ credit)*

Elective Credit

**H96100**

**Grades: 11, 12**

## SPECIAL EDUCATION

*The following classes may be taught per individual student needs and are taught in a segregated setting for IEP students with goals and objectives the same as used for the regular education curriculum but with special activities and assessments:*

**Work Experience – this is a permission only class** - Year Long Course (*½ credit per semester*)

Elective Credit

**H0600**

**Grades: 11, 12**

**Eligibility must be determined by the Missouri Department of Vocational Rehabilitation.**

This course is designed for students with active IEP's who have been determined eligible (or are in the process eligibility determinations) to receive services through the Missouri Department of Rehabilitation. As a part of Cooperative School-To-Work (CSW) class, students will also participate in a two-week functional vocational assessment through MERS in Washington, MO to further assist students and their families in making decisions towards transitional employment opportunities. Students will participate in a supervised on-the-job training program. Approval by the Missouri Department of Rehabilitation Representative, Superintendent, Director of Special Education, Principals, Counselors, and Teacher is necessary for participation in this program.

**Basic English I** - Year Long Course (*½ credit per semester*)

English Credit

**H0541**

**Grade: 9**

**Prerequisite: Students must have an active IEP.**

This course is designed to teach reading comprehension and writing skills at the basic level in four separate years using a combination of fiction and nonfiction texts. Throughout this course, students will develop listening skills, strengthen comprehension, and improve their written expression. Basic English I includes the study and application of grammar by composing paragraphs with a variety of sentence types for multiple purposes. Students will identify and analyze plot structure, themes, and character types in short story and novel units.

**Basic English II** - Year Long Course (*½ credit per semester*)

English Credit

**H0542**

**Grade: 10**

**Prerequisite: Students must have an active IEP and complete Basic English I or its equivalent course.**

This course is designed to teach reading comprehension and writing skills at the basic level in four separate years using a combination of fiction and nonfiction texts. Throughout this course, students will develop listening skills, strengthen comprehension and improve their written expression. Basic English II includes developing vocabulary skills through the study of Greek and Latin roots. Students will read Greek mythology and analyze its impact on modern culture and literature. Students will learn and apply the writing process by composing personal narratives.

**Basic English III** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**English Credit**

**H0544**

**Grade: 11**

**Prerequisite: Students must have an active IEP and complete Basic English I and II or equivalent courses.**

This course is designed to teach reading comprehension and writing skills at the basic level in four separate years using a combination of fiction and nonfiction texts. Throughout this course, students will develop listening skills, strengthen comprehension, and improve their written expression. Basic English III includes analyzing figurative language through the study of poetry and novels. Students will apply figurative language techniques in persuasive writing and speaking. Students will use text evidence to demonstrate comprehension of reading material as well as to justify opinions of reading selections.

**Basic English IV** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**English Credit**

**H0546**

**Grade: 12**

**Prerequisite: Students must have an active IEP and complete Basic English I, II and III or equivalent courses.**

This course is designed to teach reading comprehension and writing skills at the basic level in four separate years using a combination of fiction and nonfiction texts. Throughout this course, students will develop listening skills, strengthen comprehension, and improve their written expression. Basic English IV includes the use of literature circles to explore connections among a variety of literary sources. Additionally, this course enables students to analyze the use of literature in reflecting multiple cultures. Students will apply previously learned writing skills to conduct research and compose a multi-paragraph essay. Students will develop speaking and listening skills through the study of dramatic literature.

**Basic Math 1** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math Credit**

**H0547**

**Grades: 9, 10**

**Prerequisite: Students must have an active IEP.**

This course includes operations on whole numbers, integers, fractions, decimals, ratios and proportions, and percentages. It also includes exploring and solving one-variable linear equations and applications as well as simple algebraic concepts with geometric extensions. Basic Math measures critical thinking, mathematical reasoning, and problem solving techniques for situations that actually occur in today's world. This class prepares students for the world of work in addition to the ability to continue education in the Algebra area.

