TABLE OF CONTENTS

Pages

Introduction/Principal's Note....3
Administrative Staff/Counseling Staff....4
Early Entrance....5
Dual Credit at JMHS/WVNCC....7
Level Up Pathways....8
Embedded Credits....9
Making Course Selections/Advanced Placement Overview....11
Advanced Placement Courses/AP Scholar Awards....13
Advanced Placement Capstone....14
Honors/Career Tech/PLTW Courses/PROMISE....15
Promotion/Virtual School....17
Credit Recovery/Grading....18
West Virginia State Graduation Requirements....19
Instructors by Department....20

CORE COURSES

English....21
Mathematics....28
Science....36
Social Studies....46
Health/Physical Education....55
Fine Arts (Performing and Visual)....59
Foreign Language....66

CAREER AND TECHNICAL EDUCATION COURSES

CTE Elective Courses....67
Agricultural Sciences – Agribusiness....70
Automotive Technology....73
Biomedical Science....74
Broadcasting Technology....76

Building and Maintenance Operations....79
Business Enterprise....81
Careers in Education....83
Carpentry....85
Collision Repair Technology....87
Computer Aided Drafting & Design....89
Computer Science....91
Computer System Repair Technology....93
Machine Tool Technology....95
Marketing Management....96
Pre-Engineering....98
ProStart Restaurant Management....101
Therapeutic Services....103
Welding Technology....105
Additional Courses....107
Appendix A: AP Course Equivalency....110
Appendix B: Dual Credit Summary....116

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.

ADMINISTRATION

JMHS Administrative Staff	Role	Phone	Email
Jason Marling	Head Principal	304-843-4444 Ext. 218	jmarling@k12.wv.us
Gavin Hartle	Assistant Principal, Curriculum	304-843-4444 Ext. 230	jhartle@k12.wv.us
Tim Jones	Assistant Principal, Discipline	304-843-4444 Ext. 353	timothy.jones@k12.wv.us
Kallie Kastrevec	Assistant Principal, Discipline	304-843-4444 Ext. 357	kjkastrevec@k12.wv.us

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
Support Staff			
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 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:

Definitions:

Early Access:

This program allows high school students to enroll in college courses while still in high school. Early access courses include Dual Credit courses, Level Up Programs, and Concurrent courses. These courses are typically offered to students at a reduced tuition rate.

Dual Credit:

Dual credit courses offer students a unique opportunity to earn both high school and college credit simultaneously, giving them a head start on their postsecondary education while meeting high school graduation requirements. Depending on the course, the class may be available in person at John Marshall, or online through one of our partner colleges. If a student is participating in the Level up program, and their dual credit class is a part of their designated pathway, then the dual credit course is taken at no cost to the student. Otherwise, dual credit courses are typically offered at a reduced rate.

Level-Up:

Level-Up WV is West Virginia's first state-funded dual enrollment pilot program that covers the costs of approved dual enrollment courses offered by the state's colleges and universities that are tied to some of West Virginia's most in-demand careers. These courses will meet both high school graduation requirements and requirements for program completion at the institution. At John Marshall, the following CTE pathways have been approved for the Level-Up program:

- Welding
- Nursing
- Careers in Education
- Business

Concurrent Courses:

Concurrent college courses allow high school students to take college credit-bearing courses while still in high school. These courses are intended to obtain college credit only. They are not dual credit courses, and have no bearing on high school graduation requirements or GPA. These courses are taken outside of the typical school day online or in person through the partner college. Concurrent class are offered at a reduced tuition rate at a per credit hour cost.

Early Access		
Dual Credit: • In person at John Marshall or online through participating school • Earn both high school and college credit • Free (if Level Up) or reduced rate per credit hour	**Level Up Pathways:** • Credit hours are free for students enrolled in an approved pathway • Courses taken in person at John Marshall • Credits earned for high school and college	**Concurrent Credit:** • Taken online or in person at college or university • Courses offered at a reduced rate to students • Credits earned are for college only. No high school credit given for concurrent courses.

