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# John Marshall High School Mission Statement

The faculty, staff, and administration will provide a safe, caring, and productive environment for our students so that they will obtain necessary knowledge and skills to be dynamic citizens of our ever-changing society.

Dear John Marshall High School Students and Parents,

The JMHS administration and counseling staff are pleased to present the new John Marshall High School Course Description Booklet. The purpose of this booklet is to guide students in planning their academic programs. This plan will assist in students selecting courses that fulfill the graduation requirements for the state of West Virginia and Marshall County Schools. Planning course work is an important aspect of each student's high school career, and a successful plan will prepare students for their post-graduation pursuits.

Students should carefully read and discuss their course options before making final decisions. Students may contact their counselor with any questions at 304-843-4444.

## COUNSELING DEPARTMENT

The student's assigned counselor will handle all academic and scheduling issues.

JMHS Counseling Staff	Counselor by Alphabet (Last Name)	Email Address	Phone
Mika Ward	A - E	Mika.ward@k12.wv.us	304-843-4444 Ext. 231
Chelsea Eikleberry	F - L	Chelsea.linsky@k12.wv.us	304-843-4444 Ext. 232
Angie Curran	M - R	Amgessler@k12.wv.us	304-843-4444 Ext. 223
Sonya Holliday	S - Z	sdhollid@k12.wv.us	304-843-4444 Ext. 228
<b>Support Staff</b>			
Melanie Knutsen	Career Counselor	mknutsen@k12.wv.us	304-843-4444 Ext. 142
Briann Myers	Counseling Secretary	Briann.myers@k12.wv.us	304-843-4444 Ext. 222

Please stop in the Counseling Office if you have any questions.

## COLLEGE EARLY ENTRANCE/DUAL CREDIT AT JOHN MARSHALL

Dual credit is offered from West Virginia Northern Community College, West Liberty University, and West Virginia University to JMHS students through the "early entrance" programs of the respective schools. These courses are listed in the course description section with course requirements. Tuition fees are required and students must meet the prerequisite criteria set forth by each college. Dual credit courses carry an additional 1.0 value in GPA. The early entrance program is governed by the West Virginia Higher Education Policy Commission and as such, may change during the year. Decisions at the state level can affect and overrule local decisions regarding the offering of dual credit, so be sure to talk with a counselor to see which classes will be offered each semester.

Dual credit courses may be delivered at the high school, on the college campus, another site not located at the high school or college campus, in a virtual environment, or through a combination of these delivery methods. Dual credit courses taken in-person at WVNCC need to be scheduled outside of the typical school day. Students will not be permitted to leave school to attend dual credit courses during the school day. Dual credit courses may be taught by college faculty or by a high school teacher who has been approved by the college to teach the course. If dual credit is not earned and the course is failed, a student may earn high school credit for graduation through credit recovery. The college grading scale will be utilized to award grades for dual credit courses. The tuition and cost of college textbooks and materials will be paid by the student. If the college or university awards the grade, the scale may differ from West Virginia State Board of Education policy 2510 and expectations and scale detailed in the Board Policy 5421 - Grading. The Board shall allow for the grade to count toward the student's final

grade point average and class rank. John Marshall High School currently accepts the following Dual Credits, which are subject to change based on staffing or ability to offer:

AT JMHS:  
 WVU Biology  
 WVNCC Psychology  
 WVNCC Sociology  
 WVNCC College Algebra  
 WVNCC Technical Writing  
 WVNCC Technical Math  
 WLU Business Management  
 WLU Speech  
 WLU Civics  
 WLU English 101 and 102  
 WLU Microbiology  
 WLU Spanish 3

AT WVNCC:

Additional early entrance classes can be taken at WVNCC after the completion of 10<sup>th</sup> grade. The courses below have been approved to be taken at WVNCC and transferred back to MCS for high school credit. Students may enroll and take additional courses at WVNCC, however, only the general education courses listed below shall transfer back for high school credit. Dual credits are approved annually at the Board of Education and are registered with the WVDE.

Early Enrollment/Dual Credit Crosswalk	
WVNCC Course	John Marshall Course
ENG 101 - Composition I and ENG 102 - Composition II	English 12 - WVEIS 4012
CIT 117 - Microsoft Applications	BCA I - WVEIS 1411 and BCA II - WVEIS 1413
HIST 110 - US Until 1865 and HIST 111 - US Since 1865	US Studies Comprehensive - WVEIS 7012
Hist 100 - World Cultures I and HIST 101 - World Cultures II	Topics in World History - WVEIS 7243
MATH 108 - College Algebra	Algebra III - WVEIS 3051
MATH 109 - Mathematics of Business and Finance	Accounting II - WVEIS 1403
MATH 110 - Pre-Calculus	Pre-Calculus/Trigonometry - WVEIS 3064
MATH 279 - Calculus I	Calculus - WVEIS 3144
MATH 210 - Statistics	Statistics - WVEIS 3029
PSYCH 105 - Introduction to Psychology	Psychology - WVEIS 7321
SOC 125 - Introduction to Sociology	Sociology - WVEIS 7341
BIO 110 - Principles of Biology	Biology II - WVEIS 6023
BIO 114 - Anatomy and Physiology I and BIO 115 - Anatomy and Physiology II	Human Anatomy and Physiology - WVEIS 6103
SPCH 105 - Fundamentals of Speech Communication	Speech/Oral Communication (.5 credits) - WVEIS 4076
POL 102 - American National Government and Politics	Civics - WVEIS 7031
CHEM 108 - General Chemistry I	Chemistry I - WVEIS 6031
ART 150 - Art Appreciation	Art History - WVEIS 3232
MUS 150 - Appreciation of Music	Music Appreciation (.5 credits) - WVEIS 3746
GEO 205 - World Geography	World Geography - WVEIS 7189
PHYS 104 - General Physics I	Physics - WVEIS 6041

## **DUAL ENROLLMENT**

Dual enrollment means the registration of an eligible secondary student in a post-secondary course creditable toward high school completion and a career technical certificate, associate degree, or baccalaureate degree. Students enrolled in post-secondary instruction that is not creditable towards a high school diploma may not be classified as a dual enrollment student. The following dual enrollment pathways are available through a Memorandum of Understanding between Marshall County Schools and WVNCC:

WVNCC/MCS Dual Enrollment Pathways					
WVES Code	WVES Title	HS Credit	WVNCC Code	WVNCC Title	College Credit
<b>Child Development &amp; Teacher Education</b>					
1306	Intro to Education and the Classroom	1 Credit	ECCE 100	Foundations of Education	3 Hours
1307	Intro to Child Development	1 Credit	PSYC 210	Child Development	3 Hours
1308	Intro to Educational Psychology	1 Credit	PSYC 208	Developmental Psychology	3 Hours
1309	Intro to Social, Emotional and Behavioral Wellness	1 Credit	ECCE 212	Child, Families, and Communities	3 Hours
<b>Health Care</b>					
0721	Medical Terminology	1 Credit	AHS 103	Medical Terminology	1 Hour
0789	Clinical Specialties I	1 Credit	PCT 101	Patient Care Tech I	5 Hours
0790	Clinical Specialties II	1 Credit	PCT 151	Patient Care Tech II	6 Hours
n/a	American Heart Association CPR & First Aid Cert.	n/a	HPE 110	CPR and First Aid	1 Hour
<b>Business</b>					
1401	Accounting I	1 Credit	ACC 122	Principles of Accounting I	3 Hours
1403	Accounting II	1 Credit	MATH 109	Mathematics of Business and Finance	3 Hours
1411	Business Computer Applications I	1 Credit	CIT 117	Microsoft Applications	3 hours
1413	Business Computer Applications II	1 Credit			
1439	Business and Marketing Essentials	1 Credit	BA 100	Intro to Business	3 Hours
			ECON 104	Principles of Macroeconomics	3 Hours
<b>Construction &amp; Manufacturing</b>					
1862	Welding I	1 Credit	WELD 102	Basic Shielded Metal Arc Welding	6 Hours
1863	Welding II	1 Credit			
1864	Welding III	1 Credit	WELD 202	Beginning MIG	3 Hours
1865	Welding IV	1 Credit	WELD 206	Beginning TIG	3 Hours
n/a	OSHA 30 Certification	n/a	APT 103	Safety Hazard Recognition	3 Hours

### **EMBEDDED CREDIT**

An Embedded Credit Course incorporates content standards and objectives for an embedded credit from one credit bearing high school course into another (host) course(s) and allows students to earn credit for both. Embedded credit does not allow for two courses in the same content area (e.g., Algebra I and Geometry) to be embedded into one course. The intent of embedded credit is not to create a time-shortened high school experience but rather to provide opportunities for students to participate in advanced academic and/or career/technical education courses without having to choose one over the other.

It is the responsibility of the student to determine the impact of an embedded credit on NCAA eligibility, college entrance, SAT/ACT scores, and successful completion of entrance exams for various trades. Students can consult their counselor on these topics as necessary.

Students will receive high quality instruction that will allow them to work toward mastery on 100% of the content standards and objectives for all embedded credit courses approved by the county and submitted for approval to the WVBE. Credit will be awarded at the end of a particular course or multiple courses where the credit is embedded. Students must receive an actual letter grade they cannot receive a pass or fail.

A complete list of programs that yield embedded credits can be found at [https://wvde.us/wp-content/uploads/2024/01/Embedded-Fulfillment-Doc-12.19.2023-3-1\\_Jody-Wilkinson.pdf](https://wvde.us/wp-content/uploads/2024/01/Embedded-Fulfillment-Doc-12.19.2023-3-1_Jody-Wilkinson.pdf).

### **MAKING COURSE SELECTIONS**

Read this course description guide carefully. Each year of high school must be carefully planned to assure the student has fulfilled all requirements to enter post-secondary education or to begin a career with job-related skills upon graduation. As courses are selected, students and parents must determine if the selections are focused toward future educational or career plans. Students can use the checklist below to help determine their course selections:

- ✓ Determine the career focus that you are preparing to pursue.
- ✓ Review your four-year plan in the program of study to identify which courses are most appropriate for your career path.
- ✓ Determine the specific graduation requirements necessary at each grade level.
- ✓ Read each course description. Be familiar with the courses that are appropriate for each grade and career path. If you are unsure, consult with your counselor.
- ✓ Make sure that there is a clear understanding of course prerequisites. Some courses require certain grade averages, test scores, attendance requirements, or teacher recommendations.

## **PARTICIPATION IN GRADUATION EXERCISES**

To participate in graduation exercises at any Marshall County public high school, a student must have completed, without exception, all requirements for graduation as defined in Graduation Requirements or Board Policy for graduation. Students are, ultimately, responsible for tracking their own credits for graduation. Students who fall short of requirements in any area shall not participate in such exercises. The school also reserves the right to prohibit students from participating in graduation based on school discipline leading up to graduation. **Source: Marshall County Board of Education Policy and/or minutes.**

## **ADVANCED PLACEMENT**

Advanced Placement (AP) courses provide rich course material, classroom discussions, and demanding assignments. The assignments typical of AP courses will help students develop the content mastery and critical thinking skills expected of college students, and feel confident in their abilities. Successful completion of national AP tests can lead to earning college credit and help a student stand out in the college admission process. AP courses require above-average test scores, teacher recommendation, and at least a 3.0 GPA. AP classes require additional time commitments for coursework both in class and outside of school in the form of summer readings, independent research, homework assignments, and study time. The amount of time will be higher than the amount of time designated for Honors classes. Students carrying a high number of AP classes need to take this into consideration especially if participating in after school curricular activities or working a part-time job. AP courses carry an additional 1.0 GPA value. A comprehensive list of AP Credits by College or University can be found at the following link: <https://apstudents.collegeboard.org/getting-credit-placement/search-policies>.

From College Board:  
What AP Stands For

1. AP stands for clarity and transparency. Teachers and students deserve clear expectations. The Advanced Placement Program makes public its course frameworks and sample assessments. Confusion about what's permitted in the classroom disrupts teachers and students as they navigate demanding work.
2. AP is an unflinching encounter with evidence. AP courses enable students to develop as independent thinkers and to draw their own conclusions. Evidence and the scientific method are the starting point for conversations in AP courses.
3. AP opposes censorship. AP is animated by a deep respect for the intellectual freedom of teachers and students alike. If a school bans required topics from their AP courses, the AP Program removes the AP designation from that course and its inclusion in the AP Course Ledger provided to colleges and universities. For example, the concepts of evolution are at the heart of college biology, and a course that neglects such concepts doesn't pass muster as AP Biology.
4. AP opposes indoctrination. AP students are expected to analyze different perspectives from their own frame of reference, and no points on an AP Exam are awarded for agreement with a viewpoint. AP students aren't required to feel certain ways about themselves or the course content. AP courses instead develop students' abilities to assess the credibility of sources, draw conclusions, and make up their own minds. As the AP English Literature course description states: "AP students are not expected or asked to subscribe to any one specific set of cultural or political values, but are expected to have the maturity to analyze perspectives different from their own and to question the meaning, purpose, or effect of such content within the literary work as a whole."
5. AP courses foster an open-minded approach to the histories and cultures of different peoples. The study of different nationalities, cultures, religions, races, and ethnicities is essential within a variety of academic disciplines. AP courses ground such studies in primary sources so that students can evaluate experiences and evidence for themselves.
6. Every AP student who engages with evidence is listened to and respected. Students are encouraged to evaluate arguments but not one another. AP classrooms respect diversity in backgrounds, experiences, and viewpoints. The perspectives and contributions of the full range of AP students are sought and considered. Respectful debate of ideas is cultivated and protected; personal attacks have no place in AP.
7. AP is a choice for parents and students. Parents and students freely choose to enroll in AP courses. Course descriptions are available online for parents and students to inform their choice. Parents don't define which college-level topics are suitable within AP courses; AP course and exam materials are crafted by committees of professors and other expert educators in each field. AP courses and exams are then further validated by the American Council on Education and studies that confirm the use of AP scores for college credits by thousands of colleges and universities nationwide.

The AP Program encourages educators to review these principles with parents and students so they know what to expect in an AP course. Advanced Placement is always a choice, and it should be an informed one. AP teachers should be given the confidence and clarity that once parents have enrolled their child in an AP course, they have agreed to a classroom experience that embodies these principles

## **HONORS COURSES**

John Marshall High School offers honor courses to academically advanced students. These courses offer in-depth scholarly exploration into the subject area. Honors classes will carry an additional workload in the area of after school homework, reading assignments, study time and summer reading. Honors classes carry an additional .5 GPA value.

## **CAREER and TECHNICAL EDUCATION**

Career and Technical Education at John Marshall encompasses a great variety of programs designed to equip students with work and life skills. Students explore career options and develop skills they will need to be successful in the modern workplace as well as prepare them for many technical college courses. Some courses can be a springboard to immediate employment for many graduates. Other students rely on technical education courses to prepare them for college and other post-secondary learning opportunities. More information can be found at <https://wvde.us/technical-education/>.

## **PROJECT LEAD THE WAY COURSES**

PLTW empowers students to develop and apply in-demand, transportable skills by exploring real-world challenges. Through our pathways in computer science, engineering, and biomedical science, students not only learn technical skills, but also learn to solve problems, think critically and creatively, communicate, and collaborate. By creating an engaging learning environment, PLTW programs empower students to develop in-demand skills to pursue rewarding careers, solve important challenges, and contribute to global progress. John Marshall offers PLTW courses in biomedical, engineering, and computer sciences. These courses must begin with each program's intro course as a pre-requisite. Specific courses in this pathway are recognized as high school lab science credits. Students can earn Career Technical Completer certificates for taking all 4 courses in a given pathway. PLTW classes carry an additional .5 GPA value.

## **PROMISE SCHOLARSHIP INFORMATION**

Must complete high school graduation requirements at a West Virginia public or private high school.

Must complete at least one half of credits required for high school graduation through attendance at a public or private high school in the state of West Virginia.

- Limited exceptions are available for students from West Virginia who commute daily to an out-of-state public or private high school and who qualify as a military dependent under Section 6 of the PROMISE Scholarship Program Rule.

Must achieve a cumulative grade point average of at least a 3.0 on a 4.0 scale or whatever is considered a "B" average, based on county board grading policies, in both core courses AND overall coursework required for graduation by the West Virginia Department of Education.

- The Core grade point average is determined based on the grades in all core courses a student completes on the core class listing, not just those required for graduation.
- Initial eligibility will be determined by grades at the end of the seventh high school semester, but applicants may qualify as late as after the eighth semester.
- Students using the last semester of high school to determine their eligibility are responsible for having their school send an official transcript identifying both the core and overall grade point averages.
- Applicants who qualify with seventh semester grades must maintain the grade point average requirement through the eighth semester or the scholarship will be revoked.
- If a student does not have a qualifying seventh semester grade point average, they must apply and have a completed FAFSA submitted by the March 1 deadline to be considered.
- Grade point average determination must be determined by a high school counselor or school official.
- Weighted grades may be used based on county board grading policy.

Dual Credit and other College Coursework

- Students can take an unlimited number of credit hours prior to college enrollment and still be eligible for PROMISE Scholarship.
- College coursework taken in high school will count toward initial eligibility but not toward PROMISE renewal requirements.
- Students should visit the following link for information regarding Promise Scholarship renewal:  
<https://www.collegeforwv.com/programs/promise-scholarship/renew-your-scholarship/>

Students must complete the minimum core requirements listed here.

- English - 4 credits
- Mathematics - 4 credits
- Social Sciences - 4 credits
- Natural Sciences - 3 credits

#### Minimum Test Score Requirements

Must meet standardized test score criteria on ACT or SAT national test by the June testing dates of the application year.

- ACT Score requirement: 21 composite score with a minimum of 19 in English, Mathematics, Science, and Reading.
- SAT Score requirement: 1080 combined score with minimum of 510 in Mathematics and 510 in Evidence-Based Reading and Writing.

**\*Consult [www.cfwv.com](http://www.cfwv.com) for the latest information about the PROMISE Scholarship.**

### **PROMOTION CREDIT REQUIREMENTS**

Students need to earn a minimum number of credits each year to be considered for upper class standing. Those requirements are:

To be considered a sophomore (10<sup>th</sup> grade) a student must earn a minimum of five (5) cumulative credits in his freshman year (9<sup>th</sup> grade).

To be considered a junior (11<sup>th</sup> grade) a student must earn a minimum of ten (10) cumulative credits from his freshman and sophomore (10<sup>th</sup> grade) years.

To be considered a senior (12<sup>th</sup> grade) and a candidate for graduation, a student must earn a minimum of eighteen (18) credits from his freshman (9<sup>th</sup> grade), sophomore (10<sup>th</sup> grade) and junior (11<sup>th</sup> grade) years.

One half credit (.5) is awarded for each semester of successfully completed work. Two semesters of successfully completed work equals one full credit. An earned letter grade of "D" or better is considered a passing mark.