**Basic Math 2** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math Credit**

**H0548**

**Grades: 10, 11**

**Prerequisite: Students must have an active IEP and completed Basic Math 1.**

This course includes basic ratios, percentages, and proportions. Students will construct, manipulate, and calculate ratios, percentages, and proportions. Students will be able to use basic skills with measuring devices and provide correct conversion factors (with a formula sheet) with two or more steps using dimensional analysis. Students will be able to give measurements to provide area and perimeter and/or circumference. Students will be able to find the best deals with one to two step calculations when provided with numerous selections. Students will be able to calculate basic statistical concepts in order to interpret and explain graphic information in a variety of settings.

**Basic Math 3** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Math Credit**

**H0549**

**Grades: 11, 12**

**Prerequisite: Students must have an active IEP and completed Basic Math 1 and Basic Math II.**

Description: Under Construction

**Basic American History** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Social Studies Credit**

**H0555**

**Grades: 9, 10, 11, 12**

**Prerequisite: Students must have an active IEP.**

Basic American History is designed to acquaint students with the origins, concepts, organizations, and government policies that have shaped the face of the United States over the last century beginning with WWI. To increase comprehension, students will analyze relevant materials (which may include primary and secondary source documents) and incorporate these ideas into the assigned material.

**Basic World Studies** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Social Studies Credit**

**H0536**

**Grades: 9, 10, 11, 12**

**Prerequisite: Students must have an active IEP.**

Basic World Studies is designed to acquaint students with the origins, concepts, organizations, and government policies that have shaped the face of the World over the last century beginning with the Renaissance. To increase comprehension, students will analyze relevant materials (which may include primary and secondary source documents) and incorporate these ideas into the assigned material.

**Basic Government** - Year Long Course ( $\frac{1}{2}$  credit per semester)

**Social Studies Credit**

**H0556**

**Grades: 10, 11, 12**

**Prerequisite: Students must have an active IEP and have completed Basic American History and Basic World Studies.**

This course will give an overview of some aspects of history, but the main focus will be on the structures of government and its specifics. By the end of the course, students will have the training and knowledge

to prepare for the Missouri and US Constitution, and EOC exams. There will be continuous knowledge review of the Judicial, Executive, Legislative, and political processes. There will also be time in this course for contemporary issues as a basis for comparison with Constitutional law.

**Basic Physical Science** - Year Long Course (*½ credit per semester*)

**Science Credit**

**H0560**

**Grades: 9, 10, 11**

**Prerequisite: Students must have an active IEP.**

Basic Physical Science addresses the foundations for basic concepts of chemistry and physical science. Topics covered will include: Units of Measurement, Properties of Matter, Atomic Theory, Periodic Table of Elements, Forces of Motion and Newton's Law. Lab experiences, scientific inquiry, and problem-solving are used to enrich the scientific concepts in this course.

**Basic Biology** - Year Long Course (*½ credit per semester*)

**Science Credit**

**H0561**

**Grades: 10, 11, 12**

**Prerequisite: Students must have an active IEP.**

This course is designed to introduce basic biology concepts. Throughout the course, students will learn about Cell Theory, Characteristics of Life, Biomes, Ecosystems, Photosynthesis, and Genetic Traits. Students will prepare to take the Biology EOC by the end of this course.

**Basic Ecology** - Year Long Course (*½ credit per semester*)

**Science Credit**

**H0652**

**Grades: 9, 10, 11, 12**

**Prerequisite: Students must have an active IEP.**

This is a year-long course that provides the basic concepts of Ecology, including the structure of matter and the application of science to the environment and to society. This course uses biology and science as a platform for understanding the environment and environmental issues.

**Basic Personal Finance**- Semester Course (*½ credit*)

**Required Graduation Course**

**H0534**

**Grades: 9, 10, 11, 12**

**Prerequisite: Students must have an active IEP.**

This course is designed to introduce students to basic concepts of personal finance. Throughout the course, students will learn about managing their resources, time, consumer education, taxes, money and banking, credit, saving and investing, and insurance. Activities included in this course include, but are not limited to: preparing a budget, keeping records of income and expenses, writing a check, balancing a checkbook, figuring unit pricing, and figuring interest.