DUAL CREDIT AT JMHS:

The following courses are available in person at John Marshall through partnerships with the following colleges and universities:

WVU
- Biology

WVNCC
- Psychology
- Sociology
- College Algebra
- Technical Writing
- Technical Math

WLU
- Business Management
- Speech
- Civics
- English 101 and 102
- Microbiology
- Spanish 3

DUAL CREDIT AT WVNCC:

Additional early entrance classes can be taken at WVNCC after the completion of 10th 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

LEVEL UP PATHWAYS AT JMHS:

Dual enrollment in Level Up Pathways 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 Level Up Pathways are available through a Memorandum of Understanding between Marshall County Schools and WVNCC:

WVNCC/MCS Dual Enrollment Pathways					
WVEIS Code	**WVEIS Title**	**HS Credit**	**WVNCC Code**	**WVNCC Title**	**College Credit**
Child Development & Teacher Education					
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
Health Care					
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
Business					
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
Construction & Manufacturing					
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.

Approved List of Career Technical Education (CTE) Programs of Study

Transition English Language Arts for Seniors (ELA)-4013:

- Allied Health Sciences (HE0715)
- Biomedical Science (HE0780)
- Early Childhood Classroom Assistant Teacher (ED1320)
- Law and Public Safety (LA1020)
- Marketing Management (MK0420)
- Pre-Cosmetology (HU2311)
- ProStart Restaurant Management (HO1010)
- Therapeutic Services (HE0723)

Transition Mathematics for Seniors-3052:

- Automotive Technology (TR1620)
- Building Maintenance and Operations (AR1800)
- Carpentry (AR1820)
- Collision Repair Technology (TR1670)
- Computer Aided Drafting and Design (AR1720)
- Electrical Technician (AR1760)
- Emergency and Firefighting Management Services (LA2200)
- Energy, Power and Engineered Systems (Advanced Careers) (ST2175)
- HVAC Technician (AR1600)
- Industrial Equipment Maintenance (MA1870)
- Integrated Production Technologies (MA2235) - *Expires SY26-27*
- Machine Tool Technology (MA1900)
- Manufacturing Production and Design (MA1910)
- Masonry (AR1910)
- Plumbing (AR2140)
- Power Equipment Systems (TR1960)
- Robotics (MA1630)
- Welding (MA1980)

Computer Science and Mathematics-3161:

- Coding, App, and Game Design (IT1442) - *Expires SY26-27*

Advanced Mathematical Modeling-3025:

- Pre-Engineering (ST2460)

Approved List of CTE Fulfillment Credits

CTE Courses - Fulfills 3rd Science Credit:

- Allied Health Sciences (Courses I, II, and III)
- AC Energy and Power (Courses I-IV)
- CASE Animal and Plant Biotechnology
- CASE Principles of Agriculture Science-Plant
- Principles of Engineering
- Human Body Systems
- Natural Resources Management
- Therapeutic Services (Courses I, II, and III)
- CASE Food Science and Safety

CTE Courses - Fulfills 1 Personalized Social Studies Credit:

- JROTC (Courses I-IV)

  Note: Students who take U.S. Studies must utilize Contemporary Studies as their Personalized Credit unless they are utilizing JROTC Courses I-IV.

CTE Courses - Fulfills 1 Physical Education Credit:

- JROTC (Courses I and II)

CTE Courses - Fulfills 1 Art Credit:

- Fundamentals of Illustration (1851)
- Fundamentals of Graphic Design (1857)
- Illustration (1861)
- Graphic Design Applications (1859)
- Ornamental Metal Work (1982)
- Digital Imaging/Multimedia I (1431)
- Drafting Techniques (1727)
- Floriculture (0213)
- Digital Photography (1515)
- Millwork or Cabinet Making (2126 or 2127 or 2128 or 2129)

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.