### **WEST VIRGINIA VIRTUAL SCHOOL**

Courses through the WVVS assure consistent, high quality education for the students of West Virginia. The WVVS helps bridge the barriers of time, distance and inequities for all West Virginia students by providing access to online courses aligned to current state standards. All courses are reviewed by a committee of West Virginia teachers who screen courses to ensure West Virginia standards are met. Online teachers with the WVVS are certified in the content area. In an effort to promote efficacy and equity in educational opportunities, courses are available to all students statewide.

Beginning with the 2020-21 school year, the grace period to withdraw a student from a virtual course at no penalty is 14 days. The school must record a grade of WF (Withdrawn Failing) for a student who drops a course after the 14-day grace period. Grades must be recorded by using the percentage grade issued by the online instructor. Most course providers recognize grading scales vary from state to state and do not post a letter grade to the final grade report.

Advanced students who are looking to enhance their education with electives not offered by John Marshall may be able to take virtual classes through an online environment. These classes require work outside of the normal day and a great deal of focus and discipline on the individual student to be successful. Students who do well learning independently may be eligible to try virtual classes. Classes such as Cisco Networking, Interactive Game Design, Latin, German, Mandarin Chinese, Japanese, and others are available through the West Virginia Virtual School. More information about courses offered can be found at the following link:  
<https://wvweis.k12.wv.us/vschool/courses/coursecatalog.cfm>.

### **CREDIT RECOVERY**

For students who need to recover credits from a core curricular class they previously failed, JM offers a credit recovery program. The credit recovery program uses Edmentum to deliver subject material via an online program. Students should see their counselor to learn more information and start the program. Completing credit recovery can influence a student's ability to play college athletics.

**GRADING SCALE AND WEIGHTS**

The WVBOE establishes a uniform grading scale for all students in WV. Additionally, the guidelines for quality points assigned to grades to generate weighted GPAs are outlined by the WVBOE. The following charts outline the standard scales used by John Marshall.

Grading Scale	
90-100	A
80-90	B
70-80	C
60-70	D
0-60	F

Standard Quality Points		AP Quality Points		Dual Credit Quality Points		Honors Quality Points	
A	4.0	A	5.0	A	5.0	A	4.5
B	3.0	B	4.0	B	4.0	B	3.5
C	2.0	C	3.0	C	3.0	C	2.5
D	1.0	D	2.0	D	2.0	D	1.5
F	0.0	F	0.0	F	0.0	F	0.0

# West Virginia State Graduation Requirements

Core Requirements (19 credits)	
<b>English Language Arts*</b>	<p><b>4 credits</b>                      English 9                      English 10                      English 11                      English 12 or English 12 DC or Transition English Language Arts for Seniors*                      An AP@ English course may be substituted for any of the above courses.</p>
<b>Mathematics*</b>	<p><b>4 credits**</b>                      Algebra I                      Geometry                      Algebra II                      Pre-Calculus, Applied Statistics, or Transition Mathematics for Seniors* or any other fourth course option such as Advanced Mathematical Modeling                      An AP@ Mathematics course may be substituted for an equivalent course or any fourth course option.</p> <p>John Marshall requires 4 credits of mathematics and AT LEAST 3 consecutive years of high school credits in mathematics.</p>
<b>Science*</b>	<p><b>3 credits</b>                      Earth and Space Science (Grade 9)                      Biology (Grade 10)                      One additional lab science course or AP@ science course</p>
<b>Social Studies*</b>	<p><b>4 credits</b>                      World Studies (Grade 9) or an AP@ Social Studies course                      United States Studies (Grade 10) or an AP@ Social Studies course                      Contemporary Studies or an AP@ Social Studies course                      Civics for the Next Generation or AP@ Government and Politics.</p>
<b>Physical Education*</b>	<p><b>1 credit</b>                      Physical Education 9-12 (WV Education Information System [hereinafter WVEIS course 6609]). At least 50 percent of class time for physical education should be spent in moderate to vigorous-intensity physical activity.                      Physical Education credit can also be earned through participation in SSAC sanctioned sports.</p>



<b>Health*</b>	<b>1 credit</b> Health 9-12 (WVEIS course 6909)
<b>The Arts*</b>	<b>1 credit</b>
<b>Personal Finance*</b>	<b>1 credit</b> Beginning with the 2024-2025 cohort, all students will be required to complete 1 credit of personal finance during the junior or senior year of high school.
<b>Graduation Requirements (5 personalized)</b>	
<b>Personalized Education Plan</b>	<b>4 credits</b> Each student's PEP will identify course work for the four (4) credits that will lead directly to placement in entry-level, credit-bearing academic college courses, an industry-recognized certificate or license, or workforce training programs. Best practices encourage students to take at least 1 AP® and/or AC course with corresponding examination, a fourth Science credit, and 2 credits in one World Language, and/or four credits cumulating in acquisition of industry and recognized Career and Technical Education (hereinafter CTE) credential focused on career aspirations.
<b>Career and Technical Education (CTE)*</b>	The four credits taken in a career and technical concentration must be consistent with those identified for WVDE approved career and technical programs of study. (Refer to W. Va. 126CSR44M, Policy 2520.13: Common Core Content Standards for Career and Technical Education in West Virginia Schools.) Each career and technical concentration in a school shall provide students the opportunity to obtain an industry recognized credential as part of the instructional program when applicable. School systems wishing to offer a concentration outside of the state approved CTE concentrations, must have four related courses approved by the local board of education.  Approved WV Career Clusters:  Agriculture, Food and Natural Resources Architecture and Construction Arts, A/V Technology and Communication Business Management and Administration Education and Training Government and Public Administration Health Sciences Hospitality and Tourism Human Services Information Technology Maintenance/Operations Manufacturing Marketing Science, Technology, Engineering and Mathematics Transportation, Distribution and Logistics  Students with disabilities may earn 4 credits in Community Readiness Training recommended through an IEP Team as a personalized concentration.
<b>World Languages</b>	Communicating in a global society requires students to apply appropriate language strategies through embedded opportunities to explore and gain an understanding of the world around them. Undergraduate admission to West Virginia four-year colleges and universities include the completion of two units of the same world language.
<b>Electives</b>	<b>2 Credits</b> The remaining graduation requirements are to be electives. When choosing electives, students should consult with their chosen postsecondary educational program to make sure the electives are acceptable.

<b>Developmentally Appropriate Practices for Student Success and Career Readiness</b>	
<b>Career Development</b>	All students in grades 9-12 will be provided structured, on-going experiences for career exploration, decision making, and career preparation. Career development shall be an integrated approach, engaging all staff in assisting students during the school day to explore the 16 career clusters. Career exploration will include opportunities for students to discover their interests in emerging careers including STEM careers in science, oil & gas, technology, engineering, and math. The school will engage student advisors in utilizing each student's career awareness activities to develop the PEP. Advisors will assist students and their parents to utilize their various interests, learning styles, career and academic assessments to guide educational planning and career choices. Career exploration activities will be documented in each student's personalized career portfolios.
<b>Comprehensive School Counseling Program</b>	A standards-focused, integrated, comprehensive and developmental school counseling program will assist students with the acquisition of school success and career readiness skills to prepare for high school and postsecondary success. School counselors will work collaboratively with other school staff to assist students with academic and postsecondary planning that leads to seamless transitions to the identified postsecondary options. Refer to WVBE Policy 2315 to ensure alignment with policy requirements.
<b>Student Advocate/Advisor/Mentor</b>	High schools will implement an advisory system that provides students with meaningful supportive relationships and maximizes each student's personalized learning experience. An adult advocate, advisor, or mentor will take an interest in each student's successful learning, goal setting, career planning and personal growth. The advisory system shall be evidence based and systemically integrate school success and career readiness skills (e.g., work, ethic, communication skills, team work, collaborative skills, personal responsibility, social skills, organization, financial literacy, and study skills).
<b>Physical Activity</b>	High schools should recognize that healthy lifestyles and academic success are tightly interwoven. Therefore, schools should promote wellness activities that extend beyond the course requirements for physical education and health. This may be accomplished through programs that focus on skill development, sportsmanship and teamwork. Opportunities should be provided for 30 minutes of moderate to vigorous integrated physical activity daily to keep high school students physically active throughout the school year. Wellness education should target the widespread behaviors that undermine the health and resulting capacity for personal success during adolescence.
<b>Technology</b>	Students in grades 9-12 will be provided regular opportunities within the context of normal course work to master the standards set forth in WVBE Policy 2520.14. The infrastructure of classrooms should infuse technology and pedagogy to transform instruction, thus leading to improved student engagement. It is recommended that all students complete an online learning experience during grades 9-12. Students must be provided opportunities for advanced technology applications.

#### **IMPORTANT SCHEDULING NOTE**

The John Marshall High School Master Schedule is based on WVDE high school curriculum requirements and driven by student numbers and student interest. Courses and total course sections offered are determined by the number of students expressing interest in the course. While elective courses are offered in this booklet, courses may not be taught in a given school year if student numbers or personnel are not sufficient to offer the class.

**JMHS  
Alma Mater**

**The glory of John Marshall High  
Will live for years to come.  
The faculty and students are  
United into one**

**When we leave we'll ne'er forget  
The times we spent in learning,  
The knowledge and the friendships true  
Which came for all our yearning.**

**All hail dear John Marshall  
This love song lives for you  
With all our hearts  
We wish to say,  
"We love you, yes we do!"**

**-written and composed  
by senior student Reva Litman  
(now Reva Icard) in 1968**

## How To Read a Course Description

COURSE TITLE: **English Language Arts 10 American Literature Honors**

Course Name

Course  
Number:

**40101H**

**40102H**

Course Number used in scheduling

Grade Level:

10

Grade level of students who can enroll in the course

Graduation

Credit:

1 Language

Arts

Graduation requirement met by the course and the number of credits earned

The content is the same as American Literature with more depth and at a quicker pace for the advanced student. Since this is a feeder course into AP Literature 11, students are required to enrich their literary background through assigned summer reading and supplemental reading throughout the school year. The approximate out of class preparation time for this course is 1 to 2 hours per evening.

**Duration:** 2 semesters

**Prerequisite:** See criteria for Honors Placement. Must pass both semesters of English Language Arts 9 in order to take Honors. For students not in honors class last year or a transfer student, standardized test scores and grades will be used.



# CORE COURSES

## ENGLISH

<b>COURSE TITLE:</b>	<b>English Language Arts 9</b>
Course Number: <b>400910</b> <b>400920</b>	English Language Arts 9 focuses on the Next Generation CSOs in reading, writing, grammar, speaking and technology that the state requires be taught with an emphasis placed on writing.
Grade Level: 9	Duration: 2 semesters
Graduation Credit: 1 Language Arts	
<b>COURSE TITLE:</b>	<b>English Language Arts 9 Honors</b>
Course Number: <b>40091H</b> <b>40092H</b>	English Language Arts 9 Honors has the same concepts as English Language Arts 9. More formal writing will be introduced. Literary structures will be analyzed and elements of writing will be surveyed.
Grade Level: 9	Duration: 2 semesters
Graduation Credit: 1 Language Arts	Prerequisite: Students must pass both semesters of English Language Arts 8 and receive a teacher recommendation. Standardized test scores and grades will be considered to determine proficiency for entry.
<b>COURSE TITLE:</b>	<b>English Language Arts 10</b>
Course Number: <b>401010</b> <b>401020</b>	The Next Generation CSOs surveys various genres of fiction and non-fiction literature. Emphasis is placed on major literature samples, writers, and historical literary background. A research paper/project using MLA format is required. All content standards including grammar and mechanical skills are covered. Out-of-class assignments including reading and writing are required in this course.
Grade Level: 10	Duration: 2 semesters
Graduation Credit: 1 Language Arts	
<b>COURSE TITLE:</b>	<b>English Language Arts 10 Honors</b>
Course Number: <b>40101H</b> <b>40102H</b>	The Next Generation CSOs surveys various genres of fiction and non-fiction literature. Emphasis is placed on major literature samples, writers, and historical literary background. A research paper/project using MLA format is required. All content standards – including grammar and mechanical skills – are covered. Out-of-class assignments – including reading and writing – are required in this course. Since this is a feeder course into English Language Arts 11 Advanced Placement, students are required to enrich their literary background through assigned summer reading.
Grade Level: 10	Duration: 2 semesters
Graduation Credit: 1 Language Arts	Prerequisite: Students must pass both semesters of English Language Arts 9. Standardized test scores and grades will be considered to determine proficiency for entry.
<b>COURSE TITLE:</b>	<b>English Language Arts 11</b>
Course Number: <b>401110</b> <b>401120</b>	This Next Generation CSOs surveys English literature from the Anglo-Saxon era to the present. Emphasis is placed on major literary samples, writers, and historical literary background of Great Britain. A research project/paper is required. Grammar and mechanical skills are reviewed.
Grade Level: 11	Duration: 2 semesters
Graduation Credit: 1 Language Arts	

<p><b>COURSE TITLE:</b></p> <p>Course Number: <b>40421A</b> <b>40422A</b></p> <p>Grade Level: 11</p> <p>Graduation Credit: 1 Language Arts</p>	<p><b>English Literature and Composition AP</b></p> <p>The AP English Literature and Composition is an introductory college-level literary analysis course. Students cultivate their understanding of literature through reading and analyzing texts as they explore concepts like character, setting, structure, perspective, figurative language, and literary analysis in the context of literary works. The AP English Literature and Composition course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. Students engage in close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, and symbolism. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works.</p> <p>Successful passage of the exam provides student with the opportunity to earn up to six hours of college credit or honors recognition at the college level. By choosing to enroll in this college-level course, students agree to engage with college-level topics, texts, perspectives, debates, and arguments including but not limited to diverse issues regarding nationalities, cultures, religions, races, and ethnicities. Alternate assignments will not be given. Students also understand they will be required to regularly complete assignments outside of class and adhere to strict deadlines for the completion of work.</p> <p>Duration: 2 semesters</p> <p>Prerequisite: Student must have a "B" average or better in English Language Arts 10; Standardized test scores and grades will be considered to determine proficiency for entry.</p>
<p><b>COURSE TITLE:</b></p> <p>Course Number: <b>401210</b> <b>401220</b></p> <p>Grade Level: 12</p> <p>Graduation Credit: 1 Language Arts</p>	<p><b>English Language Arts 12</b></p> <p>This course focuses on reading and writing non-fiction prose, principally narrative, persuasive, and expository essays, to allow for successful transition to post-secondary schools. Students closely analyze written and visual sources, synthesize material from these texts to create their own compositions, create and present multimedia projects and utilize MLA and APA conventions. All content standards and objectives are covered. Out-of-class reading and writing is required in this course.</p> <p>Duration: 2 semesters</p>
<p><b>COURSE TITLE:</b></p> <p>Course Numbers: <b>40411A</b> <b>40412A</b></p> <p>Grade Level: 12</p> <p>Graduation Credit: 1 Language Arts</p>	<p><b>English Language and Composition AP</b></p> <p>The AP English Language and Composition course aligns to an introductory college-level rhetoric and writing curriculum, which requires students to develop evidence-based analytic and argumentative essays that proceed through several stages or drafts. Students evaluate, synthesize, and cite research to support their arguments. Students read and analyze the rhetorical elements and their effects in non-fiction written and visual texts from many disciplines and historical periods. Extensive out of class reading and writing is required in this course, including summer assignments.</p> <p>Successful passage of the exam provides student with the opportunity to earn up to six hours of college credit or honors recognition at the college level. By choosing to enroll in this college-level course, students agree to engage with college-level topics, texts, perspectives, debates, and arguments including but not limited to diverse issues regarding nationalities, cultures, religions, races, and ethnicities. Alternate assignments will not be given. Students also understand they will be required to regularly complete assignments outside of class and adhere to strict deadlines for the completion of work.</p> <p>Duration: 2 semesters</p> <p>Prerequisite: Must have a B or better average in English Language Arts 11; Standardized test scores and grades will be considered to determine proficiency for entry. It is recommended students consider taking AP Civics and Government concurrently.</p>

<b>COURSE TITLE:</b>	<b>English Language and Composition Dual Credit</b>
<p>Course Numbers: <b>40121X</b> <b>40122X</b></p> <p>Grade Level: 12</p> <p>Graduation Credit: 1 Language Arts</p> <p>College Credit: WLU ENG 101 and ENG 102</p>	<p>This class focuses on the fundamentals of expository writing and emphasizes various rhetorical strategies, such as definition, comparison/contrast, and others. This course will also introduce proper quotation, paraphrase, and summary of sources, and will review basic grammatical and mechanical skills. This course will emphasize persuasion, argumentation, and researched writing. Students will undertake a researched writing project involving several process drafts, which conclude in a well-documented academic essay. By choosing to enroll in this college-level course, students agree to engage with college-level topics, texts, perspectives, debates, and arguments including but not limited to diverse issues regarding nationalities, cultures, religions, races, and ethnicities. Alternate assignments will not be given. Students also understand they will be required to regularly complete assignments outside of class and adhere to strict deadlines for the completion of work.</p> <p>Duration: 2 semesters</p> <p>Prerequisite: Must have a B or better average in English Language Arts 11</p>

## ENGLISH ELECTIVES

<b>COURSE TITLE:</b>	<b>Creative Writing I (Prose) &amp; II (Poetry)</b>
<p>Course Numbers: <b>402200</b> <b>402300</b></p> <p>Grade Level: 9-12</p> <p>Graduation Credit: ½ Elective</p>	<p>The course provides an opportunity for the student to develop personal writing skills. It is designed to develop interest and talents and provide opportunities for creative self-expression in exposition, short story, poetry, and other prose writing.</p> <p>Duration: 1 semester</p>
<b>COURSE TITLE:</b>	<b>Mythology</b>
<p>Course Numbers: <b>413610</b> <b>413620</b></p> <p>Grade Level: 11-12</p> <p>Graduation Credit: 1 Elective</p>	<p>This course offers students the opportunity to study Greek, Norse, and Arthurian legends and myths. Emphasis is placed on the influence myths and legends have on the thought, culture, literature, and language of Western civilization. Students who are credit deficient in English will not be accepted in this class.</p> <p>Duration: 2 semesters</p>
<b>COURSE TITLE:</b>	<b>Speech/Oral Communication</b>
<p>Course Numbers: <b>407600</b></p> <p>Grade Level: 10-12</p> <p>Graduation Credit: ½ Elective</p>	<p>Content touches on verbal and non-verbal communications, listening, group communications, interviewing, speech writing and delivery, demonstrations as well as research skills. An introduction to forensics is included. Students should be enrolled in or have completed American Literature or 9th grade English Honors.</p> <p>Duration: 1 semester</p>