**Essential Skills Classroom:**

**Math H0824** – - *Year Long Course (½ credit per semester)*  
**English/Language Arts H0825** – - *Year Long Course (½ credit per semester)*  
**Social Studies H0826** – - *Year Long Course (½ credit per semester)*  
**Science H0827** - *Year Long Course (½ credit per semester)*  
**Reading H0828** - *Year Long Course (½ credit per semester)*  
**Functional Skills H0821** - *Year Long Course (½ credit per semester)*  
**Health H0820**- *Semester Course (½ credit)*  
**Personal Finance H0819**- *Semester Course (½ credit)*  
**Work Experience H0600**- *Semester Course (½ credit)*

**Grades: 9, 10, 11 12**

These courses are designed for students with active IEP's who have been determined by the IEP team to need essential life skill instruction for post-secondary education/employment (including transition), home living and self-care skills, community/leisure activities, and academic skills. Post-secondary education and employment focuses on skills required to pursue additional education and full or part-time employment. Home living and self-care skills address health and hygiene skills as well as skills needed for independent or assisted living. Community activities focus on accessing community resources such as transportation, libraries, and public services. Leisure addresses social and hobby skills. Academic courses focus on the basic skills of reading, writing, mathematics, and awareness of science and social studies concepts.

**Transition Classroom:**

**English H0563** - *Year Long Course (½ credit per semester)*  
**Math H0564** - *Year Long Course (½ credit per semester)*  
**Science H0565** - *Year Long Course (½ credit per semester)*  
**Life Skills H0823** - *Year Long Course (½ credit per semester)*  
**Social Studies H0566** - *Year Long Course (½ credit per semester)*

Similar to the Essential Skills classroom, although at a slightly higher level, these courses are designed for students with active IEP's who have been determined by the IEP team to need essential life skill instruction for post-secondary education/employment (including transition), home living and self-care skills, community/leisure activities, and academic skills. Post-secondary education and employment focuses on skills required to pursue additional education and full or part-time employment. Home living and self-care lessons address health and hygiene skills as well as skills needed for independent or assisted living. Community activities focus on accessing community resources such as transportation, libraries, and public services. Leisure addresses social and hobby skills. Academic courses focus on the basic skills of reading, writing, mathematics, and awareness of science and social studies concepts.

**Academic Intervention**- *Semester Course (½ credit)*

**Elective Credit**

**H0910**

**Grades: 9, 10, 11, 12**

**Prerequisite: Students must have an active IEP or be appointed by Admin to take this class**

Academic Intervention will be used to help students with IEPs or 504's develop academic skills. Students will work on homework completion and academic enrichment. Grades are issued as Pass/Fail.

## **Resource Room**

The Resource Room will be open to all students that have an IEP or 504 and need modifications or accommodations with any subject as described within their plans.



**There are 70 spots available for UHS students.**

### **Application Procedures:**

- Students must apply with their Guidance Counselor at their home high school

- Sending schools Guidance Office personnel conduct the selection process for their high school (See HS guidance office for details)
- Students selected to attend Four Rivers Career Center must complete the FRCC Application and return to their high school Guidance Office.

### **Admission Procedures:**

- Students will be notified by their home high school about their acceptance to Four Rivers Career Center

### **CTSO (Career Tech Student Organizations)**

HOSA-Health Occupation Students of America  
 FFA- Future Farmers of America  
 DECA- Distributive Education of America  
 Educators Rising- Future Educators of America  
 Skills USA- Partnership of students, teachers, and industry to insure a skilled workplace

### **Definitions**

**Dual Credit-** high school students taking college-level course work and earning college credit along with HS credit. Enrolling in dual credit is optional.

**Articulation Agreement-** an officially approved agreement between two institutions, which allows a student to apply credits earned in specific programs at one institution toward a specific program at the other institution

**Embedded Credit-** English or Science credit earned in conjunction with Career Technical Course.

**Career Prep Certificate-** an endorsement for High School seniors who meet certain standards demonstrating that they are ready to work in the local workplace.