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

AP COURSES AVAILABLE AT JOHN MARSHALL

• **AP 2-D Art and Design**	• **AP 3-D Art and Design**	• **AP Calculus AB**
• **AP Calculus BC**	• **AP Chemistry**	• **AP Comparative Government and Politics**
• **AP Computer Science A**	• **AP Computer Science**	• **AP English Literature and Composition**
• **AP English Language and Composition**	• **AP European History**	• **AP Human Geography**
• **AP Physics 1**	• **AP Physics 2**	• **AP Precalculus**
• **AP Psychology**	• **AP Research**	• **AP Seminar**
• **AP Statistics**	• **AP United States Government and Politics**	• **AP United States History**

AP SCHOLAR AWARDS

Award	Criteria
AP Scholar	Granted to students who receive scores of 3 or higher on three or more AP exams.
AP Scholar with Honor	Granted to students who receive an average score of at least 3.25 on all AP Exams taken, **and** scores or 3 or higher on four or more of these exams.
AP Scholar with Distinction	Granted to students who receive an average score of at least 3.5 on all AP Exams taken, **and** scores of 3 or higher on five or more of these exams.

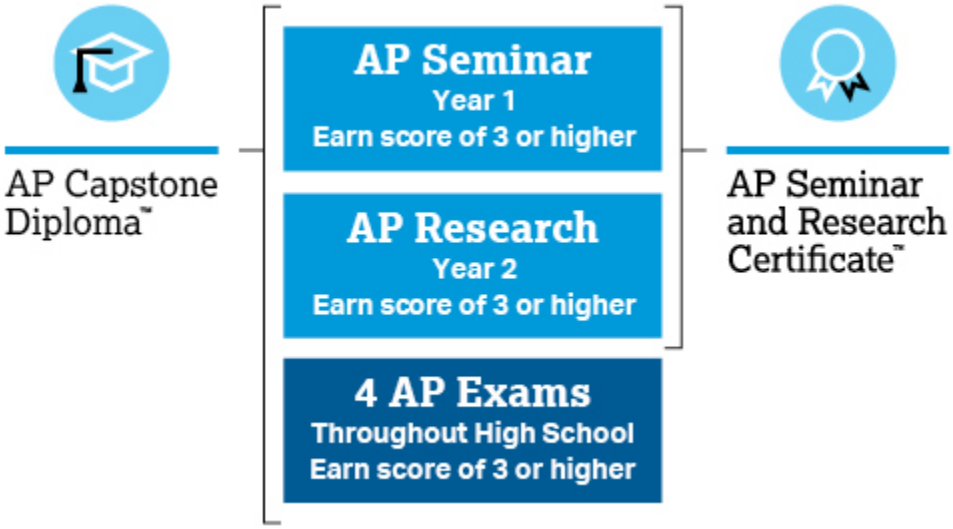
AP CAPSTONE

John Marshall offers the AP Capstone program, which allows students to earn either the AP Capstone Diploma™ or the AP Seminar and Research Certificate™.

AP Capstone Awards are listed on AP score reports, and students who earn the diploma or certificate can view and print their award certificate from their online account. Awards are also included on any AP score report sent to colleges. Here are the requirements to earn an AP Capstone award:

- The AP Capstone Diploma is granted to students who earn scores of 3 or higher in AP Seminar and AP Research and on 4 additional AP Exams of their choosing.
- The AP Seminar and Research Certificate is granted to students who earn scores of 3 or higher in both AP Seminar and AP Research.

This diagram illustrates the requirements of each award.



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-Bade Reading and Writing.

***Consult 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 (10th grade) a student must earn a minimum of six (6) cumulative credits in his freshman year (9th grade).

- To be considered a junior (11th grade) a student must earn a minimum of twelve (12) cumulative credits from his freshman and sophomore (10th grade) years.

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

Marshall County Schools Graduation Requirements

24 Total Credits Required for Graduation	
Core Requirements (19 credits)	
English Language Arts	**4 credits**
Mathematics	**4 credits**
Science	**3 credits**
Social Studies	**4 credits**
Physical Education	**1 credit**
Health	**1 credit**
The Arts	**1 credit**
Personal Finance	**1 credit**
Personalized Education Plan (Electives)	**5 credits**

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.