<b>COURSE TITLE:</b>	<b>Speech 2 Dual Credit</b>
<p>Course Numbers: <b>41651X</b></p> <p>Grade Level: 11-12 Graduation Credit: ½ Elective College Credit: WLU COM 101</p>	<p>Content consists of learning to prepare and deliver speeches in the following areas: Dramatic Duo, After Dinner Speaking, Original Oratory, Parliamentary Procedure, Impromptu, and Extemporaneous Speaking, Dramatic and Humorous Interpretation, Interpretation of Prose and Poetry.</p> <p>Duration: 1 semester</p> <p>Prerequisite: Successful completion of Speech/Oral Communication 1 with a "C" or better average.</p>
<b>COURSE TITLE:</b>	<b>School Yearbook I, II, III, IV</b>
<p>Course Numbers: <b>407110</b> <b>407120</b> <b>407210</b> <b>407220</b> <b>407310</b> <b>407320</b> <b>407410</b> <b>407420</b></p> <p>Grade Level: 9-12</p> <p>Graduation Credit: 1 Elective</p>	<p>Students in Yearbook will engage in the entire process of producing the current annual edition. Students will engage in all types of production activities including sales, advertising, writing copy, page layout, and use of various computer programs including word processing and desktop publishing. Previous experience in writing, journalism, desktop publishing, or photography is helpful but not required. Students will learn basics of journalism, design, photography, writing, and business.</p> <p>Prerequisite: Students must successfully complete the application process to be considered for a staff position. Students must have had a "B" or better in English the previous year to be eligible for this class. Students who are credit deficient in ENGLISH will not be accepted into this class.</p>
<b>COURSE TITLE:</b>	<b>AP Seminar</b>
<p>Course Numbers: <b>40451A</b> <b>40452A</b></p> <p>Grade Level: 9-12</p> <p>Graduation Credit: 1 Elective</p>	<p>Students investigate real-world issues from multiple perspectives, gathering and analyzing information from various sources in order to develop credible and valid evidence-based arguments and presentations. Students practice reading and analyzing articles, research studies, and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information, develop their own perspectives in written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Extensive out of class reading and writing is required in this course. Starting with the 2025-2026 school year, AP Seminar may be utilized as an English 10 Graduation Credit.</p> <p>Duration: 2 semesters</p> <p>Prerequisite: Must be a sophomore or junior, have a current GPA of 3.0 and receive recommendations from at least two current teachers; Standardized test scores will be considered to determine proficiency for entry.</p>
<b>COURSE TITLE:</b>	<b>AP Research</b>
<p>Course Numbers: <b>40461A</b> <b>40462A</b></p> <p>Grade Level: 9-12</p> <p>Graduation Credit: 1 Elective</p>	<p>AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a year-long research based investigation to address a research question. In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. Students explore their skill development, document their processes, and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of approximately 4000–5000 words (accompanied by a performance or exhibition of product where applicable) and a presentation with an oral defense. Extensive out of class reading and writing is required in this course.</p> <p>Duration: 2 semesters</p> <p>Prerequisite: Student must successfully complete the AP Seminar course.</p>



# MATHEMATICS

<b>COURSE TITLE:</b>	<b>Algebra I</b>
Course Numbers: <b>306110</b> <b>306120</b>	Students in Algebra I will focus on units that deepen and extend understanding of linear and exponential relationships. They will also engage in methods for analyzing, solving, and using quadratic functions. Students will continue developing mathematical proficiency in a developmentally-appropriate progressions of standards.  Duration: 2 semesters
Grade Level: 9	
Graduation Credit: 1 Math	
<b>COURSE TITLE:</b>	<b>Algebra I Honors</b>
Course Numbers: <b>30611H</b> <b>30612H</b>	Students in Algebra I Honors will focus on units that deepen and extend understanding of linear and exponential relationships. They will engage in methods for analyzing, solving, and using quadratic functions. Algebra I Honors is designed to provide students with an in-depth level of instruction at an accelerated pace, covering additional topics. The course emphasizes critical thinking and real world problem solving. It is targeted to highly motivated students who have some understanding of Algebra.  Duration: 2 semesters  Prerequisite: Student must have teacher recommendation and B or above in 8 <sup>th</sup> grade math.
Grade Level: 9	
Graduation Credit: 1 Math	
<b>COURSE TITLE:</b>	<b>Geometry</b>
Course Numbers: <b>306210</b> <b>306220</b>	Students in Geometry will explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Important differences exist between this Geometry course and the historical approach taken in other geometry classes. For example, transformations are emphasized early in this course. Students will continue developing mathematical proficiency in a developmentally-appropriate progressions of standards. Students will continue the skill progressions from previous courses.  Duration: 2 semesters
Grade Level: 10	
Graduation Credit: 1 Math	
<b>COURSE TITLE:</b>	<b>Geometry Honors</b>
Course Numbers: <b>30621H</b> <b>30622H</b>	Students in Geometry Honors will explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Important differences exist between this Geometry course and the historical approach taken in other geometry classes. For example, transformations are emphasized early in this course. Students will continue developing mathematical proficiency in a developmentally-appropriate progressions of standards. The course emphasizes critical thinking and real world problem solving.  Duration: 2 semesters  Prerequisite: Student must have teacher recommendation, passing standardized test scores, and B or above in Algebra I.
Grade Level: 9-10	
Graduation Credit: 1 Math	
<b>COURSE TITLE:</b>	<b>Algebra II</b>
Course Numbers: <b>306310</b> <b>306320</b>	Students in Algebra II will build on their work with linear, quadratic, and exponential functions and extend their knowledge of functions to include polynomial, rational, and radical functions. Students will solve quadratic equations over the set of complex numbers and solve exponential equations using the properties of logarithms. Trigonometric functions will be introduced. Students will continue developing mathematical proficiency in a developmentally-appropriate progression of standards. Students will continue the skill progressions from previous courses.  Duration: 2 semesters
Grade Level: 10-11	
Graduation Credit: 1 Math	

<b>COURSE TITLE:</b>	<b>Algebra II Honors</b>
Course Numbers: <b>30631H</b> <b>30632H</b>	Students in Algebra II Honors will build on their work with linear, quadratic, and exponential functions and extend their knowledge of functions to include polynomial, rational, and radical functions. Students will solve quadratic equations over the set of complex numbers and solve exponential equations using the properties of logarithms. Trigonometric functions will be introduced. Students will continue developing mathematical proficiency in a developmentally-appropriate progression of standards. Algebra II Honors is designed to provide students with an in-depth level of instruction at an accelerated pace, covering additional topics. The course emphasizes critical thinking and real world problem solving.
Grade Level: 9-10	
Graduation Credit: 1 Math	
	Duration: 2 semesters
	Prerequisite: Student must have teacher recommendation, passing standardized test scores, and B or above in Algebra I.
<b>COURSE TITLE:</b>	<b>AP Pre-Calculus</b>
Course Numbers: <b>30381A</b> <b>30382A</b>	AP Precalculus prepares students for other college-level mathematics and science courses. Through regular practice, students build deep mastery of modeling and functions, and they examine scenarios through multiple representations. The course framework delineates content and skills common to college precalculus courses that are foundational for careers in mathematics, physics, biology, health science, social science, and data science.
Grade Level: 10-12	
Graduation Credit: 1 Math	
	Duration: 2 semesters
	Prerequisite: Algebra II or Algebra II Honors. Student must be on track for Calculus AB.
<b>COURSE TITLE:</b>	<b>PreCal/Trig</b>
Course Numbers: <b>306410</b> <b>306420</b>	Pre-Calculus/Trig extends students' knowledge of functions and equations (e.g., higher-order functions, exponential, and logarithmic) as well as provide preparation for a calculus.
Grade Level: 10-12	
Graduation Credit: 1 Math	
	Duration: 2 semesters
	Prerequisite: Algebra II
<b>COURSE TITLE:</b>	<b>Transition Math for Seniors</b>
Course Numbers: <b>305210</b> <b>305220</b>	The course prepares students for their entry level credit-bearing liberal studies mathematics course at the post-secondary level. Focus is on helping students solidify their quantitative literacy by enhancing numeracy and problem-solving skills as students investigate and use the fundamental concepts of algebra, geometry, and introductory trigonometry.
Grade Level: 12	
Graduation Credit: 1 Math	
<b>COURSE TITLE:</b>	<b>College Algebra III Dual Credit</b>
Course Numbers: <b>30511X</b> <b>30512X</b>	College Algebra III is worth 3 credits at WVNCC. This is a semester (half credit) course at JMHS. Marshall County pays for your textbook. Students pay class fees to WVU. This course follows WVU's calendar.
Grade Level: 10-12	
Graduation Credit: 1 Math	
College Credit: WVNCC MATH 108	Duration: 2 semester
	Prerequisite: Overall 3.0 average, "C" or better in Algebra I, Geometry, and Algebra II and a passing grade on the WVU placement test.

<b>COURSE TITLE:</b>	<b>Advanced Mathematical Modeling</b>
Course Numbers: <b>302510</b> <b>302520</b>	Students in Advanced Mathematical Modeling will continue to build upon their algebra and geometry foundations and expand their understanding through further mathematical experiences. The primary focal points of Advanced Mathematical Modeling include the analysis of information using statistical methods and probability, modeling change and mathematical relationships, mathematical decision making in finance, and spatial and geometric modeling for decision-making. As students work with these topics, they continually rely on mathematical processes, including problem-solving techniques, appropriate mathematical language and communication skills, connections within and outside mathematics and reasoning. Students also use multiple representations, technology, applications and modeling and numerical fluency in problem solving contexts.
Grade Level: 11-12	
Graduation Credit: 1 Math	
	Duration: 2 semesters
<b>COURSE TITLE:</b>	<b>Applied Statistics</b>
Course Number: <b>302810</b> <b>302820</b>	The Applied Statistics course provides experiences in statistics designed to strengthen students' understanding of the statistical method of inquiry and statistical simulations. Students formulate statistical questions to be answered using data, design and implement a plan to collect the appropriate data, select appropriate graphical and numerical methods for data analysis, and interpret their results to make connections with the initial question. Students use multiple representations, technology, applications and modeling in problem-solving contexts.
Grade Level: 11-12	
Graduation Credit: 1 Math	
	Duration: 2 semesters
	Prerequisite: Algebra I and Geometry
<b>COURSE TITLE:</b>	<b>Statistics AP</b>
Course Numbers: <b>30331A</b> <b>30332A</b>	The AP Statistics course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding.
Grade Level: 11-12	
Graduation Credit: 1 Math	
	Duration: 2 semesters
	Prerequisite: Algebra II Honors
<b>COURSE TITLE:</b>	<b>AP Calculus AB</b>
Course Numbers: <b>30311A</b> <b>30312A</b>	Differential and integral calculus with application involving polynomial, exponential, logarithmic, and trigonometric functions. Homework is 1 to 1.5 hours per night. The major intent of this course is to guide students to take the Advanced Placement Exam in May, providing them with the opportunity to earn three hours college credit.
Grade Level: 11-12	
Graduation Credit: 1 Math	
	Duration: 2 semesters
	Prerequisite: Pre-Cal/Trig Honors
<b>COURSE TITLE:</b>	<b>AP Calculus BC</b>
Course Numbers: <b>30321A</b> <b>30322A</b>	This course is an extension of the topics covered in Calculus AB, including arc-length, additional techniques of integration, improper integrals, and indeterminate forms. A thorough treatment is given to "infinite series," including Taylor, Maclaurin, and Power series. Parametric equations, polar coordinates, vector-valued functions, along with advanced topics on exponential growth and decay are also studied. Homework required is 1 to 1.5 hours per night. The major intent of this course is to guide students to take the Advanced Placement Exam in May, providing them with the opportunity to earn up to six hours college credit.
Grade Level: 11-12	
Graduation Credit: 1 Math	
	Duration: 2 semesters
	Prerequisite: AP Calculus AB

# SCIENCE

<p><b>COURSE TITLE:</b></p> <p>Course Numbers: <b>620110</b> <b>620120</b></p> <p>Grade Level: 9</p> <p>Graduation Credit: 1 Science</p>	<p><b>Earth and Space Science</b></p> <p>A required lab science 9th grade level course in which students will focus on 5 major topics: Space Systems, History of Earth, Earth's Systems, Weather and Climate, and Human Sustainability. There is an emphasis on using engineering and technology concepts to design solutions to challenges facing human society. There is a focus on several scientific practices which include developing and using models, planning and conducting investigations, analyzing and interpreting data, using mathematical and computational thinking, constructing explanations and designing solutions. Students will engage in active inquires, investigations, and hands-on activities as they develop and demonstrate conceptual understandings and research and laboratory skills described in the objectives.</p> <p>Duration: 2 semesters</p>
<p><b>COURSE TITLE:</b></p> <p>Course Numbers: <b>62011H</b> <b>62012H</b></p> <p>Grade Level: 9</p> <p>Graduation Credit: 1 Science</p>	<p><b>Earth and Space Science Honors</b></p> <p>A required lab science 9th grade level course in which students will focus on 5 major topics: Space Systems, History of Earth, Earth's Systems, Weather and Climate, and Human Sustainability. There is an emphasis on using engineering and technology concepts to design solutions to challenges facing human society. There is a focus on several scientific practices which include developing and using models, planning and conducting investigations, analyzing and interpreting data, using mathematical and computational thinking, constructing explanations and designing solutions. Students will engage in active inquires, investigations, and hands-on activities as they develop and demonstrate conceptual understandings and research and laboratory skills described in the objectives. All topics studied in Earth and Space science will be examined in more depth in the honors course.</p> <p>Duration: 2 semesters</p>
<p><b>COURSE TITLE:</b></p> <p>Course Numbers: <b>602110</b> <b>602120</b></p> <p>Grade Level: 10</p> <p>Graduation Credit: 1 Science</p>	<p><b>Biology</b></p> <p>A required lab science 10th grade level course that introduces the student to the life sciences. Topics covered include focus on five life science topics: Structure and Function, Inheritance and Variation of Traits, Matter and Energy in Organisms and Ecosystems, Interdependent Relationships in Ecosystems, and Natural Selection and Evolution. There is an emphasis on using engineering and technology concepts to design solutions to challenges facing human society. Students will engage in active inquiries, investigations, and hands-on activities as they develop and demonstrate conceptual understandings and research and laboratory skills described in the objectives.</p> <p>Duration: 2 semesters</p>
<p><b>COURSE TITLE:</b></p> <p>Course Numbers: <b>60211H</b> <b>60212H</b></p> <p>Grade Level: 10</p> <p>Graduation Credit: 1 Science</p>	<p><b>Biology Honors</b></p> <p>A required lab science 10th grade level course (taken in lieu of Biology) that introduces the student to the life sciences. Topics covered include focus on five life science topics: Structure and Function, Inheritance and Variation of Traits, Matter and Energy in Organisms and Ecosystems, Interdependent Relationships in Ecosystems, and Natural Selection and Evolution. There is an emphasis on using engineering and technology concepts to design solutions to challenges facing human society. There is a focus on several scientific practices which include developing and using models, planning and conducting investigations, analyzing and interpreting data, using mathematical and computational thinking, constructing explanations and designing solutions. Students will engage in active inquiries, investigations, and hands-on activities as they develop and demonstrate conceptual understandings and research and laboratory skills described in the objectives. All topics studied in Biology will be examined in more depth in the honors course. Formal lab report writing will be expected and a focus in the course as well.</p> <p>Duration: 2 semesters</p> <p>Prerequisite: Students must have teacher recommendation.</p>

<b>COURSE TITLE:</b>	<b>Biology AP</b>
Course Numbers: <b>61211A</b> <b>61212A</b>	A highly intensive course that is tailored to the AP Biology Curriculum Framework that focuses on the major concepts in biology and connections. The course is designed so that students develop a deep conceptual understanding, as well an opportunity to integrate biological knowledge and science practices through inquiry-based activities and laboratory investigations without having to teach a textbook from cover to cover. A college text will be used in order to prepare students for success on the AP exam. Students are encouraged to take the Advanced Placement Examination, which may qualify them to earn college credit for their first year college biology course. Students who intend to pursue a medical/science career path OR who have excelled in academics and want to test out of freshman Biology in college should strongly consider taking this course. Courses that would be helpful to have taken or be taken concurrently, but are not required include: <b>Chemistry I and Microbiology</b> . Study time averages 1 hour per night. A summer assignment will be given in order to reduce the course-load throughout the year and is expected to be completed on time. A successful student in this course would demonstrate being very self-disciplined, hard-working, prepared, timely and on-task at all times.
Grade Level: 11-12	
Graduation Credit: 1 Science	
	Duration: 2 semesters
	Prerequisite: Successful completion (A/B average) of Biology and appropriate math course. Students must have teacher recommendation. <b>Chemistry strongly recommended.</b>
<b>COURSE TITLE:</b>	<b>Chemistry I</b>
Course Numbers: <b>603110</b> <b>603120</b>	Chemistry I is intended to provide students with a basic background in chemistry and teach problem-solving techniques. Students will perform experiments relating to the covered topics. Students taking Chemistry 1 are encouraged to take Chemistry 2. This course is designed to prepare a student for college chemistry.
Grade Level: 10-12	
Graduation Credit: 1 Science	
	Duration: 2 semesters
	Prerequisite: Successful completion of Algebra I.
<b>COURSE TITLE:</b>	<b>Chemistry I Honors</b>
Course Numbers: <b>60311H</b> <b>60312H</b>	Chemistry Honors is the first year of AP Chemistry and uses a college text to study basic concepts, atomic structure, energy changes in reactions and chemical bonding. This class is difficult and requires a serious time commitment from the student in order to be successful. Well-developed problem-solving skills are essential.
Grade Level: 10-12	
Graduation Credit: 1 Science	
	Duration: 2 semesters
	Prerequisite: Students must have teacher recommendation.
<b>COURSE TITLE:</b>	<b>Chemistry II</b>
Course Numbers: <b>603310</b> <b>603320</b>	Chemistry II is a continuation of Chemistry I. This course covers reaction rates, equilibrium, acids and bases, and electrochemistry and places emphasis on laboratory skills.
Grade Level: 11-12	
Graduation Credit: 1 Science	
	Duration: 2 semesters
	Prerequisite: Maintain at least a "C" average in Chemistry I.
<b>COURSE TITLE:</b>	<b>Chemistry AP</b>
Course Numbers: <b>63211A</b> <b>63212A</b>	This course uses a college text and is designed to prepare students for the AP Chemistry Exam and earn college credit for a first-year college chemistry course. Completion of ALL summer assignments by due date is required.
Grade Level: 11-12	
Graduation Credit: 1 Science	
	Duration: 2 semesters
	Prerequisite: Successful completion of Chemistry I Honors. Students must have teacher recommendation.