**CASE (AFNR)-**Curriculum for Agricultural Science Education /Agriculture, Food, and Natural Resources

**CASE (ASA)-**Agricultural Science-Animal

**CASE (ASP)-**Agricultural Science-Plant

During junior and senior year, a student will utilize a practical hands-on instructional method combined with classroom learning, resulting in more real life knowledge through work experience. A combined total of six (6) credits can be earned to meet the practical art credit or elective credit requirement.

Students who attend Four Rivers will leave with experience, knowledge, confidence, dignity, and a well-rounded education that will prepare them for a lifetime of success in their career of choice. Employers throughout the East Central Missouri region desire a combination of classroom learning and experience based activity in their search for employees.

### **Course Offerings**

The following is a list of courses available, the grade level at which they may be taken, and recommended prerequisites. Additional course information may be obtained from your counselor and/or the Admissions/Placement Director of Four Rivers Career Center at (636) 231-2100

Students enrolling in courses at Four Rivers Career Center MUST complete the Four Rivers Career Center's Application for Admission and also the advisement process. Contact your assigned high school guidance counselor to enroll in courses at Four Rivers.

**STUDENTS WHO ENROLL IN FOUR RIVERS CAREER CENTER WILL FOLLOW THE FOUR RIVERS CALENDAR. STUDENTS WILL BE REQUIRED TO ATTEND FOUR RIVERS WHENEVER FOUR RIVERS IS IN SESSION, REGARDLESS OF ANY MODIFIED DAYS**

**Collision Repair I – 3 Credits**

**H8010**

**Grades: 11, 12**

**(½ embedded Applied Math credit and ½ embedded English IV credit)**

Collision Repair is a two-year program providing instruction in the basic entry-level skills that are an integral part of the auto body repair trade. The comprehensive ASE (Automotive Service Excellence) certified course covers basic welding, sheet metal dent repair, surface preparation, and refinishing fundamentals. Instruction is also provided in automotive design/construction, identification, and care of hand and power tools. Basic skills are reinforced with instruction added in body panel replacement, collision estimation, shop management, frame damage identification, MIG welding, and glass installation. Reading, writing, and basic math skills are necessary for success in this field.

**Collision Repair II – 3 Credits**

**H8020**

**Grade: 12**

**(½ embedded Applied Math credit and ½ embedded English IV credit)**

Collision Repair is a two-year program providing instruction in the basic entry-level skills that are an integral part of the auto body repair trade. The comprehensive ASE (Automotive Service Excellence) certified course covers basic welding, sheet metal dent repair, surface preparation, and refinishing fundamentals. Instruction is also provided in automotive design/construction, identification, and care of hand and power tools. Basic skills are reinforced with instruction added in body panel replacement, collision estimation, shop management, frame damage identification, MIG welding, and glass installation. Reading, writing, and basic math skills are necessary for success in this field.

**Auto Technology I – 3 Credits**

**H8110**

**Grades: 11, 12**

**(½ embedded Applied Math credit and ½ embedded English IV credit)**

Auto Technology is a two-year program based upon the ASE (Automotive Service Excellence) training program, covering basics of auto diagnostics and repair. Core topics and related skills are taught which will prepare students to enter the automotive field.

**Auto Technology II – 3 Credits**

**H8120**

**Grade: 12**

**(½ embedded Applied Math credit and ½ embedded English IV credit)**

Auto Technology is a two-year program based upon the ASE (Automotive Service Excellence) training program, covering basics of auto diagnostics and repair. Core topics and related skills are taught which will prepare students to enter the automotive field.

**Machine Tool Technology I – 3 Credits**

**H8210**

**Grades: 11, 12**

**(½ embedded Applied Math credit and ½ embedded English IV credit)**

Machine Tool Technology is a one or two-year program offering basic instruction in the use of precision tools and machines. This program provides first-hand machinist training such as turning, milling, and grinding materials. Recommended preparations include basic mathematics, mechanical drawing, computer literacy, or industrial arts.