Instructors by Department

English Department:

Mrs. Jonna Kuskey (Department Chair)
Mrs. Kylee Benson
Mrs. Andrea Burke
Mr. Jason George
Ms. Lisa Kiss
Mrs. Josie Mentzer
Mrs. Marcie Robbins
Mr. Thomas Romick
Ms. Timmi Snyder
Mrs. Brandy Walton
Mrs. Monica Will
Mrs. Jennifer Yates

Math Department:

Mrs. Carla Whitlatch (Department Chair)
Ms. Julie Barack
Mr. Robert Bonar
Mrs. Molly Eikleberry
Mrs. Jayne Frye
Mrs. Jonette Holmes
Mr. Alex Kent
Ms. Angela Kidd
Mr. Brock Melko
Mr. Brian Noble
Ms. Sue Sadoski
Mrs. Anna Stipetich

Science Department:

Mrs. Kathleen Loughman (Department Chair)
Mr. Eddie Anderson
Mr. Ryan Asbury
Mrs. Rachel Bandy
Mrs. Mary Ann Burke
Mrs. Alexa Bushovisky
Mrs. Christina Gary
Mr. Ted Hanket
Mrs. Rachel Hensler
Mr. Arthur Kaste
Mrs. Amy Kent
Dr. Jamie Pettit

Social Studies Department:

Mr. David Parsons (Department Chair)
Mr. Timothy Garrison
Mr. Joshua Gary
Mrs. Erin Parsons
Mr. Lance Philipps
Mr. Keith Riggle
Mrs. Tiffany Robbins
Mrs. Jessica Romick
Mr. Cole Simms
Mr. Joe Sturgill
Mr. Charles Tennant
Mr. Cliff Wolodkin

Physical Education / Health Department:

Mr. Joel Sansone (Department Chair)
Mr. Richard Goodrich
Mr. Brad Livingston
Mr. Thomas Salkovick
Mr. Brian Smith
Mrs. Ashley Taylor
Mr. Griffin Yocum

Fine Arts Department:

Mrs. Tracey Filben (Department Chair)
Mrs. Ashley Cottrill
Ms. Elaina DePetro
Mr. Justin Jones
Mr. David Scherrick
Ms. Olivia Snider

Foreign Language Department:

Mrs. Michelle Bieniek
Mrs. Carri Fitzpatrick
Dr. Jesus Marin

Special Education Department:

Mrs. Kelli Murphy (Department Chair)
Mr. Samuel Ames
Ms. Jessica Bruce
Mr. Charles Bursee
Mrs. Kara Bursee
Mrs. Lori Caldwell
Mrs. Kelli Gonot
Mrs. Kara Groves
Mr. Gus Hanson
Mrs. Becky Kaemmerling
Mrs. Michelle Wells