<b>COURSE TITLE:</b>	<b>Physics I</b>
Course Numbers: <b>604110</b> <b>604120</b>	Physics is designed for those planning careers in science, physical therapy, engineering, dentistry, pharmacology, etc. This course prepares students for college-level physics.
Grade Level: 11-12	Duration: 2 semesters
Graduation Credit: 1 Science	Prerequisite: Successful completion of Algebra I and Geometry.
<b>COURSE TITLE:</b>	<b>Physics I AP</b>
Course Numbers: <b>63261A</b> <b>63262A</b>	This course is the equivalent to a first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; and mechanical waves and sound. It will also introduce electric circuits.
Grade Level: 11-12	Duration: 2 semesters
Graduation Credit: 1 Science	Prerequisite: Successful completion of Algebra I and Geometry.
<b>COURSE TITLE:</b>	<b>Physics 2 AP</b>
Course Numbers: <b>63271A</b> <b>63272A</b>	This course is the equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics, thermodynamics, electricity and magnetism, optics, and atomic and nuclear physics.
Grade Level: 12	Duration: 2 semesters
Graduation Credit: 1 Science	Prerequisite: Successful completion of Algebra I and Geometry.
<b>COURSE TITLE:</b>	<b>Physical Science</b>
Course Numbers: <b>601110</b> <b>601120</b>	This course is a general lab science that explores classification of matter, elements and the Periodic Table, chemical bonds, and chemical reactions during the first semester. The second semester focuses on motion/Newton's Laws, electricity, magnetism, sound and light waves, and energy. This is a third course option for a lab science.
Grade Level: 10-12	Duration 2 semesters
Graduation Credit: 1 Science	
<b>COURSE TITLE:</b>	<b>Environmental Science</b>
Course Numbers: <b>631210</b> <b>631220</b>	This course builds on previous knowledge of chemical, physical, biological, and geological processes and focuses on the natural world. Students will develop an understanding of how humans affect and are affected by the environment. Students <b>must be trustworthy, independent workers, and will be required to go outside</b> to test the stream behind the school, and identify native trees. Students will also use GIS to study watersheds.
Grade Level: 11-12	Duration: 2 semesters
Graduation Credit: 1 Science	Prerequisite: Algebra I, Geometry, Chemistry is recommended.
<b>COURSE TITLE:</b>	<b>Forensic Science</b>
Course Numbers: <b>604410</b> <b>604420</b>	This class is designed for students who desire a hands-on science course that integrates physics, chemistry, and biology. Students will use problem-solving skills, laboratory science, and content knowledge of all fields of science to solve hypothetical crimes. <u>This course can be counted as one of the three lab sciences required for graduation, but students must check with individual colleges to be sure it will be accepted.</u>
Grade Level: 11-12	Duration: 1 semester
Graduation Credit: 1 Science	Prerequisite: Successful completion of Earth Science 9, Biology, and Geometry with a "C" average.

<b>COURSE TITLE:</b>	<b>Human Anatomy and Physiology Honors</b>
Course Numbers: <b>61031H</b> <b>61032H</b>	This course is designed for students who plan to enter careers that require extensive knowledge of human anatomy and physiology, such as those expecting to continue in a medical or science-related career path. Standards are addressed in greater depth and with high levels of expectation. Students will investigate the structure and function of the human body and with an emphasis on laboratory work. This course studies the structure and function of the human body and the mechanisms for maintaining homeostasis within it. It includes the study of cells, tissues and various body systems (skeletal, cardiovascular, lymphatic, muscular, respiratory, digestive, and others). It also includes the concepts of development, metabolism, and fluid and electrolyte balance. This course uses dissection as an instructional activity.
Grade Level: 12	
Graduation Credit: 1 Science	
	Duration: 2 semesters
	Prerequisite: Successful completion (B/C average) of Microbiology and/or Chemistry is recommended.
<b>COURSE TITLE:</b>	<b>Microbiology Dual Credit</b>
Course Numbers: <b>77251X</b> <b>77252X</b>	This course studies microorganisms and genetics. It focuses on developing good microscope/lab skills and techniques by surveying various microorganisms. Students will complete a genetic component, including a <i>Drosophila</i> project, upon taking the course. This course is intended for students expecting to pursue a medical career path or a degree in science.
Grade Level: 11-12	
Graduation Credit: 1 Science	
College: WLU Microbiology	Duration: 2 semesters
	Prerequisite: "B" average in Biology
<b>COURSE TITLE:</b>	<b>Microbiology</b>
Course Numbers: <b>772510</b> <b>772520</b>	This course studies microorganisms and genetics. It focuses on developing good microscope/lab skills and techniques by surveying various microorganisms. Students will complete a genetic component, including a <i>Drosophila</i> project, upon taking the course. This course is intended for students expecting to pursue a medical career path or a degree in science.
Grade Level: 11-12	
Graduation Credit: 1 Science	
College: WLU Microbiology	Duration: 2 semesters
	Prerequisite: "B" average in Biology
<b>COURSE TITLE:</b>	<b>Zoology (Elective Credit)</b>
Course Numbers: <b>627010</b> <b>627020</b>	The Zoology elective builds on the biology core with added emphasis on animal taxa, basic body plans, symmetry, and behavior. This course encourages critical thinking, use of the scientific method, integration of technology, and application of knowledge and skills learned. A variety of learning opportunities will be utilized, including lecture/discussion, reading in the content area, written assignments, and laboratory exercises. Dissections are REQUIRED. This class is intended for students who plan to attend a 4-year college. <u>This course will not count as one of the three lab sciences required for graduation.</u>
Grade Level: 11-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters
	Prerequisite: Successful completion of Physical Science and Biology
<b>COURSE TITLE:</b>	<b>Physical Geology I</b>
Course Numbers: <b>626110/20</b>	This is an introductory course that discusses Earth materials and the processes that shape the Earth. Topics covered include minerals, rocks, volcanoes, earthquakes, plate tectonics, geologic time, water resources, glaciation, structural geology, and energy and mineral resources. This class will include hands-on projects involving rocks and minerals, geologic maps, faults and folds, and dating of geologic features and events. This is a continuation of concepts learned in Earth & Space Science.
Grade Level: 10 – 12	
Graduation Credit: 1 Science	
	Duration: 2 semesters
	Prerequisite: C average or above in Earth & Space Science AND Algebra I



<b>COURSE TITLE:</b>	<b>Dental Assisting I</b>
Course Numbers: <b>074000</b>	This course provides introduction to the dental assisting profession while preparing the student with foundational dental assisting knowledge and entry level skill. Students will obtain knowledge in communication, safety, legal and ethics, and teamwork skills to prepare for employment as dental assistants. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction
Grade Level: 9 – 12	
Graduation Credit: ½ Elective	
	Duration: 1 semester
<b>COURSE TITLE:</b>	<b>Astronomy</b>
Course Numbers: <b>626210</b> <b>626220</b>	An astronomy course offers an engaging exploration of the universe and its many wonders. Students will delve into the fundamental principles of what astronomy is, gaining a solid foundation in the interplay between light and matter and how these elements shape our understanding of the universe. The curriculum will encompass a thorough examination of our solar system, the life cycles of stars, the intricate structures of galaxies, and the vastness of the universe itself. This course not only enriches students' knowledge but also enhances their critical thinking and analytical skills, as it incorporates essential algebra concepts to solve real-world astronomical problems. By joining this class, students will not only satisfy their curiosity about the cosmos but also develop a strong scientific literacy that will serve them in various fields of study and future careers.
Grade Level: 10 – 12	
Graduation Credit: 1 Elective	
	Duration: 2 Semesters
	Prerequisite: Successful completion of Earth and Space Science and Algebra I

## **SOCIAL STUDIES**

<b>COURSE TITLE:</b>	<b>World Studies</b>
Course Numbers: <b>701010</b> <b>701020</b>	The course emphasizes the historic economic, geographic, political, and social structure of various cultural regions of the world from the dawn of civilization to the 20 <sup>th</sup> Century. Special attention is given to the formation and evolution of societies into complex political and economic systems.
Grade Level: 9	
Graduation Credit: 1 Social Studies	
	Duration: 2 semesters
<b>COURSE TITLE:</b>	<b>World Studies Honors</b>
Course Numbers: <b>70101H</b> <b>70102H</b>	The course emphasizes the historic, economic, geographic, political, and social structure of various cultural regions of the world from the dawn of civilization to the 20 <sup>th</sup> Century. Special attention is given to the formation and evolution of societies into complex political and economic systems. The Honors course requires well-developed reading, writing, and research skills. Students should be highly motivated and are expected to participate in class.
Grade Level: 9	
Graduation Credit: 1 Social Studies	
	Duration: 2 semesters



<b>COURSE TITLE:</b>	<b>Human Geography AP</b>
Course Numbers: <b>70421A</b> <b>70422A</b>	The purpose of the AP course in Human Geography is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. They also learn about the methods and tools geographers use in their science and practice.
Grade Level: 9	
Graduation Credit: 1 Social Studies	
	Duration: 2 semesters
	Pre-Requisite: Teacher recommendation necessary.
<b>COURSE TITLE:</b>	<b>U.S. Studies</b>
Course Numbers: <b>700910</b> <b>700920</b>	This course studies the forming of the United States from the Pre-Columbian civilizations to its transformation as a dominant political and economic influence in the world at the beginning of the 20 <sup>th</sup> Century. Special emphasis is placed on the evolution of the Constitution, and how the challenges of settling expansive and widely-differing environments were met by a diverse population.
Grade Level: 10	
Graduation Credit: 1 Social Studies	
	Duration: 2 semesters
<b>COURSE TITLE:</b>	<b>U.S. Studies Comprehensive</b>
Course Numbers: <b>701210</b> <b>701220</b>	This course examines the history and evolution of the United States and the role of participatory democracy in the development of a rapidly changing technological society. This study of the United States and its constitutional government is an examination of the formative years from the colonization of what would be the United States to present day. Students will engage in critical thinking and problem-solving skills as they learn and work with factual historical content, geography, civics, economics and other social studies concept.
Grade Level: 10-11	
Graduation Credit: 1 Social Studies	
	Duration: 2 semesters
<b>COURSE TITLE:</b>	<b>European History AP</b>
Course Numbers: <b>70451A</b> <b>70452A</b>	The study of European history since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which they live. In addition to providing a basic narrative of events and movements, the goals of AP European History are to develop (a) an understanding of some of the principal themes in modern European history, (b) an ability to analyze historical evidence and historical interpretation, and (c) an ability to express historical understanding in writing. This course also develops context for understanding the expansion of contemporary institutions, the role of continuity and change in present-day society and politics, and the evolution of current forms of artistic expression and intellectual discourse.
Grade Level: 10-12	
Graduation Credit: 1 Social Studies	
	Duration: 2 semesters
	Prerequisite: World Studies Honors is recommended.
<b>COURSE TITLE:</b>	<b>Contemporary Studies</b>
Course Numbers: <b>701110</b> <b>701120</b>	The focus of this course is on America and its role in the world from 1914 to the present. Themes of study include American reform movements, cultural values, economic and technological development, geography and environment, diversity, conflict, democratic principles, and global interdependency.
Grade Level: 11	
Graduation Credit: 1 Social Studies	
	Duration: 2 semester

<b>COURSE TITLE:</b>	<b>U.S. History AP</b>
Course Number: <b>70461A</b> <b>70462A</b>	The course will cover U.S. history from the pre-Columbian era to the present. Students will examine American political institutions and behavior, public policy, social and economic change, diplomacy and international relations, and cultural and intellectual developments. The AP course uses a college-level text and requires well-developed reading, writing, and research skills. Students should be highly motivated and are expected to participate in class. The course requires a minimum of 5 hours of homework per week.  Duration: 2 semesters  Prerequisite: "A" or "B" average in Social Studies and teacher/counselor recommendation.
Grade Level: 11	
Graduation Credit: 1 Social Studies	
<b>COURSE TITLE:</b>	<b>Government &amp; Politics: Comparative AP</b>
Course Numbers: <b>70431A</b> <b>70432A</b>	In this course, students develop an understanding of fundamental concepts used by political scientists to study the processes and outcomes of politics in China, Iran, Mexico, Nigeria, Russia, and the United Kingdom. Students will learn to compare and contrast the political institutions of those nations as well as analyze and interpret relevant basic data. This is an expansion of what is learned in U.S. Government and Politics AP, although highly motivated juniors are encouraged to take the class as well. Course may require an average of 3 hours of homework per week.  Duration: 2 semesters  Prerequisite: "A" or "B" average in Social Studies and teacher recommendation.
Grade Level: 11-12	
Graduation Credit: 1 Social Studies	
<b>COURSE TITLE:</b>	<b>Government &amp; Politics: U.S. AP</b>
Course Numbers: <b>70441A</b> <b>70442A</b>	This advanced course examines constitutional underpinnings of the U.S. government, political beliefs and behaviors, political parties, interest groups and mass media, institutions of national government, public policy, civil rights, and civil liberties. Fundamental economic principles and personal finance issues are included (as required by the state). The AP course is taught with college-level texts and requires well-developed reading, writing, and research skills. Students should be highly motivated and are expected to participate in class. Course requires an average of 3-5 hours of homework per week.  Duration: 2 semesters  Prerequisite: Should be taken along with AP English Language. "A" or "B" average in social studies recommended.
Grade Level: 11-12	
Graduation Credit: 1 Social Studies	
<b>COURSE TITLE:</b>	<b>Civics for the Next Generation</b>
Course Numbers: <b>703110</b> <b>703120</b>	In this course, students develop the knowledge, skills and dispositions to engage in civic life. The two broad areas of study are government and politics, civic life, and personal finance. Special emphasis is placed on analysis of the personal, political and economic roles of responsible citizens in American democracy.  Duration: 2 semesters
Grade Level: 12	
Graduation Credit: 1 Social Studies	
<b>COURSE TITLE:</b>	<b>Civics for the Next Generation Dual Credit</b>
Course Numbers: <b>70311X</b> <b>70312X</b>	This class will cover the historical background of American government; the Constitution; political processes; structure and procedures of government. Additionally, this course will cover the interrelationship of national, state, and local governments; problems and functions of the modern state; revision, reapportionment, and finance.  Duration: 2 semesters
Grade Level: 12	
Graduation Credit: 1 Social Studies  College: WLU POLS 201	

<b>COURSE TITLE:</b>	<b>Psychology AP</b>
Course Numbers: <b>70471A</b> <b>70472A</b>	This more demanding course picks up where Psychology I ends. Units of the second semester include sensation and perception, personality, cognition, testing and individual differences, abnormal psychology, treatment of psychological disorders, and social psychology. The pace of the course is faster, with more vocabulary and more writing assignments. Students are required to be highly motivated and enthusiastic participants in class. The course requires a minimum of 5 hours of study time per week.
Grade Level: 10-12	
Graduation Credit: 1 Social Studies	
	Duration: 2 semesters
	Prerequisite: "A" or "B" average in Social Studies and Science, or teacher/counselor recommendation.
<b>COURSE TITLE:</b>	<b>Psychology</b>
Course Numbers: <b>732110</b> <b>732120</b>	This course is considered a third course core credit for students who have taken US Comprehensive (7012). The course covers the history and theories of psychology, research methods, biological bases of behavior, states of consciousness, learning, memory, motivation and emotion, and developmental psychology. Students will develop the reading, studying, and note-taking skills required for success in college classes. The tests are challenging and will require 3 to 5 hours of study time per week. Students are required to be enthusiastic participants in class.
Grade Level: 11-12	
Graduation Credit: 1 Social Studies	
	Duration: 2 semester
	Prerequisite: "A" or "B" average in Social Studies is strongly recommended.
<b>COURSE TITLE:</b>	<b>Sociology</b>
Course Numbers: <b>734110</b> <b>734120</b>	This course is considered a third course core credit for students who have taken US Comprehensive (7012). This course is designed to introduce students to the basic principles of sociology. In addition, research into the social issues of our times is stressed. The Sociology course is taught with a college-level text and requires well-developed reading, writing, and research skills. Students should expect to spend approximately 5 hours per week on outside reading.
Grade Level: 11-12	
Graduation Credit: 1 Social Studies	
	Duration: 2 semester
	Prerequisite: "A" or "B" average in Social Studies is strongly recommended.

## **SOCIAL STUDIES ELECTIVES**

<b>COURSE TITLE:</b>	<b>History of the Holocaust</b>
Course Numbers: <b>714900</b>	This course is a detailed examination of the programs of persecution and mass murder carried out by the Nazi German regime between 1917 and 1945. Several themes will be prominent throughout the semester. The class will examine and try understand when and how policies of exclusion can be transformed into a systematic program of murder and will focus on the place of the Holocaust in European, and not only German, history. Third, the class will shape an understanding of how eyewitness memories, historical research, and media representations all shape our contemporary understanding of what the Holocaust was and why it is important today. The mass murder of European Jews will be the central focus of this course. The class will, however, also discuss programs of discrimination and murder carried out against other groups (e.g. Roma, the disabled, and Poles) and attempt to place these phenomena within the context of Nazi German and other nations' racial policies.
Grade Level: 11-12	
Graduation Credit: ½ Elective	
	Duration: 1 semester

<b>COURSE TITLE:</b>	<b>Sports History</b>
Course Numbers: <b>733200</b>	This semester class covers material and offers discussion about the origins and history of specific sports from the ancient Greeks through modern times. Special topics related to sports, such as sportsmanship, racial integration, Title IX legislation, and steroids will be discussed. Tests, book reviews, and research papers are required. Web research will be incorporated, as well as related videos.
Grade Level: 10-12	
Graduation Credit: ½ Elective	
<b>COURSE TITLE:</b>	<b>Pop Culture I &amp; II</b>
Course Numbers: <b>724310</b> <b>724320</b>	<i>Rock and Roll: An American Story</i> is an online resource that focuses on different eras of American popular music and will be employed throughout the course. Students will examine the roots of Rock and Roll and its foundation in Southern Blues, Jazz, and Country music. In addition, a variety of film genres that have had a significant impact on popular culture will be reviewed and analyzed. Students will utilize numerous forms of technology, create music videos, and research movements that have affected trends from television to clothing.
Grade Level: 11-12	
Graduation Credit: ½ Elective	
	Duration: 1 semester

## HEALTH/PHYSICAL EDUCATION

<b>COURSE TITLE:</b>	<b>Health 9 (online option)</b>
Course Numbers: <b>690901</b>	Health 9 is designed to explore the issues that currently are important to the daily lives of students. Main topics emphasized include leading a healthy life, self-esteem, stress management, drug, alcohol and tobacco abuse, nutrition and physical fitness.
Grade Level: 9-12	
Graduation Credit: ½ Health	
	Duration: 1 semester
<b>COURSE TITLE:</b>	<b>Health 10 (online option)</b>
Course Numbers: <b>690902</b>	Health 10 is designed to teach ways to improve and prolong mental, physical and social well-being through a wellness and holistic approach. Main topics emphasized; you are responsible for your own health, mental and social health, family and interpersonal relationships, marriage, building relationships, sexually transmitted diseases, stress management, drug, alcohol, and tobacco abuse. This course also has an online version that is orchestrated through John Marshall if the course will not fit into a student's PEP plan or schedule.
Grade Level: 9-12	
Graduation Credit: ½ Health	
	Duration: 1 semester
	Prerequisite: Health 9
<b>COURSE TITLE:</b>	<b>PE High School 9</b>
Course Numbers: <b>660901</b>	This is a semester course designed to give students an overview of various lifetime sports. All students MUST participate and complete the Fitness Gram Physical Education Fitness Test mandated by the State of West Virginia. Grade is based on participation in class, dressing for class in approved gym attire, behavior and sportsmanship.
Grade Level: 9	
Graduation Credit: ½ Physical Education	
	Duration: 1 semester
	Prerequisite: All incoming freshmen will be scheduled into this course.