**Machine Tool Technology II – 3 Credits**

**H8220**

**Grade: 12**

**(½ embedded Applied Math credit and ½ embedded English IV credit)**

Machine Tool Technology is a two-year program offering basic instruction in the use of precision tools and machines. This program provides first-hand machinist training such as turning, milling, and grinding materials. Recommended preparations include basic mathematics, mechanical drawing, computer literacy, or industrial arts.

**Welding Technology I – 3 Credits**

**H8310**

**Grades: 11, 12**

**(½ embedded Applied Math credit and ½ embedded English IV credit)**

Machine Tool Technology is a one or two-year program offering basic instruction in the use of precision tools and machines. This program provides first-hand machinist training such as turning, milling, and grinding materials. Recommended preparations include basic mathematics, mechanical drawing, computer literacy, or industrial arts.

**Welding Technology II – 3 Credits**

**H8320**

**Grade: 12**

**(½ embedded Applied Math credit and ½ embedded English IV credit)**

Welding Technology is a two-year program that prepares students for employment in the welding and metal fabrication industries. This is a comprehensive program that provides training in various types of welding processes and positions, including plate and pipe. Materials used include steel, stainless steel, and aluminum. Blueprint reading, layout, and fit-up are integral parts of the curriculum. Reading, writing, and basic math skills are necessary for success in this field. Students must also have good hand eye coordination and manual dexterity.

**Building Construction Trades I – 3 Credits**

**H8410**

**Grades: 11, 12**

**(½ embedded Applied Math credit and ½ embedded English IV credit)**

Building Construction is a two-year program where the students learn construction related skills. Students are exposed to the various phases of residential and commercial construction; including carpentry, concrete, plumbing, electrical wiring, hanging and taping drywall, and painting. Instruction is split between the classroom and building sites. Recommended preparations include drafting, general shop and basic mathematics.

**Building Construction Trades II – 3 Credits**

**H8420****Grade: 12****(½ embedded Applied Math credit and ½ embedded English IV credit)**

Building Construction is a two-year program where the students learn construction related skills. Students are exposed to the various phases of residential and commercial construction; including carpentry, concrete, plumbing, electrical wiring, hanging and taping drywall, and painting. Instruction is split between the classroom and building sites. Recommended preparations include drafting, general shop and basic mathematics.

**Teaching Careers Program – 3 Credits****H8030****Grades: 11, 12****(1 embedded English IV credit)**

This course is designed for students interested in teaching careers grades K-12. This program is designed to allow students true teaching experiences and opportunities for learning at various levels, while partnering with local schools to complete observation hours and assignments related to the course work. In addition to the hands-on opportunities, students will also be engaged in academic coursework that is relevant to becoming a teacher. Students will engage in topics related to child development, teaching and learning and classroom instructional strategies.

**Health Occupations – 3 Credits****H8510****Grade: 12****(1 embedded English IV credit & 1 embedded Science credit)****Prerequisite: Concurrent enrollment or completion of Chemistry I or Chemistry II. An application, interview, and instructor consent are required.****Costs involved with this program include: \$10.00 for a background check, \$15.00 HOSA dues, approximately \$40 for one uniform; additional fees for any associated required immunizations.****Students must provide their own transportation for the second semester rotation schedule.****Students must have a “C” or better in all three of the Health Occupations classes (A&P/medical terminology, Orientation to Health Occupations, and Fundamentals) in order to continue to second semester rotations. OSS or any breach of confidentiality can be grounds for removal from the program resulting in failure and loss of credit hours.**

Through classroom study, laboratory training, field trips and guest speakers, students will become familiar with available career choices in the health science industry. Students will rotate through more than 35 different areas in and outside the hospital.