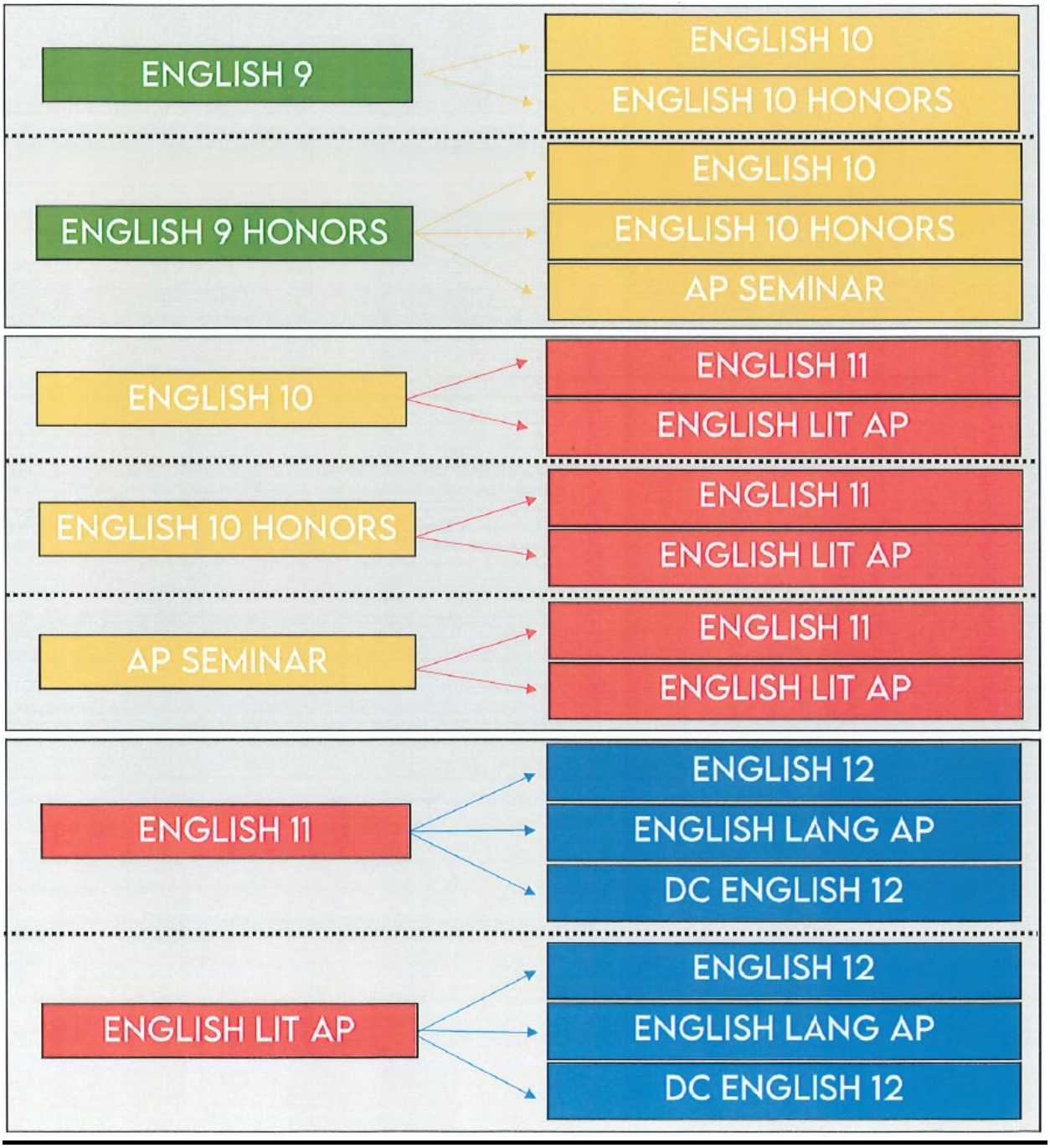
CTE Department:

Mr. Jayson Summers (Department Chair)
Mrs. Josette Albert
Mr. Matthew Ali
Mrs. Peyton Bertram
Mr. Mark Cisar
Mrs. Susanne Cubick
Mr. Harold Francis
Mr. Andrew Gaudino
Mr. Joseph Kuskey
Mrs. Carly McElhaney
Mr. Todd Morris
Mrs. Megan Pintus
Mr. Jared Ulrich
Mrs. Lora Vannest
Mr. Joseph Wendt
Mr. Terry Whitlatch
Mrs. Katherine Williams

CORE COURSES

ENGLISH

English Course Progression



English Courses

English Language Arts 9

Course Numbers: 400910 (Semester 1), 400920 (Semester 2)
Grade Level: 9
Graduation Credit: 1 Language Arts Credit
Duration: 2 Semesters

Course Description:
This course emphasizes the West Virginia Next Generation Content Standards and Objectives (CSOs) in reading, writing, grammar, speaking, and technology. Special focus is placed on developing writing skills across a variety of forms and purposes. Students will engage with literary and informational texts, build vocabulary, and practice effective communication in both written and spoken formats.

English Language Arts 9 Honors

Course Numbers: 40091H (Semester 1), 40092H (Semester 2)
Grade Level: 9
Graduation Credit: 1 Language Arts Credit
Duration: 2 Semesters
Prerequisite: Successful completion of both semesters of English Language Arts 8, teacher recommendation, and consideration of standardized test scores and academic performance.

Course Description:
This honors-level course includes all components of English Language Arts 9, with increased rigor and depth. Students will be expected to demonstrate higher-level thinking through formal writing assignments, literary analysis, and critical evaluation of text structure and elements. The course is designed for students who show advanced proficiency and are prepared for an accelerated pace and increased expectations.