<b>COURSE TITLE:</b>	<b>PE High School 10</b>
Course Numbers: <b>660902</b>  Grade Level: 10  Graduation Credit: ½ Physical Education	This is a semester course designed to give students an overview of various lifetime sports. All students <b>MUST</b> participate and complete the Fitness Gram Physical Education Fitness Test mandated by the State of West Virginia. Grade is based on participation in class, dressing for class in approved gym attire, behavior and sportsmanship.  Duration: 1 semester  Prerequisite: All sophomores will be scheduled into this course.
<b>COURSE TITLE:</b>	<b>Extracurricular Inter-Scholastic PE</b>
Course Numbers: <b>794800</b>  Grade Level: 9-10  Graduation Credit: ½ Physical Education	If a student plays an SSAC sanctioned sport, he or she can receive credit for 1 semester of PE per sports season. The coach must sign paperwork verifying the student was at all necessary practices and completed the entire season. This is a non-graded course that is not included in GPA.  Duration: 1 semester
<b>COURSE TITLE:</b>	<b>PE High School 10 – Walking/Jogging</b>
Course Number: <b>6609</b>  Grade Level: 10-12  Graduation Credit: ½ Physical Education	Walking/Jogging – This is a semester course designed to give students the flexibility of developing a personal cardio vascular fitness program. Students will use pedometers to keep track of steps and distance. Various other techniques will be used throughout the semester.  Duration: 1 semester
<b>COURSE TITLE:</b>	<b>Individual Sports/Fitness Conditioning</b>
Course Numbers: <b>672510</b> <b>672520</b> Grade Level: 11-12  Graduation Credit: 1 Physical Education	This class is designed to keep student athletes or non-athletes in good physical condition by participating in various cardio workouts. Areas of concentration include: speed, agility, endurance and flexibility.  Duration: 1 semester  Prerequisite: Must have passed PE High School 9 and PE High School 10.
<b>COURSE TITLE:</b>	<b>Recreational Sport/Advanced Physical Education</b>
Course Numbers: <b>674100</b>  Grade Level: 11-12 (Seniors given priority)  Graduation Credit: ½ Physical Education	Class is designed for students who enjoy participating in individual and team sports, recreational activities, and outdoor sports. Grade is based on participation, dressing in approved gym clothes, behavior and sportsmanship.  Duration: 1 semester  Prerequisite: Must have passed PE High School 9 and PE High School 10.
<b>COURSE TITLE:</b>	<b>Weight Training</b>
Course Numbers: <b>676510</b> <b>676520</b>  Grade Level: 10-12  Graduation Credit: 1 Physical Education	This course will allow the student to create an individual weight lifting program. Daily participation, dressing in approved gym clothes, and attendance is the basis of grades.  Duration: 1 semester or 2 semesters  Prerequisite: Must have passed PE High School 9.
<b>COURSE TITLE:</b>	<b>Life Fitness Education</b>
Course Numbers: <b>673300</b>  Grade Level: 9-12  Graduation Credit: ½ Physical Education	This class is designed for students that have a desire to learn about the benefits and importance of exercise, how to properly exercise, proper nutrition, and about general wellness. Students will be expected to do class work as well as participation in various exercises and activities.  Duration: 1 semester

## HEALTH/PHYSICAL EDUCATION ELECTIVES

<b>COURSE TITLE:</b>	<b>Driver's Education</b>
Course Numbers: <b>681100</b>	This course is designed to teach and encourage safe driving habits and to develop defensive driving techniques as a lifelong principle for safe vehicle operation. Enrollment is limited, so preference will be made based upon grade level (seniors, juniors, and then sophomores). A Learner's Permit is NOT required.
Grade Level: 10-12	
Graduation Credit: ½ Elective	
<b>COURSE TITLE:</b>	<b>Sports Medicine I &amp; II</b>
Course Numbers: <b>693310</b> <b>693320</b> <b>693410</b> <b>693420</b>	This course is designed to familiarize the student with the field of Athletic Training. It will allow students to develop an awareness of the current and proper techniques for the prevention, care, and rehabilitation of athletic injuries.
Grade Level: 11-12	
Graduation Credit: 1 Elective	
	Duration: 1 semester
	Duration: 2 semesters

## FINE ARTS (PERFORMING and VISUAL) COURSES

	<b>Vocal and Instrumental Music Courses</b>
<b>COURSE TITLE:</b>	<b>Band I, II, III, IV</b>
Course Numbers: <b>361110</b> <b>361120</b> <b>361210</b> <b>361220</b> <b>361310</b> <b>361320</b> <b>361410</b> <b>361420</b>	Students will prepare selected marching and concert band music for performances and festivals. Students are required to be enrolled in band in order to audition for All-State band or to participate in Solo-N-Ensemble or Regional Honors Band. Practice outside of school hours may be required. Students will be required to attend all scheduled rehearsals and performances during school and outside curricular time. To move on to the next sequenced band class, a student must pass the previous course. <u>Honors credit is available through specific criteria provided by Mrs. Filben.</u>
Grade Level: 9-12	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters
<b>COURSE TITLE:</b>	<b>Steel Drum Band</b>
Course Numbers: <b>374210</b> <b>374220</b>	Open to any band student or with permission from Mrs. Filben. Students will be required to attend all scheduled rehearsals and performances during school and outside curricular time.
Grade Level: 9-12	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters

<b>COURSE TITLE:</b>	<b>Chorus I, II, III, IV</b>
<p>Course Numbers:  <b>362110</b>  <b>362120</b>  <b>362210</b>  <b>362220</b>  <b>362310</b>  <b>362320</b>  <b>362410</b>  <b>362420</b></p> <p>Grade Level: 9-12</p> <p>Graduation Credit:  1 Fine Arts/Elective</p>	<p>Chorus I is open to any interested student. The course develops individual vocal techniques and basic music concepts. Class participation and performances are part of the grade. This group will combine to perform with the concert choir. To continue on to the next course level, a student must pass the previous course.</p> <p>Duration: 2 semesters</p>
<b>COURSE TITLE:</b>	<b>Monarch Choir</b>
<p>Course Numbers:  <b>377010</b>  <b>377020</b>  <b>377110</b>  <b>377120</b>  <b>377210</b>  <b>377220</b>  <b>377310</b>  <b>377320</b></p> <p>Grade Level: 9-12</p> <p>Graduation Credit:  1 Fine Arts/Elective</p>	<p>Students will study advanced choral literature and technique. Students should have prior choral experience. Because class participation and performances are part of the grade, students with questionable attendance records may not be allowed to take this class.</p> <p>Duration: 2 semesters</p> <p>Prerequisite: By Audition Only</p>
<b>COURSE TITLE:</b>	<b>Music Theory/Music Appreciation</b>
<p>Course Numbers:  <b>375600</b>  <b>374600</b></p> <p>Grade Level: 9-12</p> <p>Graduation Credit:  ½ Fine Arts/Elective</p>	<p>Students will be instructed in the fundamentals of written music theory. The course is designed to prepare instrumental, vocal, piano, and string students for college theory.</p> <p>Duration: 1 semester</p>
<b>COURSE TITLE:</b>	<b>Piano I, II, III, IV</b>
<p>Course Numbers:  <b>368100</b>  <b>368200</b>  <b>368300</b>  <b>368400</b></p> <p>Grade Level: 9-12</p> <p>Graduation Credit:  ½ Fine Arts/Elective</p>	<p>This course offers beginning instruction in piano for the novice to instruction for advanced Piano students. <u>Students must pass each level to advance to the next level.</u></p> <p>Duration: 1 semester</p>
<b>COURSE TITLE:</b>	<b>Orchestra I, II, III, IV</b>
<p>Course Numbers:  <b>376400</b>  <b>376500</b>  <b>377600</b>  <b>377700</b></p> <p>Grade Level: 9-12</p> <p>Graduation Credit:  1 Fine Arts/Elective</p>	<p>This class will be taught during the school day to students who have experience playing violin, viola, cello, or bass. Students will be required to attend all scheduled rehearsals and performances during school and outside curricular time. Students must pass each level to advance to the next level.  <u>Honors credit is available through specific criteria provided by Mr. Jones.</u></p> <p>Duration: 2 semesters</p>

<b>COURSE TITLE:</b>	<b>Guitar I</b>
Course Numbers: <b>3726</b>	In Guitar I, students will begin a basic study of guitar. Students will learn the correct wrist, hand, and body positions, block and broken chord patterns, cadences using I, IV, and V chords, and simple pieces. Sight-reading rhythms and notes in treble clef will be practiced and evaluation skills will be developed.
Grade Level: 9-12	
Graduation Credit: 1/2 Fine Arts/Elective	
	<b>Visual Arts</b>
<b>COURSE TITLE:</b>	<b>Art I</b>
Course Numbers: <b>321110</b> <b>321120</b>	Students produce two-dimensional and three-dimensional artworks using a variety of media, techniques, technology, and processes. They use verbal and written formats to relate art skills and strategies to other disciplines, various cultures, major art movements and historical periods. Students will practice responsible workplace skills and review career options and study the concept of art criticism.
Grade Level: 9-12	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters
<b>COURSE TITLE:</b>	<b>Art II</b>
Course Numbers: <b>321210</b> <b>321220</b>	General Art 2 is a continuation of the concepts presented in General Art I with a focus on developing greater skill in handling various media, and the expression of individual ideas through artworks. Artistic concepts will be discussed such as the use of themes and personal motifs and symbols in artworks.
Grade Level: 10-12	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters
	Prerequisite: Pass both semesters of Art I
<b>COURSE TITLE:</b>	<b>Art III</b>
Course Numbers: <b>321310</b> <b>321320</b>	General Art 3 builds on previous content standards with a more in-depth approach. Students analyze art from various cultures visually, verbally, and in written form. They study art history, criticism, and aesthetics in relation to individually selected artworks and develop a personal philosophy of art. The students develop personal portfolios which include products and critiques.
Grade Level: 11-12	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters
	Prerequisite: Successfully complete Art I and Art II
<b>COURSE TITLE:</b>	<b>Art IV</b>
Course Numbers: <b>321410</b> <b>321420</b>	In General Art 4 students develop and clarify their philosophy of art and art making through in-depth explorations with media, techniques and processes. Students expand and refine a portfolio reflecting a broad base of knowledge in the arts. Students focus on value and drawing skill and the necessary steps to achieve a portfolio for college.
Grade Level: 12	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters
	Prerequisite: Successfully complete Art I, Art II and Art III or be a senior planning on majoring in Art in college.
<b>COURSE TITLE:</b>	<b>AP 2-D Art and Design</b>
Course Numbers: <b>32231A</b> <b>32232A</b>	AP 2-D Art and Design is an introductory college-level two-dimensional design course. Students refine and apply 2-D skills to ideas they develop throughout the course. In AP 2-D Art and Design you'll develop skills using materials and processes such as graphic design, photography, collage, printmaking, fashion illustration, and others. As the course concludes you'll submit a portfolio that demonstrates your ability to practice, experiment, and revise your own work while communicating your ideas about art and design.
Grade Level: 10-112	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters
	Prerequisite: Art I



<b>COURSE TITLE:</b>	<b>AP 3-D Art and Design</b>
Course Numbers: <b>32241A</b> <b>32242A</b>	AP 3-D Art and Design is an introductory college-level three-dimensional design course. Students refine and apply 3-D skills to ideas they develop throughout the course. In AP 3-D Art and Design you'll learn how to create art in different disciplines such as sculpture, architectural rendering, metal work, ceramics, and others. At the end of the course you'll submit a portfolio that demonstrates your knowledge of art skills using three-dimensional materials.
Grade Level: 10-12	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters
	Prerequisite: Art I
<b>COURSE TITLE:</b>	<b>Graphic Arts</b>
Course Numbers: <b>331310</b> <b>331320</b>	This studio art course is an introduction to the world of Graphic Design. The course content will include the development of design skills, technical use of the material, and concept development through verbal and visual methods. Photoshop will be included in the Graphic program.
Grade Level: 10-12	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters
<b>COURSE TITLE:</b>	<b>Ceramics/Pottery I/II</b>
Course Numbers: <b>330710</b> <b>330720</b> <b>330810</b> <b>330820</b>	This is a studio art class that introduces the foundations of hand-built and wheel-thrown pottery. Students will explore in depth, the properties and terminology associated with clay, various forming and decorating techniques and the history of clay in various cultures. Class evaluation includes hand-built and wheel thrown projects, class participation, textbook readings, essay tests, and written assignments. <u>Students will get dirty from the clay and fingernails must be kept short.</u> Consistent attendance and extra work outside of the regular class hours are important for success in this class. Student must be able to work independently.
Grade Level: 11-12	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters
	Prerequisite: Art 1
<b>COURE TITLE:</b>	<b>Sculpture</b>
Course Numbers: <b>333710</b> <b>333720</b>	This studio course focuses on hands on learning with a variety of materials and properties used to create 3-dimensional art works, which may include, cardboard, clay and glazes, paper and metal work. Students will explore and understand the elements and principles of design as they apply them to 3-dimensional artistic expression.
Grade Level: 10-12	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters
	Pre-requisite: Art 1
	<b>Performing Arts</b>
<b>COURSE TITLE:</b>	<b>Theatre I/Theatre II</b>
Course Numbers: <b>380110</b> <b>380220</b>	Students interested in pursuing oral communications, TV, radio, film, public relations, or theatre will find this course an interesting introduction. Content includes the structure, varieties, history and evaluation of drama, voice & diction, improvisation, and mime, and gaining self-confidence.
Grade Level: 10-12	
Graduation Credit: 1 Fine Arts/Elective	
	Duration: 2 semesters

<b>COURSE TITLE:</b>	<b>Theatre/Stagecraft</b>
Course Numbers: <b>385910</b> <b>385920</b>	In Theatre/Stagecraft students will learn staging, lighting, and technical aspects of theatre. A large part of this course is focused on set construction.
Grade Level: 9-12	Duration: 2 semesters
Graduation Credit: 1 Fine Arts/Elective	

## **FOREIGN LANGUAGE**

<b>COURSE TITLE:</b>	<b>Spanish I</b>
Course Numbers: <b>566110</b> <b>566120</b>	Students develop oral and written communication skills with an emphasis on listening, speaking, and writing to prepare for college foreign language courses. They are also introduced to the Spanish-speaking world through cultural activities.
Grade Level: 9-12	Duration: 2 semesters
Graduation Credit: 1 Foreign Language/Elective	
<b>COURSE TITLE:</b>	<b>Spanish II</b>
Course Numbers: <b>566210</b> <b>566220</b>	Students refine listening and speaking skills acquired in level 1 and are expected to comprehend more spoken Spanish. Emphasis is also on vocabulary and grammar through structure skills.
Grade Level: 9-12	Duration: 2 semesters
Graduation Credit: 1 Foreign Language/Elective	Prerequisite: Must have passed Spanish I.
<b>COURSE TITLE:</b>	<b>Spanish III Dual Credit</b>
Course Numbers: <b>56631X</b> <b>56632X</b>	In this honors course of study, the student will continue to study the Spanish language and culture with an emphasis on more complex structures and vocabulary. Students will begin the study of Spanish literature.
Grade Level: 10-12	Duration: 2 semesters
Graduation Credit: 1 Foreign Language/Elective	Prerequisite: Spanish II
College Credit: WLU SPAN 101	

# CAREER AND TECHNICAL EDUCATION COURSES

Career and Technology Education (CTE) is a program that enables John Marshall students to fulfill their career potential. The CTE program at John Marshall provides students with:

- academic subject matter taught with relevance to the real world, often called "contextual learning";
- employability skills, from job-related expertise to workplace ethics
- educational pathways that help them explore interests and careers while progressing through school
- postsecondary career pathways that include registered apprenticeship, industry certification, community college certificate/associate degree programs, and four-year college degree programs.

Career and Technology Education Programs provide students with BOTH relevant career skills preparation AND rigorous academic skills.

A **Completer Program** is a sequence of courses on a specific career pathway that provides a minimum of four credits in a Career and Technology Education Program. Most Completer Programs at John Marshall are two-year programs taken during a student's junior and senior year. When a student enters a Completer Program, they are committing to the two years it will take to acquire the four credits needed.

Many students in the completer programs will graduate high school with some type of certification or credentials. The West Virginia Board of Education approves all completer programs, and completion of the required CTE completer credits meets Marshall County Schools graduation requirements at the high school level. Students who successfully complete a CTE program in most occupational pathways are eligible for community college credit through EDGE (Earn a Degree Graduate Early).

**Simulated Workplace** - <https://wvde.us/simulated-workplace/>

The West Virginia Department of Education has worked with committee experts from numerous businesses and industries throughout West Virginia to design Simulated Workplace. This new educational initiative has been created to assist schools in implementing workplace environmental protocols that align with West Virginia workforce requirements, including random drug testing, professionalism, attendance, and safety. Simulated Workplace has not only enhanced instructional delivery of career education but has created a more engaged career and technical student. The simulated workplace environment permits students the opportunity to take ownership of their individual performance as it impacts the overall success of their education, while thriving in an authentic workplace culture. Simulated Workplace also encourages local business and industry experts to join onsite review teams to assist schools in meeting their workforce needs and expectations.

**NOCTI Testing** - <https://wvde.us/governors-economic-initiatives/technical-assessment/>

The Office of Governor's Economic Initiatives supports Federal Perkins accountability measures, such as technical assessments, for CTE state approved programs. The office oversees CTE programs' implementation of the National Occupational Competency Testing Institute (NOCTI) technical assessment as well the CTE Portfolio.

NOCTI provides Standardized Assessments for Career and Technical Education Centers that are aligned with industry standards and created by industry experts in conjunction with educators across the country.

**Governor's Workforce Credential** - <https://wvde.us/governors-economic-initiatives/student-opportunities/>

The Governor's Workforce Credential signifies a student's knowledge of business processes within a Simulated Workplace environment. The West Virginia Governor endorses only the top CTE completers in the state for their achievements in academics, technical training and work readiness.