**Three areas of study included in the Health Science Careers program:****1) Anatomy and Physiology and Medical Terminology**

One hour of the first semester offers the student core competencies in anatomy and physiology and medical terminology. The student must pass with a 70% to advance to the second semester. During the second semester, the student will have the opportunity to use the theory and skills learned during the first semester and apply it in actual health care settings and by writing a term paper for the final exam. An embedded science credit will be awarded to the student after completing the 2<sup>nd</sup> semester to all sending schools with the exception of New Haven High School.

## 2) **Orientation to Health Occupations**

This portion of the course is designed to introduce the student to a variety of healthcare fields and provide the tools necessary to choose and be successful in continuing education.

## 3) **Fundamentals**

This portion of the Health Occupations program offers the student information and skills in communication, personal care, and safety in the healthcare field.

### **Graphic Communication I – 3 Credits**

**H8610**

**Grades: 11, 12**

**(½ embedded English IV credit)**

The Graphic Communications Two-year program provides the training and experience necessary for employment in one of the many fields in the graphic industry. Students can broaden their knowledge and skills through exposure to a variety of training areas which include: layout design, desktop publishing (Adobe In Design, Illustrator, and Photoshop), photography, multimedia production, screen printing, pad printing. English, keyboarding, computer and art courses would be beneficial to students entering the graphics field.

### **Graphic Communication II – 3 Credits**

**H8620**

**Grades: 11, 12**

**(½ embedded English IV credit)**

The Graphic Communications two-year program provides the training and experience necessary for employment in one of the many fields in the graphic industry. Students can broaden their knowledge and skills through exposure to a variety of training areas which include: layout design, CTP (computer to plate), desktop publishing (primarily using Adobe In Design, Illustrator, and Photoshop), photography, multimedia production, screen printing, pad printing, and offset press operation. English, keyboarding, computer and art courses would be beneficial to students entering the graphics field.

### **Information Technology I – CompTIA A+ credit - 3 Credits**

**H8630**

**Grades: 11, 12**

**(½ embedded English IV credit)**

Many IT professionals begin their careers in IT support related positions. In an IT support job, you'll be asked to install, repair, configure, secure, and manage computer hardware, operating systems, and software in home or corporate environments. These are the most basic and foundational skills required of all IT professionals as well as the ability to perform tasks commonly performed by IT network professionals, including systems administrators, network administrators, network engineers and related careers. The core responsibilities of these job roles typically revolve around the management of hardware and software networking components and include IP configuration, setting up wireless and wired networks, managing networks, basic network security, software updates, hardware upgrades and network protocols. Additionally, communication, listening and analysis skills are essential for interacting with customers. Certification(s): TestOut PC Pro and Network Pro, CompTIA A+ and Network+.

### **Information Technology II – CompTIA Network Credit – 3 Credits**

**H8640**

**Grade: 12**

**(½ embedded English IV credit)**

**Prerequisite: Keyboarding, Computer Applications**

Begin preparing for a networking career with this introduction to how networks operate. Perform real-world tasks using the command line interface on Cisco switching devices. Learn the skills that are often performed by IT professionals in a variety of job roles, including computer security specialists, systems engineers, and network systems administrators. Students even get the chance to build simple local area networks (LANs). Discover a working knowledge of IP addressing schemes, foundational network security, and be able to perform basic configurations for routers and switches as well as performing basic network configuration and troubleshooting, identify and mitigate LAN security threats, and configure and secure a basic WLAN. Certification(s): 2/3 Partial completion of Cisco Certified Network Associate CCNA

### **PLTW Cybersecurity**

**H8334**

**Grades: 11, 12**

**Prerequisite: Students are currently enrolled in Algebra II, Students have previously taken at least one computer science course and Information Technology I.**

Cybersecurity introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in Cybersecurity, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely. Certification(s): TestOut Security Pro, CompTIA Security+

### **Health Science Academy (PLTW Biomed III & IV)**

**H8509**

**Grades: 11, 12**

**Prerequisite: Principles of Biomedical Science and Human Body Systems**

**Medical Intervention (SI)** Students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

**Biomedical Innovation (S2)** In the final course of the PLTW Biomedical Science sequence, students build on the knowledge and skills gained from previous courses to design innovative solutions for the most pressing health challenges of the 21<sup>st</sup> century. Students address topics ranging from public health and biomedical engineering to clinical medicine and physiology. They have the opportunity to work on an independent project with a mentor or advisory from a university, medical facility, or research institution.