English Language Arts 10

Course Numbers: 401010 (Semester 1), 401020 (Semester 2)
Grade Level: 10
Graduation Credit: 1 Language Arts Credit
Duration: 2 Semesters

Course Description:
Aligned with the West Virginia Next Generation Content Standards and Objectives (CSOs), this course surveys a range of fiction and non-fiction genres. Emphasis is placed on major literary works, significant authors, and historical literary context. Students are required to complete a research paper/project using MLA format. All standard content, including grammar and mechanical skills, is covered. Out-of-class reading and writing assignments are required.

English Language Arts 10 Honors

Course Numbers: 40101H (Semester 1), 40102H (Semester 2)
Grade Level: 10
Graduation Credit: 1 Language Arts Credit
Duration: 2 Semesters
Prerequisite: Successful completion of both semesters of English Language Arts 9. Standardized test scores and grades will be considered to determine proficiency for entry.

Course Description:
This honors-level course follows the English 10 curriculum with added academic rigor. Students explore a variety of fiction and non-fiction genres, focusing on major literary works, authors, and historical background. A research project using MLA format is required. Grammar and mechanical skills are reinforced. As a preparatory course for AP English Language Arts 11, summer reading is required to enrich students' literary background. Out-of-class reading and writing are also required.

English Language Arts 11

Course Numbers: 401110 (Semester 1), 401120 (Semester 2)
Grade Level: 11
Graduation Credit: 1 Language Arts Credit
Duration: 2 Semesters

Course Description:
This course surveys English literature from the Anglo-Saxon era to the present, emphasizing major literary works, authors, and historical context. Students will complete a research paper or project, and grammar and mechanics will be reviewed throughout the year. The curriculum follows the Next Generation CSOs and includes both reading and writing assignments.

English Literature and Composition AP

Course Numbers: 40421A (Semester 1), 40422A (Semester 2)
Grade Level: 11
Graduation Credit: 1 Language Arts Credit
Duration: 2 Semesters
Prerequisite: Students 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.

Course Description:
AP English Literature and Composition is a college-level course focused on literary analysis of fiction, poetry, and drama. Students develop their skills in reading, analyzing, and writing about imaginative literature. Topics include character, setting, structure, figurative language, and theme. Writing assignments include expository, analytical, and argumentative essays.

Successful completion of the AP exam may earn students up to six hours of college credit or honors recognition. Students must be prepared for college-level content, discussions, and writing. Alternate assignments will not be given. This course requires regular out-of-class work and strict adherence to deadlines.

English Language Arts 12

Course Numbers: 401210 (Semester 1), 401220 (Semester 2)
Grade Level: 12
Graduation Credit: 1 Language Arts Credit
Duration: 2 Semesters

Course Description:
This course prepares students for post-secondary education by focusing on reading and writing non-fiction prose, including narrative, persuasive, and expository essays. Students will analyze written and visual sources, synthesize materials, and create multimedia presentations. Research writing using both MLA and APA formats is taught. All content standards are addressed, and out-of-class assignments are required.

English Language and Composition AP

Course Numbers: 40411A (Semester 1), 40412A (Semester 2)
Grade Level: 12
Graduation Credit: 1 Language Arts Credit
Duration: 2 Semesters
Prerequisite: Must have a "B" or better average in English Language Arts 11. Standardized test scores and grades will be considered to determine proficiency. It is recommended that students take AP Civics and Government concurrently.

Course Description:
This college-level course follows the AP English Language and Composition curriculum, emphasizing rhetoric and argumentative writing. Students read and analyze non-fiction texts across disciplines and historical contexts, and write evidence-based essays. The course includes a research component and multiple stages of drafting.

Successful passage of the AP exam can result in up to six hours of college credit. Students are expected to handle complex topics and texts. Alternate assignments are not provided. The course includes summer work and consistent out-of-class reading and writing.