**National Technical Honor Society** - <https://nth.s.org/>

The National Technical Honor Society serves over 100,000 student members annually. Awarding over \$2 million in scholarships to date, NTHS honors the achievements of top CTE students, provides scholarships to encourage the pursuit of higher education, and cultivates excellence in today's highly competitive, skilled workforce.

Student membership is open to John Marshall High School students who are enrolled in career and technical education programs. Each student must meet the qualifications set by the school. Membership cost is a one-time \$30 fee.



## **CTE ELECTIVES**

CTE Electives are courses that can be taken independently of a CTE Completer program (see Completer Program pg 33). Some of these electives are designed to be exploratory courses taken in 9<sup>th</sup> and 10<sup>th</sup> grade before applying for CTE programs. Some may also be taken at any grade level as a personal elective course. Course descriptions for these electives are listed under the corresponding programs.

Courses listed below may have prerequisites to enroll:

### Agriculture Science

- 0101 - Introduction to Agriculture, Food, and Natural Resources – page
- 0149 - Companion Animal Care – page
- 0190 - Fish and Wildlife Management – page

### Broadcasting Technology

- 2421 – Communication Systems – page

### Business

- 1401 – Accounting Principles I
- 1452 – Personal Finance
- 1439 – Business & Marketing Essentials
- 1411 – Business Computer Applications I
- 1417 – Business Law and Ethics
- 0422 – Marketing Principles
- 0437 – Hospitality and Tourism Marketing
- 1455 – Web Page Publishing
- 1431 – Digital Imagine/Multimedia

### Computer Systems Repair Technology

- 1706 – Imaging For The Web

### Therapeutic Services

- 0700 – Exploring Health Professions

### Construction Technology

- 2424 – Construction Systems

### Project Lead The Way (PLTW)

- 2461 – Introduction to Engineering
- 0727 – Principles of Biomedical Science
- 1408 – Computer Science Essentials

### PROSTART Restaurant Management

- 1018 – Baking and Pastry Applications
- 0951 – Food Preparation

### Family and Consumer Science

- 0929 – LIFE
- 0903 – Parenting & Strong Families

### Home Mechanics

- 2554 – Mechanical Service Systems

Students planning to enroll in one of the following programs starting in 11<sup>th</sup> grade are encouraged to take Career Exploration in 10<sup>th</sup> grade:

### Automotive Technology

### Building and Maintenance Operations

### Carpentry

### Collision Repair Technology

### Machine Tool Technology

### Welding

<b>COURSE TITLE:</b>	<b>Career Exploration</b>
Course Numbers: <b>762710</b> <b>762720</b>	This course is divided into six-week segments with each segment being completed in a different vocational area. The six areas include Automotive Technology, Collision Repair Technology, Welding Technology, Drafting, Home Repair, Construction Systems, and Machine Tool Technology. This course will expose the student to different technologies that will help them in choosing a future Career Technical area or for general experience.
Grade Level: 10	
Graduation Credit: 1 Elective	
	Duration: 2 semesters

“Always do your best. What you plant now, you will harvest later.”

-Og Mandino, Author



## **AGRICULTURE SCIENCE – AGRIBUSINESS SYSTEMS**

Available Credentials/Clubs: OSHA 10, FFA, TSA

**Completer Courses:**

1. 0101 - Intro to Agriculture, Food, & Natural Resources
2. 0102 – The Science of Agriculture
3. 0134 - Agricultural Experience

Choose one of the following:

- a. 0111 – Food Science Technology
- b. 0212 - Horticulture

**Related Electives:** 1. 0200 – Natural Resource Management

<b>COURSE TITLE:</b>	<b>Introduction to Agriculture, Food, and Natural Resources</b>
Course Numbers: <b>010110</b> <b>010120</b>	This area of study is designed to provide students with core skills and competencies needed for pursuing careers in agriculture and natural resources. Students will utilize problem-solving techniques and participate in laboratory activities to develop an understanding of course concepts. Safety instruction is integrated into all activities. Students will be provided with real world learning opportunities and instruction related to selection, development, and maintenance of individual Supervised Agricultural Experience (SAE) programs. #1 Completer Course
Grade Level: 9-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters <span style="float: right;">CTE Elective</span>

<b>COURSE TITLE:</b>	<b>The Science of Agriculture</b>
Course Numbers: <b>010210</b> <b>010220</b>	This course focuses on the basic scientific principles and processes related to the production of plants and animals for the food and fiber systems. Topics of instruction include basic understanding of the livestock/poultry industry and its various components, career opportunities, soil science, crop science/agronomy, weed science, basic agricultural mechanics and related industry careers, environmental stewardship, entrepreneurship, and leadership/personal development. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. #2 Completer Course  Duration: 2 semesters  Prerequisite: Intro to Agriculture
Grade Level: 10-12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Agriculture Experience</b>
Course Numbers: <b>013410</b> <b>013420</b>	Required for summer projects for <u>agricultural completers only</u> . Projects must be pre-approved. Credit is awarded for completion of the Agriculture Experience Project. #3 Completer Course  Duration: 4 semester of enrollment Junior/Senior Year as a ½ credit each year.  Prerequisite: Teacher recommendation
Grade Level: 11-12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Horticulture</b>
Course Numbers: <b>021210</b> <b>021220</b>	Horticulture is one of four courses to complete Plant Systems Program. The horticultural course is an in-depth look at concepts of plant growth and plant usage in our environment for aesthetics, ecosystem, and as plant products for human consumption. Topics: Plant growth requirements, plant processes, and propagation. Students will use the greenhouse as a laboratory. #4 Completer Course  Duration: 2 semesters  Prerequisite: Introduction to Agriculture
Grade Level: 10-12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Food Science Technology</b>
Course Numbers: <b>011110</b> <b>011120</b>	This specialization course is for students who seek a deeper knowledge in the area of food science technology. Topics covered include food safety, business and economics, packaging and marketing, value-added processing, quality assurance, food processing, food preparation and presentation and careers in the food science industry. Students will utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. #4 Completer Course  Duration: 2 semesters  Prerequisite: Introduction to Agriculture
Grade Level: 10-12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Natural Resource Management (Semester Course)</b>
Course Numbers: <b>020000</b>	This specialization course covers topics on soil and water conservation, basic wildlife management, environmental law and regulations, basic forestry, and land management. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.  Duration: 1 semester  Prerequisite: Introduction to Agriculture
Grade Level: 10-12	
Graduation Credit: ½ Elective	
	CTE Elective

**Education is not the learning of facts, but the training of the mind to think.**

**- Albert Einstein**



## AUTOMOTIVE TECHNOLOGY

Available Credentials/Clubs: ASE, WV State Inspection, Skills USA

- Completer Courses:**
1. 1631 - Automotive Technology MLR-1
  2. 1623 - Automotive Technology MLR-2
  3. 1625 - Automotive Technology MLR-3
  4. 1637 - Automotive Technology MLR-4
    - a. 1633 – Auto-Tech AST3

**Related Electives:** 1. 7627 – Career Exploration

<b>COURSE TITLE:</b>	<b>Auto-Tech MLR1/Auto-Tech MLR2 (2 period block)</b>
Course Numbers: <b>162310</b> <b>163120</b>	This course is the first of a two-year program in Automotive Technology. Units: automotive electrical systems, theory and operation of brake systems, fundamentals of steering and suspension systems, basic engine concept, engine performance, climate controls, standard and automatic transmissions, computerized data systems, and computer operations related to automotive technology. #1 and #2 Completer Courses
Grade Level: 11-12	
Graduation Credit: 2 Electives	
<b>COURSE TITLE:</b>	<b>Auto-Tech MLR3/Auto-Tech MLR4/Auto-Tech AST3 (3 pd block)</b>
Course Numbers: <b>162510</b> <b>163720</b> <b>163310</b> <b>163320</b>	This class is the second year of Automotive Technology. Emphasis will be on obtaining "ASE" technician certification, CFC air-conditioning certification, and the West Virginia State Inspection Licensure. Units: computerized engine controls, heating & air conditioning, engine performance, computerized wheel alignments, suspension systems, antilock brakes, manual drive trains, front wheel drive systems, electrical/electronic systems, fuel injection, and electronic analyzers. #3 and #4 Completer Courses
Grade Level: 12	
Graduation Credit: 3 Electives	
	Duration: 2 semesters  Prerequisite: Auto-Tech MLR 1/Auto-Tech MLR 2





## **BROADCASTING TECHNOLOGY**

Available Credentials/Clubs: Skills USA



- Completer Courses:**
1. 1681 - Fundamentals of Broadcasting
  2. 1683 - Radio Broadcasting Presentations
  3. 1685 - Television Production Applications
  4. 1689 - Producing Live TV

- Related Electives:**
1. 1684 - Video Editing
  2. 2421 - Communication Systems

<b>COURSE TITLE:</b>	<b>Fundamentals of Broadcasting</b>
Course Numbers: <b>168110</b> <b>168120</b>	This course will introduce students to the basic fundamentals needed to support broadcast managers in the production and broadcasting of materials and programs. Students will become familiar with the equipment, processes, and procedures used in producing and making of radio and television broadcasts.  Duration: 2 semesters  Prerequisite: Teacher recommendation
Grade Level: 11	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Radio Broadcasting Presentations</b>
Course Numbers: <b>168310</b> <b>168320</b>	This course will provide students with the knowledge to perform, either in a live or mock setting, a radio broadcast.  Duration: 2 semesters  Prerequisite: Teacher recommendation
Grade Level: 11	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Television Production Applications</b>
Course Numbers: <b>168510</b> <b>168520</b>	This course will provide students with an entry-level understanding of the components of television broadcasting.  Duration: 2 semesters  Prerequisite: Teacher recommendation
Grade Level: 12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Producing Live TV</b>
Course Numbers: <b>168910</b> <b>168920</b>	This course is designed to prepare students for entry-level positions in the television industry. Students will be introduced to the requirements for producing live television news and other live programs including talk shows, game shows, variety shows and sports events. Because this is a course where students rely on other students for success of the broadcast, each student must attend class on a consistent basis. Any student not meeting the attendance requirement is subject to removal from the class.  Duration: 2 semesters  Prerequisite: Teacher recommendation
Grade Level: 12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Video Editing</b>
Course Numbers: <b>168410</b> <b>168420</b>	This full-year course is designed to train students in advanced-level video editing with nonlinear editors. Included in instruction are video effects, keying, color correction and other higher-level processes. The student will explore how packaging and imaging of a product impacts the sales of videos.  Duration: 2 semesters  Prerequisite: Fundamentals of Broadcasting and teacher recommendation
Grade Level: 11-12	
Graduation Credit: 1 Elective	



<b>COURSE TITLE:</b>	<b>Digital Photography (Semester One)</b>
Course Number: <b>151500</b>	This course introduces the student to the skills required to produce professional quality photographs. Students will use DSLR cameras, various accessories such as filters and tripods, photo editing software, and an inkjet printer. Emphasis will be placed on photojournalism and advertising photography. Units of Study: Camera Basics, Photo Editing, Photo Printing.
Grade Level: 9-12	
Graduation Credit: ½ Elective Credit	
<b>COURSE TITLE:</b>	<b>Communication Systems (Semester Two)</b>
Course Numbers: <b>242100</b>	This course provides opportunities for students to study and apply technological systems, concepts and processes in communications technology. Group and individual activities engage students in creating ideas, developing innovations and implementing design solutions as they relate to communication systems.
Grade Level: 9-12	
Graduation Credit: ½ Elective Credit	



## Monarch Industries

### **BUSINESS**

Available Credentials/Clubs: Microsoft Office Specialist, Word, Excel, PowerPoint, Access, OSHA 10, WV Welcome Hospitality Certification, FBLA, DECA



#### **Accounting and Finance**

1. 1401 - Accounting Principles I
2. 1403 - Accounting Principles II



#### **Business Enterprise**

1. 1411 - Business Computer Applications I
2. 1439 - Business & Marketing Essentials
3. 1417 – Business Law and Ethics
4. 1504 – Dual Credit Business Economics



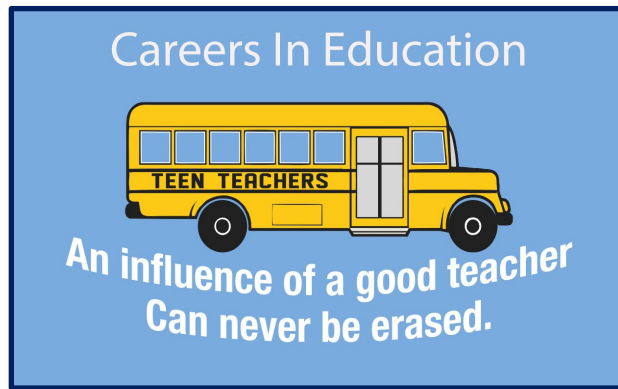
## Marketing Management

1. 0422 - Marketing Principles
2. 0425 - Marketing Applications
3. 0426 – Cross-Media Marketing
4. 0428 - Marketing Work Experience/Internship

<b>COURSE TITLE:</b>	<b>Accounting Principles I</b>
Course Numbers: <b>140110</b> <b>140120</b>	Content emphasizes the introduction of basic accounting principles, procedures, and techniques involved in recording and classifying all transactions and financial statements. Both paper and electronic accounting practices are covered. This is one of the required courses for the Accounting concentration.  Duration: 2 semesters  CTE Elective
Grade Level: 10-12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Accounting Principles II</b>
Course Numbers: <b>140310</b> <b>140320</b>	In this class, training situations provide opportunities for the student to master the basic skills necessary to perform accounting activities, prepare for on-the-job training, and function effectively in college accounting courses. One of the required courses for the Finance/Accounting concentration.  Duration: 2 semesters  Prerequisite: Accounting I
Grade Level: 11-12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Personal Finance</b>
Course Numbers: <b>145110</b> <b>145120</b>	This course is designed to help students understand the impact of individual choices on occupational goals and future earning potential. Students will design personal and household budgets, simulate use of checking and saving accounts, demonstrate knowledge of finance, debt, and credit management and evaluate and understand insurance and taxes. This course will provide a foundational understanding for making informed personal financial decisions.  Duration: 2 semesters  CTE Elective
Grade Level: 11-12	
Graduation Credit: 1 Personal Finance Credit	
<b>COURSE TITLE:</b>	<b>Business and Marketing Essentials</b>
Course Numbers: <b>143910</b> <b>143920</b>	This course is designed to provide the student with a working knowledge of the business environment. This course teaches students different forms of business and activities involved with operating a business. The course will provide a better understanding of what businesses will expect of their employees. This class is required for the Management and Accounting concentrations. (If majoring in the Management or Accounting concentrations, this class should be taken before Business Management and Entrepreneurship). This course is EDGE credit eligible.  Duration: 2 semesters  CTE Elective
Grade Level: 9-12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Business Computer Applications I</b>
Course Numbers: <b>141110</b> <b>141120</b>	The curriculum within the Microsoft IT Academy will offer students learning solutions for IT skills training and certification as well as technology essentials for professionals. Students will develop skills that employers demand within the Microsoft Word and PowerPoint Programs. Upon completion of the course, students will complete the Microsoft Office Specialist Exams for Word 2013 and Excel 2013.  Duration: 2 semesters  CTE Elective
Grade Level: 10-12	
Graduation Credit: 1 Elective	

<b>COURSE TITLE:</b>	<b>Business Law and Ethics - Honors</b>
Course Numbers: <b>14171H</b> <b>14172H</b>	Business law provides students with information on the basic fundamentals of contracts, credit, employment, insurance, commercial paper, property and bailments. The legal concepts for this class will provide students the necessary legal knowledge that they will encounter in their everyday lives.  Duration: 2 semesters
Grade Level: 11-12	
Graduation Credit: 1 Elective	
	CTE Elective
<b>COURSE TITLE:</b>	<b>Business Economics Dual Credit</b>
Course Numbers: <b>15041X</b> <b>15042X</b>	This course introduces students to the principles of economics as applied to business decision-making. Students will explore topics such as demand and supply analysis, production and cost theory, market structures, pricing strategies, and the role of government in business. Through case studies and simulations, students will develop analytical skills to assess business opportunities and challenges in various economic environments. This foundational knowledge will prepare them for further study in business-related fields and equip them with essential skills for success in the business world.  Duration: 2 Semesters
Grade Level: 11-12	
Graduation Credit: 1 Elective	
	CTE Elective
<b>COURSE TITLE:</b>	<b>Marketing Principles</b>
Course Numbers: <b>042210</b> <b>042220</b>	This course provides students with basic knowledge and skills related to marketing occupations. Units of study include marketing principles, human relations, marketing math, economic principles, school store operation, cash handling, sales process, and job-seeking and keeping skills. Students are strongly encouraged to take Marketing Principles in grade 10 or 11. This is one of the required classes for the Marketing concentration.  Duration: 2 semesters
Grade Level: 10-11	
Graduation Credit: 1 Elective	
	CTE Elective
<b>COURSE TITLE:</b>	<b>Marketing Applications</b>
Course Numbers: <b>042510</b> <b>042520</b>	Marketing Applications builds on skills provided in Marketing Principles to provide students with entry-level employment skills. Units of study include promotion, pricing, finance, distribution, risk management, purchasing, marketing, research and entrepreneurship. This is one of the required classes for the Marketing concentration.  Duration: 2 semesters  Prerequisite: Marketing Principles
Grade Level: 12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Cross-Media Marketing</b>
Course Numbers: <b>042610</b> <b>042620</b>	Cross-Media Marketing introduces students to a variety of marketing strategies and applications to prepare them for future marketing courses. Units of study include advertising, promoting, marketing, communications, technology in retail marketing, customer service, sales, digital marketing, digital media communications, and marketing strategies. This is one of the required classes for the Marketing concentration.  Duration: 2 Semesters
Grade Level: 10-12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Management and Entrepreneurship Dual Credit</b>
Course Numbers: <b>14451X</b> <b>14452X</b>	This class emphasizes management skills on the personal and corporate level and focuses on what managers do, how they do it, and what factors will make them successful in leading people or businesses. This class is required for the Management and Marketing concentrations. This course is EDGE credit eligible.  Duration: 2 semesters  Prerequisite: Introduction to Business and Marketing Essentials
Grade Level: 11-12	
Graduation Credit: 1 Elective	
College Credit: WLU	

<b>COURSE TITLE:</b>	<b>Marketing Work Experience/Internship</b>
<p>Course Numbers: <b>042810</b> <b>042820</b></p> <p>Grade Level: 11-12</p> <p>Graduation Credit: 1 Elective</p> <p>College Credit: WLU</p>	<p>This class offers students the opportunity to gain hands-on, practical experience in the field of marketing. Through structured internships or simulated work experiences with local businesses or organizations, students will immerse themselves in real-world marketing tasks and projects under the guidance of industry professionals. This course is designed to provide students with valuable insights into marketing strategies, consumer behavior, and the day-to-day operations of marketing departments, while also fostering critical thinking, problem-solving skills, and professional development.</p> <p>Duration: 2 Semesters</p>