The third component of this course includes 1.0 credit in Biomedical Science English. Students are not required to sign up for an additional English course if they wish to earn their credit by taking Biomedical Science English.

### **Computer Integrated Manufacturing (PLTW Engineering IIIa) – 1.5 Credits**

**H8330**

**Grades: 11, 12**

**Prerequisite: none listed**

**Fall Semester**

**(.5 embedded credit of English)**

This semester course is designed to expose students to the fundamentals of computerized manufacturing technology. The course is built around several key concepts: Computer Modeling — using a three dimensional, solid modeling software package with mass property analysis. CNC Equipment — understanding the machine tools and its operating and programming aspects. CAM Software — converting computer generated geometry into a program to drive CNC machine tools. Robotics — using a robot for materials handling and assembly operations. Flexible Manufacturing Systems — working in teams to design manufacturing work cells and table top factory simulations.

Regarding English language instruction, this course will cultivate the critical thinking, reading, writing, and oral skills required for students to pursue a career in human services. Students will practice reading for information, analyzing nonfiction narrative, evaluating sources through career research, and a variety of writing assignments including research-based, argument, and technical writing. Instruction is based on lecture, small group activities, graded discussion, online assignments, and project-based learning.

### **Civil Engineering and Architecture (PLTW Engineering IIIb) – 1.5 Credits**

**H8331**

**Grades: 10, 11, 12**

**Prerequisite: none listed**

**Spring Semester**

**(.5 embedded credit of English)**

Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3-D architectural design software.

Regarding English language instruction, this course will cultivate the critical thinking, reading, writing, and oral skills required for students to pursue a career in human services. Students will practice reading for information, analyzing nonfiction narrative, evaluating sources through career research, and a variety of writing assignments including research-based, argument, and technical writing. Instruction is based on lecture, small group activities, graded discussion, online assignments, and project-based learning.

### **Engineering Design and Development (PLTW Engineering IV) – 3 Credits**

**H8332**

**Grade: 12**

**Prerequisite: none listed**

**(1.0 embedded credit of English)**

In this capstone course, students work in teams to design and develop an original solution to a valid open-ended technical problem by applying the engineering design process. Students perform research to choose, validate, and justify a technical problem. After carefully defining the problem, teams design,

build, and test their solutions while working closely with industry professionals who provide mentoring opportunities. Finally, student teams present and defend their original solution to an outside panel. Upon successful completion of this course and at least an 80% on the comprehensive assessment at the end of the course, students can earn 3 hours of college credit from many universities nationwide.

### **Fire Science Academy - 3 Credits**

**H8100**

**Grades: 11, 12**

Fire Science Academy is a class designed for students interested in future careers in Emergency Management. Students will learn the skills necessary to be a first responder and will learn the tactical skills in live fire suppression and vehicle extrication. This course will provide training using fire fighting equipment, fire safety, and fire department incident command. This would also include structural search and rescue, forcible entry, ventilation, fire suppression equipment, incident scene operations, and risk reductions. After successful completion of the course, students are eligible to complete the Fire Fighter I and II certification and will also be certified in NIMS 100, 200, and 700. This class will be located at the Washington Fire Department Training facility

### **CAPS Global Business - 3 Credits**

**H8641**

**Grades: 11, 12**

**(1.0 embedded credit of English)**

CAPS: Global Business and Entrepreneurship provides high school students a state of the art business center where you will learn the skill sets necessary to move an idea from light bulb to launch. You will live and learn the stages of ideation, business development, perfected pitch proposals and business implementation. CAPS works collaboratively with area business leaders to design and develop mutually beneficial learning experiences. Together, we will personalize your learning experience to prepare you for your future in high skilled and high demand careers.