English Language and Composition Dual Credit

Course Numbers: 40121X (Semester 1), 40122X (Semester 2)
Grade Level: 12
Graduation Credit: 1 Language Arts Credit
College Credit: West Liberty University – ENG 101 and ENG 102
Duration: 2 Semesters
Prerequisite: Minimum 3.0 GPA and a score of at least 510 on the SAT ELA subtest

Course Description:
This dual credit course introduces college-level expository writing and rhetorical strategies such as definition and comparison/contrast. Students learn proper integration of sources through quotation, paraphrase, and summary, while reviewing grammar and mechanics. In the second semester, the course emphasizes persuasive and argumentative writing and includes a formal research project with multiple drafts.

Students are expected to engage with mature and diverse topics without the option for alternate assignments. College-level expectations apply, including strict deadlines and regular out-of-class work.

English Electives

Creative Writing I (Prose) & II (Poetry)

Course Numbers: 402200 (Prose), 402300 (Poetry)
Grade Level: 9-12
Graduation Credit: ½ Elective Credit
Duration: 1 Semester

Course Description:
This course offers students the opportunity to develop personal writing skills through creative self-expression. Students will explore and write various forms of prose and poetry, including exposition, short stories, and lyrical pieces. Emphasis is placed on developing individual style and voice.

Mythology

Course Numbers: 413610 (Semester 1), 413620 (Semester 2)
Grade Level: 11-12
Graduation Credit: 1 Elective Credit
Duration: 2 Semesters

Course Description:
Students will explore Greek, Norse, and Arthurian legends and myths. Emphasis is placed on how myths influence thought, literature, language, and culture in Western civilization. The course involves reading, analysis, and discussion of foundational stories.
Note: Students who are credit deficient in English will not be accepted.

Speech / Oral Communication

Course Number: 407600
Grade Level: 10-12
Graduation Credit: ½ Elective Credit
Duration: 1 Semester
Recommended: Students should be enrolled in or have completed American Literature or 9th Grade English Honors.

Course Description:
This course introduces students to effective verbal and non-verbal communication skills. Units include listening, interviewing, speech writing and delivery, research, group communication, and forensics. Students will develop confidence and presentation skills through various speaking formats.

Speech 2 – Dual Credit

Course Number: 41651X
Grade Level: 11-12
Graduation Credit: ½ Elective Credit
College Credit: WLU – COM 101
Duration: 1 Semester
Prerequisite: Successful completion of Speech / Oral Communication with a "C" or better average.

Course Description:
This college-level course builds on prior speaking skills and prepares students for advanced public speaking. Units include Original Oratory, Parliamentary Procedure, Impromptu Speaking, Dramatic Interpretation, and Prose/Poetry Interpretation. Students will write and deliver speeches in a variety of format.

School Yearbook I, II, III, IV

Course Numbers:

- Yearbook I: 407110 (Sem 1), 407120 (Sem 2)
- Yearbook II: 407210 (Sem 1), 407220 (Sem 2)
- Yearbook III: 407310 (Sem 1), 407320 (Sem 2)
- Yearbook IV: 407410 (Sem 1), 407420 (Sem 2)

- **Grade Level:** 9-12
  Graduation Credit: 1 Elective Credit
  Duration: 2 Semesters
  Prerequisite: Application approval required. Students must have earned a "B" or better in English the previous year. Students who are credit deficient in English will not be accepted.

Course Description:
This course offers students the opportunity to produce the school yearbook from concept to publication. Students engage in journalism, writing, photography, design, marketing, and desktop publishing. Teamwork and project deadlines are emphasized throughout the year.

AP Seminar

Course Numbers: 40451A (Semester 1), 40452A (Semester 2)
Grade Level: 10-12
Graduation Credit: 1 Elective Credit
Duration: 2 Semesters
Prerequisite: Must be a sophomore or junior, have a current GPA of 3.0, and receive recommendations from two current teachers. Standardized test scores may be considered to determine placement.

Course Description:
Students investigate real-world issues from multiple perspectives, using credible sources to develop evidence-based arguments. Coursework includes analyzing texts, conducting research, and delivering written and oral presentations both individually and in groups.
Note: Beginning in the 2025–2026 school year, AP Seminar may fulfill the English 10 Graduation Requirement.