 **CAREERS IN EDUCATION (GROW YOUR OWN)**

**Available Credentials/Clubs: Educator's Rising, ECCAT**

- Completer Courses:**
- 1. 1306 - Intro to Education and the Classroom**
  - 2. 1307 – Intro to Child Development**
  - 3. 1308 – Introduction to Educational Psychology**
  - 4. 1309 – Intro to Social Emotional and Behavioral Wellness**

<p><b>COURSE TITLE:</b></p>	<p><b>Intro to Education and the Classroom/ Intro to Child Development (2 period block)</b></p>
<p>Course Numbers: <b>13061X</b> <b>13072X</b></p> <p>Grade Level: 11-12</p> <p>Graduation Credit: 2 Elective</p> <p>Dual Credit</p>	<p>Introduction to Education and the Classroom explores teaching as a career. Students are introduced to the basic knowledge and skills needed to be an effective educator. They will investigate the roles and responsibilities of an educator, issues related to school and community, and the importance of developing a positive and inclusive culture in the classroom and throughout the school.</p> <p>Introduction to Child Development will provide students with insight on how a student learns at each developmental level. Future educators need to understand what and how children learn at each level of development to provide appropriate content and pedagogy. Students will be introduced to psychological, behavioral, and social learning theories and theorists. They will investigate the characteristics of learners and illustrate examples of the developmental levels at each stage. A clinical experience is required as part of the course completion.</p> <p>Duration: 2 semesters</p> <p>Prerequisite: Teacher recommendation</p>
<p><b>COURSE TITLE:</b></p>	<p><b>Introduction to Educational Psychology/Intro to Social Emotional and Behavioral Wellness (2 period block)</b></p>
<p>Course Numbers: <b>13081X</b> <b>13092X</b></p> <p>Grade Level: 11-12</p> <p>Graduation Credit: 2 Elective</p> <p>Dual Credit</p>	<p>Introduction to Educational Psychology will provide students with a deeper understanding of learning theories that can be applied to teaching and learning. Topics include intelligence, individual differences in learning, how people retrain new information, instructional approaches, student engagement and motivation, and assessment.</p> <p>Introduction to Social, Emotional, and Behavioral Wellness prepares educators to examine the social and emotional needs of students and how to address the non-academic barriers to learning. They will be introduced to the effects of trauma, adverse childhood experiences, and provided with effective classroom strategies to create a positive classroom environment. Activities will include insight into how to collaborate with families, agencies, and the community to provide multi-tiered systems of support.</p> <p>Duration: 2 semesters</p> <p>Prerequisite: Teacher recommendation</p>



## **CARPENTRY**

### **Completer Courses:**

- 1. 1842 – Carpentry I**
- 2. 1843 - Carpentry II**
- 3. 1844 - Carpentry III**
- 4. 1845 - Carpentry IV**

<b>COURSE TITLE:</b>	<b>Carpentry I/Carpentry II (2 period block)</b>
<p>Course Numbers: <b>184210</b> <b>184320</b></p> <p>Grade Level: 11</p> <p>Graduation Credit: 2 Elective</p>	<p>This course introduces the student to the knowledge base and technical skills of the carpentry industry. Carpentry I begins with the NCCER Core curriculum which is a prerequisite to all Level I completions. The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling. Students will then begin developing skill sets related to the fundamentals of Carpentry such as Orientation to the Trade; Building Materials, Fasteners, and Adhesives; and Hand and Power Tools.</p> <p>Carpentry II will continue to build student skill sets in areas such as Reading Plans and Elevations; Floor Systems, Wall and Ceiling Framing; Roof Framing; Introduction to Concrete, Reinforcing Materials, and Forms; Windows and Exterior Doors; Basic Stair Layout.</p> <p>Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.</p> <p>Prerequisite: Teacher recommendation</p>
<b>COURSE TITLE:</b>	<b>Carpentry III/Carpentry IV/Framing Practices and Applications (3 period block)</b>
<p>Course Numbers: <b>184410</b> <b>184520</b> <b>182410/20</b></p> <p>Grade Level: 12</p> <p>Graduation Credit: 3 Elective</p>	<p>Carpentry III will continue to build student skill sets in areas of Commercial Drawings; Roofing Applications; Thermal and Moisture Protection; and Exterior Finishing.</p> <p>Carpentry IV will continue to build student skill sets in areas of Cold-Formed Steel Framing; Drywall Installation; Drywall Finishing; Doors and Door Hardware; Suspended Ceilings; Window, Door, Floor, and Ceiling Trim; Cabinet Installation; and Cabinet Fabrication.</p> <p>Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.</p> <p>Prerequisite: Teacher recommendation</p>



## **THERAPEUTIC SERVICES**

**Available Credentials/Clubs: C-PCT, CPR, OSHA-10, Stop the Bleed, HOSA**

- Completer Courses:**
- 1. 0711 - Foundations of Health Science**
  - 2. 0715 - Advanced Principles of Health Science**
  - 3. 0789 - Clinical Specialty I**
  - 4. 0790 - Clinical Specialty II**
    - a. 07210X – Medical Terminology**

- Related Electives:**
- 1. 0700 – Exploring Health Professions**

<b>COURSE TITLE:</b>	<b>Foundations of Health Science (Honors)/Advanced Principles of Health Sciences (2 period block)</b>
Course Numbers: <b>07111H</b> <b>071520</b>	Instructional content will focus on healthcare safety, environmental safety processes and procedures, ethical and legal responsibilities and mathematical computations. Medical terminology and the reinforcement, expansion and enhancement of biology content specific to diseases and disorders are an integral part of the course. Instruction will incorporate project and problem-based healthcare practices and procedures to demonstrate the importance of these skills. Students will develop basic technical skills required for all health career specialties including patient privacy, communication, teamwork and occupational safety and be provided with opportunities to obtain certifications in HIPPA/Data Privacy, and health care safety.
Grade Level: 11	
Graduation Credit: 2 Electives	
	Duration: 2 semesters
<b>COURSE TITLE:</b>	<b>Clinical Specialty I/Clinical Specialty II/Med. Term (3 pd block)</b>
Course Numbers: <b>07891X</b> <b>07902X</b> <b>07210X</b>	These courses are designed to allow the student to choose career work-based experiences from a list of specializations provided by the instructor. In the first semester, students will volunteer as Nursing Assistants at Good Shepherd Nursing Home. Upon completion of the volunteer work, the students are eligible to become Certified Nursing Assistants after passing the standardized test. Students who complete this block can receive 13 college credits through WVNCC. These courses also provide DC/AP credit.
Grade Level: 12	
Graduation Credit: 3 Electives	
Dual Credit	Duration: 2 semesters  Prerequisite: Successful completion of Foundations of Health Science and Advanced Principles of Health Sciences
<b>COURSE TITLE:</b>	<b>Exploring Health Professions</b>
Course Numbers: <b>070000</b>	This semester long course is designed to introduce students to the various professions associated with health care and health care providers.
Grade Level: 10	
Graduation Credit: ½ Elective	
	Duration: 1 semester
	CTE Elective





## COLLISION REPAIR TECHNOLOGY

Available Credentials/Clubs: ASE, OSHA 10, Skills USA

- Completer Courses:**
1. 1671 - Fundamentals of Collision Repair Technology
  2. 1675 - Nonstructural Analysis and Damage Repair
  3. 1677 - Structural Analysis and Damage Repair
  4. 1679 – Surface Preparation and Refinishing
    - a. 1676 – Custom Finishing Processes

**Related Electives:** 7627 – Career Exploration

<b>COURSE TITLE:</b>	<b>Fundamentals of Collision Repair Technology/Nonstructural Analysis and Damage Repair (2 period block)</b>
Course Numbers: <b>167110</b> <b>167520</b>  Grade Level: 11-12  Graduation Credit: 2 Electives	Fundamentals of Collision Repair introduces the student to the knowledge base and technical skills as they relate to the field of Collision Repair Technology. In the Fundamentals of Collision Repair Technology class areas of study include career opportunities and practices, integrated academics, knowledge of tools and equipment, panel straightening techniques, and introduction to vehicle preparation. Safety instruction is integrated into all activities. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.  Non-Structural Analysis and Damage Repair will continue to build student skill sets in non-structural analysis and repair of metal and composite parts. Students will utilize integrated academics, problem-solving techniques, and manipulative skills while completing lab activities to develop an understanding of course concepts.  Duration: 2 semesters
<b>COURSE TITLE:</b>	<b>Structural Analysis and Damage Repair/Surface Preparation and Refinishing/Custom Finishing Processes (3 period block)</b>
Course Numbers: <b>167710</b> <b>167920</b> <b>167610/20</b>  Grade Level: 12  Graduation Credit: 3 Electives	Structural Analysis and Damage Repair will continue to build student skill sets in frame and unibody type vehicles using welding techniques, measuring equipment, and frame machines.  Surface Preparation and Refinishing will continue to build student skill sets in preparing a surface for refinishing; inspect, clean and operate spraying equipment; detail a vehicle; and diagnose finish defects.  Duration: 2 semesters  Prerequisite: Fundamentals of Collision Repair Technology and Nonstructural Analysis and Damage Repair







## COMPUTER AIDED DRAFTING AND DESIGN

Available Credentials/Clubs: Skills USA, OSHA 10

Completer Courses:

1. 1729 - Fundamentals of Drafting
2. 1727 - Drafting Techniques
3. 1725 - Mechanical Drafting
4. 1721 - Architectural Drafting



Related Electives: 1. 7627 – Career Exploration

<b>COURSE TITLE:</b>	<b>Fundamentals of Drafting</b>
Course Numbers: <b>172910/20</b>	This course introduces the student to the knowledge base and technical skills for all courses in the Drafting Program of Study. Areas of study include tools and equipment, measurement, basic drafting techniques, freehand technical sketching, orthographic projection, dimensioning, basic computer skills, and drawing techniques. Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, WV SkillsUSA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.
Grade Level: 9-10	
Graduation Credit: 1 Elective	
	Duration: 2 semesters
	Prerequisite: Algebra and Geometry suggested
<b>COURSE TITLE:</b>	<b>Drafting Techniques</b>
Course Numbers: <b>172710/20</b>	This course introduces the student to techniques used in advanced orthographic projection. Areas of study include sectioning, pictorial views, auxiliary views, patterns and developments, dimensioning, advanced 2D CAD techniques, and basic 3D modeling in CAD. Students will demonstrate knowledge and technical expertise in various fundamental drafting techniques. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.
Grade Level: 9-10	
Graduation Credit: 1 Elective 1 Fine Arts Credit	
	Duration: 2 semesters
	Prerequisite: Algebra and Geometry suggested
<b>COURSE TITLE:</b>	<b>Mechanical Drafting</b>
Course Numbers: <b>172510/20</b>	This course introduces the student to the knowledge base and technical skills necessary for mechanical drafting. Areas of study include advanced dimensioning techniques, assembly drawings, threads and fasteners, gears and cams, welding, and basic solid modeling. Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities.
Grade Level: 11-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters
	Prerequisite: Fundamentals of Drafting and Drafting Techniques
<b>COURSE TITLE:</b>	<b>Architectural Drafting</b>
Course Numbers: <b>172110/20</b>	This course introduces students to the specialization of architectural drawing and design. Areas of study include architectural styles, floor plans, dimensioning and annotation, site and foundation plans, elevations and section layouts, and residential utilities. Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities.
Grade Level: 11-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters
	Prerequisite: Fundamentals of Drafting and Drafting Techniques



## **PROJECT LEAD THE WAY (PLTW)**

Students interested in completing a program in PLTW are encouraged to take one course each year in grades 9-12.

### **Available Credentials/Clubs: AP+PLTW Credentials**

#### **Pre-Engineering**

- 1. 2461 - Introduction to Engineering**
  - 2. 2463 - Principles of Engineering**
  - 4. 2464 - Engineering Design and Development**
- Choose one of the following third year courses:**
- a. 2466 - Civil Engineering and Architecture**
  - b. 2806 - Computer Science Principles AP  
(Description under Computer Science)**

#### **Biomedical Science**

- 1. 0727 - Principles of Biomedical Science**
- 2. 0766 - Human Body Systems**
- 3. 0780 - Medical Interventions**
- 4. 0795 - Biomedical Innovation**

#### **Computer Science**

- 1. 1408 - Computer Science Essentials**
- 2. 2806 - Computer Science Principles AP**
- 3. 2801 - Computer Science AP**
- 4. 1418 - Cybersecurity**

#### **Pre-Engineering**

Potential College Credit awarded upon completion of the Pre-Engineering Pathway. Portfolio and fee to post-secondary institution required.

<b>COURSE TITLE:</b>	<b>Intro to Engineering (PLTW PATHWAY PRE-ENGINEERING)</b>
Course Numbers: <b>24611H</b> <b>24612H</b>	Project Lead the Way engineering students engage in open-ended problem solving, learn and apply the engineering design process, and use the same industry leading technology and software as are used in the world's top companies. Students investigate topics such as aerodynamics and astronautics, biological engineering, environmental engineering, digital electronics and circuit design that give them the opportunity to learn about different engineering disciplines before beginning post-secondary education.  Duration: 2 semesters  CTE Elective
Grade Level: 9-12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Principles of Engineering (PLTW PATHWAY PRE-ENGINEERING)</b>
Course Numbers: <b>24631H</b> <b>24632H</b>	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. <b><u>THIS COURSE CAN BE A 3<sup>RD</sup> YEAR LAB SCIENCE.</u></b>  Duration: 2 semesters Prerequisite: Students must have passed Intro to Engineering
Grade Level: 9-12	
Graduation Credit: 1 Science	
<b>COURSE TITLE:</b>	<b>Civil Engineering and Architecture (PLTW PATHWAY PRE-ENGINEERING)</b>
Course Numbers: <b>24661H</b> <b>24662H</b>	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. In addition, as students work in teams to design and test solutions, they're empowered develop in-demand, transportable skills like collaboration, critical thinking, and communication.  Prerequisite: Students must have passed Intro to Engineering. Duration: 2 semesters
Grade Level: 11-12	
Graduation Credit: 1 Elective	

<b>COURSE TITLE:</b>	<b>Engineering Design and Development (PLTW PATHWAY PRE-ENGINEERING CAPSTONE)</b>
Course Numbers: <b>24641H</b> <b>24642H</b>	The knowledge and skills students acquire throughout PLTW Engineering come together in Engineering Design and Development as they identify an issue and then research, design, and test a solution, ultimately presenting their solution to a panel of engineers. Students apply the professional skills they have developed to document a design process to standards, completing Engineering Design and Development ready to take on any post-secondary program or career.
Grade Level: 11-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters Prerequisite: Students must have passed Intro to Engineering, POE, and a third course engineering elective.

## **Biomedical Science**

<b>COURSE TITLE:</b>	<b>Principles of Biomedical Science (PLTW PATHWAY BIOMEDICAL)</b>
Course Numbers: <b>07271H</b> <b>07272H</b>	In the introductory course of the PLTW Biomedical Science program, students explore concepts of biology and medicine to determine factors that led to the death of a fictional person. While investigating the case, students examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing them to design their own experiments to solve problems.
Grade Level: 9-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters CTE Elective
<b>COURSE TITLE:</b>	<b>Human Body Systems (PLTW PATHWAY BIOMEDICAL)</b>
Course Numbers: <b>07661H</b> <b>07662H</b>	In this second course for Biomedical, Students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis in the body. Exploring science in action, students build organs and tissues on a skeletal Maniken®; use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration; and take on the roles of biomedical professionals to solve real-world medical cases.. <b><u>THIS COURSE CAN BE A 3<sup>RD</sup> YEAR LAB SCIENCE.</u></b>
Grade Level: 10-12	
Graduation Credit: 1 Science	
	Duration: 2 semesters Prerequisite: Students must have passed Principles of Biomedical Science.
<b>COURSE TITLE:</b>	<b>Medical Interventions (PLTW PATHWAY BIOMEDICAL)</b>
Course Numbers: <b>07801H</b> <b>07802H</b>	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.
Grade Level: 11-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters Prerequisite: Students must have passed Human Body Systems.
<b>COURSE TITLE:</b>	<b>Biomedical Innovation (PLTW PATHWAY BIOMEDICAL)</b>
Course Numbers: <b>07951H</b> <b>07952H</b>	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 21st 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 advisor from a university, medical facility, or research institution.
Grade Level: 11-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters Prerequisite: Students must have passed Medical Interventions.

## Computer Science

<p><b>COURSE TITLE:</b></p> <p>Course Numbers: <b>14081H</b> <b>14082H</b></p> <p>Grade Level: 9-12</p> <p>Graduation Credit: 1 Elective</p>	<p><b>Computer Science Essentials (PLTW PATHWAY CS)</b></p> <p>Designed to be the first computer science course for students who have never programmed before, Introduction to Computer Science is an optional starting point for the PLTW Computer Science program. Students work in teams to create apps for mobile devices using MIT App Inventor®. They explore the impact of computing in society and build skills in digital citizenship and cybersecurity. Beyond learning the fundamentals of programming, students build computational-thinking skills by applying computer science to collaboration tools, modeling and simulation, and data analysis. In addition, students transfer the understanding of programming gained in App Inventor to text-based programming in Python® and apply their knowledge to create algorithms for games of chance and strategy.</p> <p>Duration: 2 semesters</p> <p style="text-align: right;">CTE Elective</p>
<p><b>COURSE TITLE:</b></p> <p>Course Numbers: <b>28061A</b> <b>28062A</b></p> <p>Grade Level: 10-12</p> <p>Graduation Credit: 1 Elective</p>	<p><b>Computer Science Principles AP (PLTW PATHWAY CS)</b></p> <p>Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. Computer Science Principles helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation. PLTW is recognized by the College Board as an endorsed provider of curriculum and professional development for AP® Computer Science Principles (AP CSP). <u>This course can be a third course elective for the engineering pathway.</u></p> <p>Duration: 2 semesters</p> <p>Prerequisite: Students must have passed Computer Science Essentials.</p>
<p><b>COURSE TITLE:</b></p> <p>Course Numbers: <b>28011A</b> <b>28012A</b></p> <p>Grade Level: 11-12</p> <p>Graduation Credit: 1 Elective</p>	<p><b>Computer Science Applications AP (PLTW PATHWAY CS)</b></p> <p>Students cultivate their understanding of coding through analyzing, writing, and testing code as they explore concepts like modularity, variables, and control structures. This course is endorsed by the College Board, giving students the opportunity to take the AP Computer Science A exam for college credit.</p> <p>Duration: 2 semesters</p> <p>Prerequisite: Students must have passed Computer Science Principles AP or Principles of Engineering.</p>
<p><b>COURSE TITLE:</b></p> <p>Course Numbers: <b>14181H</b> <b>14182H</b></p> <p>Grade Level: 11-12</p> <p>Graduation Credit: 1 Elective</p>	<p><b>Cybersecurity (PLTW PATHWAY CS)</b></p> <p>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.</p> <p>Duration: 2 semesters</p> <p>Prerequisite: Students must have passed Computer Science AP.</p>



## **PROSTART Restaurant Management**

**Available Credentials/Clubs: ServSafe, Food Handler's Card,  
WV Welcome Hospitality Certification, NRAEF, Skills USA, FCCLA**



- Completer Courses:**
1. 1013 - Restaurant and Culinary Foundations
  2. 1014 - Restaurant Management Essentials
  3. 1019 - Advanced Principles in Food Production
  4. 1020 - Restaurant Professional

- Related Electives:**
1. 1210 - Hospitality and Tourism Internship
  2. 1018 - Baking and Pastry Applications

<b>COURSE TITLE:</b>	<b>Restaurant and Culinary Foundations/Restaurant Management Essentials (PROSTART I) (2 period block)</b>
Course Numbers: <b>1013E1</b> <b>1014E2</b>	This class is the first of a two-year program designed to develop entry level skills for the Food Service Industry. The student will study the fundamentals of food technology, basic food production, quick service, sanitation, safety and dining room customer service.  Duration: 2 semesters
Grade Levels: 11	
Graduation Credit: 2 Elective	
<b>COURSE TITLE:</b>	<b>Advanced Principles in Food Production/Restaurant Professional (PROSTART II) (2 period block)</b>
Course Numbers: <b>1019E1</b> <b>1020E2</b>	This is the second of a two-year program designed to prepare a student for a food service occupation. It emphasizes professional food services, dining room service and work experiences in the food service industry.  Duration: 2 semesters  Prerequisite: Restaurant and Culinary Foundations and Restaurant Management Essentials (PROSTART I)
Grade Level: 12	
Graduation Credit: 2 Elective	
<b>COURSE TITLE:</b>	<b>Hospitality and Tourism Internship</b>
Course Numbers: <b>121010</b> <b>121020</b>	This course provides work experiences in the food service industry. Students must be employed in food service industry and must submit a letter from current employer verifying employment.  Duration: 2 semesters  Prerequisite: Must have been enrolled in Advanced Principles in Food Production/Restaurant Professional (PROSTART II).
Grade Level: 12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Baking and Pastry Applications</b>
Course Numbers: <b>101800</b>	Baking and Pastry is an elective course which focuses on weights, measures, and general baking, classifications, handling and storage of ingredients, safety and handling, yeast raised dough products, cakes, cookies, batters, breads, biscuits, muffins, pies, and special dessert preparation. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction.  Duration 1 semester
Grade Level: 9-12	
Graduation Credit: ½ Elective	
	CTE Elective



## **FAMILY and CONSUMER SCIENCE**

<b>COURSE TITLE:</b>	<b>Life</b>
Course Numbers: <b>092910</b> <b>092920</b>	This class is offered as a one-credit class. Students examine areas of Foods and Nutrition, Parenting, Life Relationships, Financial Literacy, Personal Wellness and Resource Management.
Grade Level: 9-10	Duration: 2 semesters
Graduation Credit: 1 Elective	
	CTE Elective
<b>COURSE TITLE:</b>	<b>Parenting and Strong Families</b>
Course Numbers: <b>090300</b>	This class helps students evaluate readiness for parenting while examining appropriate parenting and strong family practices. Students have an opportunity to experience parenting through the Real Care Baby Project, a baby simulation that requires round the clock care of a newborn. Class size is limited to 18.
Grade Level: 10-12	Duration: 1 semester
Graduation Credit: ½ Elective	
	CTE Elective
<b>COURSE TITLE:</b>	<b>Food Preparation</b>
Course Number: <b>095100</b>	Food Preparation emphasizes skill development in the selection, preparation, storing and serving of food, management of resources to meet individual and family nutritional needs and optimal use of food resources, the principles of nutrition and the relationship of nutrition to health and well-being. Class size is 18. Good attendance is used to select students.
Grade Level: 10-12	Duration: 1 semester
Graduation Credit: ½ Elective	
	CTE Elective



## **BUILDING MAINTENANCE AND OPERATIONS**

### **Available Credentials/Clubs: Skills USA**

- Completer Courses:**
- 1. 1774 – Building Maintenance and Operations I**
  - 2. 1775 - Building Maintenance and Operations II**
  - 3. 1776 - Building Maintenance and Operations III**
  - 4. 1777 - Building Maintenance and Operations IV**

- Related Electives:** 1. **2445 – Mechanical Service Systems**

<b>COURSE TITLE:</b>	<b>Building Maintenance and Operations I</b>
Course Numbers: <b>177410</b> <b>177420</b>	This course introduces the student to the knowledge base and technical skills of the Building Maintenance and Operations industry. Building Maintenance and Operations I begins with the NCCER Core curriculum which is a prerequisite to all Level I completions. The students will complete modules in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling. Students will then begin developing skill sets related to the fundamentals of Building Maintenance and Operations such as Site Layout One: Distance Measurement and Leveling; and Introduction to Concrete, Reinforcing Materials and Forms. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.
Grade Level: 9-10	
Graduation Credit: 1 Elective	
	Duration: 2 semesters
<b>COURSE TITLE:</b>	<b>Building Maintenance and Operations II</b>
Course Numbers: <b>177510</b> <b>177520</b>	Building Maintenance and Operations II will continue to build student skill sets in areas such as Handling and Placing Concrete; Introduction to Masonry; and Masonry Units and Installation Techniques. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.
Grade Level: 9-10	
Graduation Credit: 1 Elective	
	Duration: 2 semesters  Prerequisite: Building and Maintenance Operations I
<b>COURSE TITLE:</b>	<b>Building Maintenance and Operations III</b>
Course Numbers: <b>177610</b> <b>177620</b>	Building Maintenance and Operations III will continue to build student skill sets in areas of Floor Systems; Wall and Ceiling Framing; Roof Framing; and Roofing Applications. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.
Grade Level: 11-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters  Prerequisite: Building and Maintenance Operations II
<b>COURSE TITLE:</b>	<b>Building Maintenance and Operations IV</b>
Course Numbers: <b>177710</b> <b>177720</b>	Building Maintenance and Operations will continue to build student skill sets in areas of Exterior Finishing; Basic Stair Layout; Electrical Safety; and Residential Electrical Services. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.
Grade Level: 11-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters  Prerequisite: Building and Maintenance Operations III



<b>COURSE TITLE:</b>	<b>Mechanical Service Systems (Home Mechanics I)</b>
Course Numbers: <b>244510</b> <b>244520</b>	This class will include emphasis on general maintenance of buildings, equipment, and furnishings. Students will be introduced to the basic principles of mechanisms, electricity, and fluidics involved in the support, maintenance, design, and installation of all types of mechanical and electrical devices. Safety instruction is integrated into all activities.
Grade Level: 9-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters
	CTE Elective

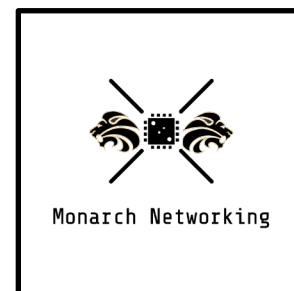


## **COMPUTER SYSTEMS REPAIR TECHNOLOGY**

**Available Credentials/Clubs: Skills USA, Microsoft A+ Credentials**

**Completer Courses:**

- 1. 1664 - CompTIA A+ 220-901**
- 2. 1665 - CompTIA A+ 220-902**
- 3. 1694 - Networking + N10-006**
- 4. 1695 - Server +**



**Related Electives:**

- 1. 1706 – Imaging for the Web**

<b>COURSE TITLE:</b>	<b>CompTIA A+ 220-901/CompTIA A+ 220-902 (2 period block)</b>
Course Numbers: <b>166410</b> <b>166520</b>	Students will learn to build, maintain, and troubleshoot a computer's hardware including motherboards, power supplies, memory, storage systems, etc.
Grade Level: 10-12	Students will learn how to install, operate, and troubleshoot various operating systems including Windows 9X, Windows 2000, Windows XP, Windows Vista, Windows 7, Windows 8 and various distributions of Linux.
Graduation Credit: 2 Electives	#1 and #2 Completer Courses
	Duration: 2 semesters
	Prerequisite: Business Computer Applications I
<b>COURSE TITLE:</b>	<b>Networking + N10-006/Server+ (2 period block)</b>
Course Numbers: <b>169410</b> <b>169520</b>	This ARIES class is a full semester of professional IT training that builds a solid foundation of network administration skills, protocols, the OSI module, LAN design, cabling and connectors, and troubleshooting and maintenance for non-vendor-specific environments. Students will troubleshoot and repair computers as part of regular class work.
Grade Level: 12	Areas of study include computer hardware, data representation, operating system, utility, productivity software, communications and networks, and the Internet. Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities.
Graduation Credit: 2 Electives	#3 and #4 Completer Courses
	Duration: 2 semesters
	Prerequisite: A+ Essentials and A+ Practical Applications
<b>COURSE TITLE:</b>	<b>Imaging for the Web</b>
Course Numbers: <b>170610</b> <b>170620</b>	This course introduces the student to the knowledge base and technical skills for producing digital images for use in web sites and multimedia applications. Areas of study include digital imaging concepts, imaging hardware, imaging applications, and legal and ethical consideration. Students will demonstrate knowledge and technical expertise in creating, capturing, and altering digital images. Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities. This course is recommended as an Elective in the Computer Systems Repair Technology Program of Study.
Grade Level: 10-12	
Graduation Credit: 1 Elective	
	Duration: 2 semesters





**MACHINE TOOL TECHNOLOGY**

**Available Credentials/Clubs: NIMS, OSHA 10, Skills USA**

- Completer Courses:**
- 1. 1903 - Fundamentals of Machine Tool Technology**
  - 2. 1907 - Machine Tool Operations**
  - 3. 1905 - Fundamentals of Machine Processes**
  - 4. 1909 - Metal Trades Processes and Applications**
    - a. 1902 – Machine Tool Technology**

<b>COURSE TITLE:</b>	<b>Fundamentals of Machine Tool Technology/Machine Tool Operations (2 period block)</b>
<b>Course Numbers:</b> <b>190310</b> <b>190720</b>  <b>Grade Level:</b> 11  <b>Graduation Credit:</b> 2 Electives	This class is the first of a two-year program teaching machine tool technology in units of safety, measurement, basic procedures, machine processes, blueprint reading, various types of math that apply to shop processes, and basic computerized machining processes. #1 and #2 Completer Courses  Duration: 2 semesters
<b>COURSE TITLE:</b>	<b>Fundamentals of Machine Processes/Metal Trades Processes and Applications/Machine Tool Technology (3 period block)</b>
<b>Course Numbers:</b> <b>190510</b> <b>190920</b> <b>190210</b> <b>190220</b>  <b>Grade Level:</b> 12  <b>Graduation Credit:</b> 3 Electives	The second year of Machine Tool Technology emphasizes advanced machining processes on manual and computerized machinery. #3 and #4 Completer Courses  Duration: 2 semesters  Prerequisite: Fundamentals of Machine Tool Technology and Machine Tool Operations.

 **WELDING**

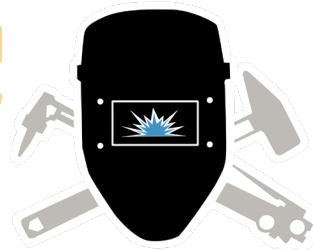
Available Credentials/Clubs: Skills USA, WV State Welding Certificate, OSHA 10

- Completer Courses:**
1. 1862 - Welding I
  2. 1863 - Welding II
  3. 1864 - Welding III
  4. 1865 - Welding IV
    - a. Blueprint Reading and Metallurgy

**Related Electives:** 1. 7627 – Career Exploration

<b>COURSE TITLE:</b>	<b>Welding I/Welding II (2 period block)</b>
Course Numbers: <b>18621X</b> <b>18632X</b>	First of two-year program in welding technology. Units: Intro to welding, oxy-fuel cutting and welding, shielded metal arc welding and gas metal arc welding, and blueprint reading. #1 and #2 Completer Courses
Grade Level: 11	Duration: 2 semesters
Graduation Credit: 2 Electives	
Dual Credit	
<b>COURSE TITLE:</b>	<b>Welding III/Welding IV/Blueprint Reading and Metallurgy (3 period block)</b>
Course Numbers: <b>18643X</b> <b>18654X</b> <b>198310</b> <b>198320</b>	The second year of welding focuses on obtaining a WV State welding certificates on plate and pipe welding using four different welding processes. Additional studies include advanced metallurgy, gas tungsten arc welding, blueprint reading, flux cored, plasma arc and gas metal arc welding. #3 and #4 Completer Courses
Grade Level: 12	Duration: 2 semesters
Graduation Credit: 3 Electives	Prerequisite: Welding I and Welding II
Dual Credit	

**MON-ARC  
WELDING**



## ADDITIONAL COURSES

<b>COURSE TITLE:</b>	<b>Fab Lab</b>
Course Numbers: <b>762010</b> <b>762020</b>	Do you want to use state-of-the-art equipment to design, build and test almost anything? Would you like to develop the technological, problem-solving and hands-on skills desired by employers? If your answer is yes, then this course is for you. In Fab Lab, computer-controlled fabrication technologies such as 3D printers, lasers, CNC routers, vinyl cutters and milling machines will be used to transform a product idea into its tangible form. Students will explore many interrelated career fields, including engineering, science, mathematics, art, graphic design, computer aided design (CAD), electronics, and entrepreneurship. General elective credit.  Duration: 2 semesters
Grade Level: 9-12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Special Programs Peer Tutor</b>
Course Numbers: <b>763199</b>	Students who take this course will help students with special needs complete daily classroom activities while increasing socialization and interaction with peers.  Duration: 1 semester
Grade Level: 10-12	
Graduation Credit: Non-credit	
<b>COURSE TITLE:</b>	<b>Reading Support</b>
Course Numbers: <b>481010</b> <b>481020</b>	This course is designed to improve student's reading ability. Emphasis and practice is provided using scientifically researched based reading programs. The goal of this course is to provide students with multiple strategies in the five areas of reading through small group instruction and hands on activities. Students will be exposed to nonfiction stories, fiction stories, and informational texts covering all the content areas.  Duration: 2 semesters
Grade Level: 9-12	
Graduation Credit: 1 Elective	
<b>COURSE TITLE:</b>	<b>Robotics I/II/III/IV</b>
Course Numbers: <b>186610/20</b> <b>186710/20</b> <b>186810/20</b> <b>186910/20</b>	REC 1 includes an introduction to Robotics and to VEX programming. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts.  Duration: 2 semesters
Grade Level: 9-12	
Graduation Credit: 1 Elective	

**“We do not remember days, we remember moments.”**

**-Cesare Pavese  
Italian Poet/ Author**

# John Marshall Career Technical Education Application

Return to: John Marshall  
Counseling Office  
Date Returned \_\_\_\_\_

**JOHN MARSHALL HIGH SCHOOL  
CAREER TECHNICAL EDUCATION  
SIMULATED WORKPLACE  
STUDENT APPLICATION FORM**

Name (Print) \_\_\_\_\_ Grade \_\_\_\_\_

WVEIS Number \_\_\_\_\_ High School (Circle One) JMHS CHS Uniform (Shirt) Size \_\_\_\_\_

Home Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Student Phone # \_\_\_\_\_ Alternate Number \_\_\_\_\_

Best Number to Reach Parent/Guardian \_\_\_\_\_

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Completer Programs Offered

Blocked Programs  
11th - 2 period block / 12th - 3 period block

COLLISION REPAIR TECHNOLOGY	BROADCASTING TECHNOLOGY
AUTOMOTIVE TECHNOLOGY	CAREERS IN EDUCATION
WELDING TECHNOLOGY	COMPUTER AIDED DRAFTING & DESIGN
MACHINE TOOL TECHNOLOGY	PROSTART RESTAURANT MANAGEMENT
COMPUTER SYSTEMS TECHNOLOGY	THERAPEUTIC SERVICES

*Indicate in Which Programs You Wish to Enroll (Please List Your Top 2 Choices)  
You will only be selected for one Blocked Program.*

Choice 1: \_\_\_\_\_ Choice 2: \_\_\_\_\_

Non-Blocked Programs Offered

ACCOUNTING & FINANCE	PLANT SYSTEMS
MANAGEMENT & ADMINISTRATIVE SUPPORT	PLTW - PRE-ENGINEERING
MARKETING MANAGEMENT	PLTW - COMPUTER SCIENCE
CONSTRUCTION SYSTEMS	PLTW - BIOMEDICAL SCIENCE
HOME MECHANICS	

Choice 1: \_\_\_\_\_ Choice 2: \_\_\_\_\_

You may select both blocked and non-blocked programs if you wish, you are not required to choose a program from each type.  
Find information about all of these programs and courses in the Course Description Booklet at <http://jmhs.mars.k12.wv.us>

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Student Signature: \_\_\_\_\_ Date \_\_\_\_\_

Non-Discrimination: This Company prohibits discrimination against or harassment of any person employed by or seeking employment with the CTE program because of race, creed, religion, or national origin or because of age, physical or mental disability, or sex.

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**(For School Use Only)**

Student GPA \_\_\_\_\_ Days Absent in Current Year \_\_\_\_\_ Discipline Referrals \_\_\_\_\_

## JMHS SCHEDULE PLANNER

	<b>CORE CLASSES</b>	<b>1<sup>st</sup> Semester</b>	<b>2<sup>nd</sup> Semester</b>
<b>1</b>	<b>English/Lang. Arts</b>		
<b>2</b>	<b>Mathematics</b>		
<b>3</b>	<b>Science</b>		
<b>4</b>	<b>Social Studies</b>		
	<b>OTHER REQUIREMENTS</b>		
<b>1</b>	<b>Fine Arts</b>		
<b>2</b>	<b>Physical Education</b>		
<b>3</b>	<b>Health</b>		
<b>4</b>	<b>Personal Finance</b>		
	<b>ELECTIVES</b>		
<b>1</b>	<b>#1 Choice</b>		
<b>2</b>	<b>#2 Choice</b>		
<b>3</b>	<b>#3 Choice</b>		
<b>4</b>	<b>#4 Choice</b>		
<b>5</b>	<b>#5 Choice</b>		
<b>6</b>	<b>#6 Choice</b>		
	<b>Total Number of Classes</b>		
	<b>Total Number of Credits</b>		