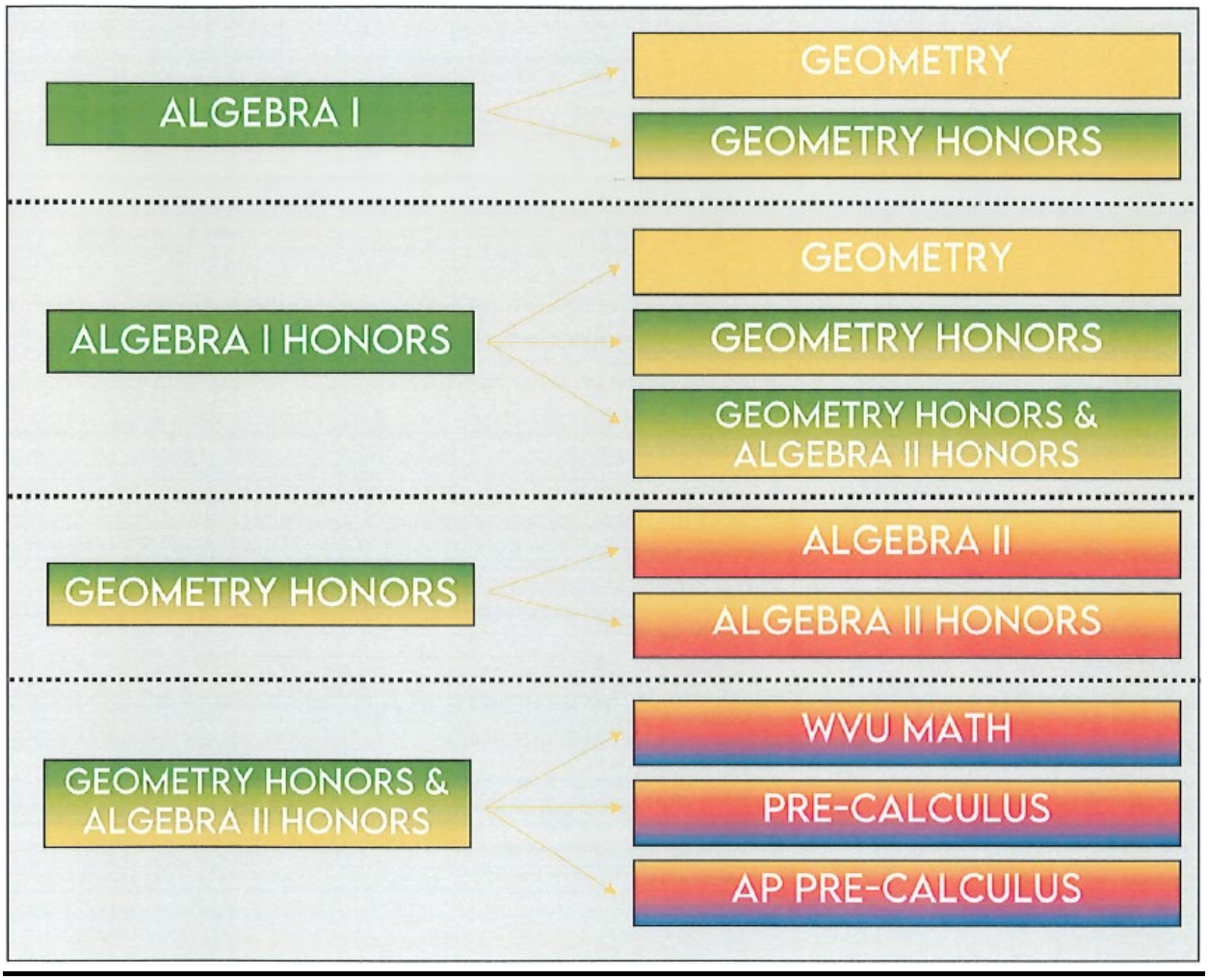
AP Research

Course Numbers: 40461A (Semester 1), 40462A (Semester 2)
Grade Level: 10-12
Graduation Credit: 1 Elective Credit
Duration: 2 Semesters
Prerequisite: Successful completion of AP Seminar.

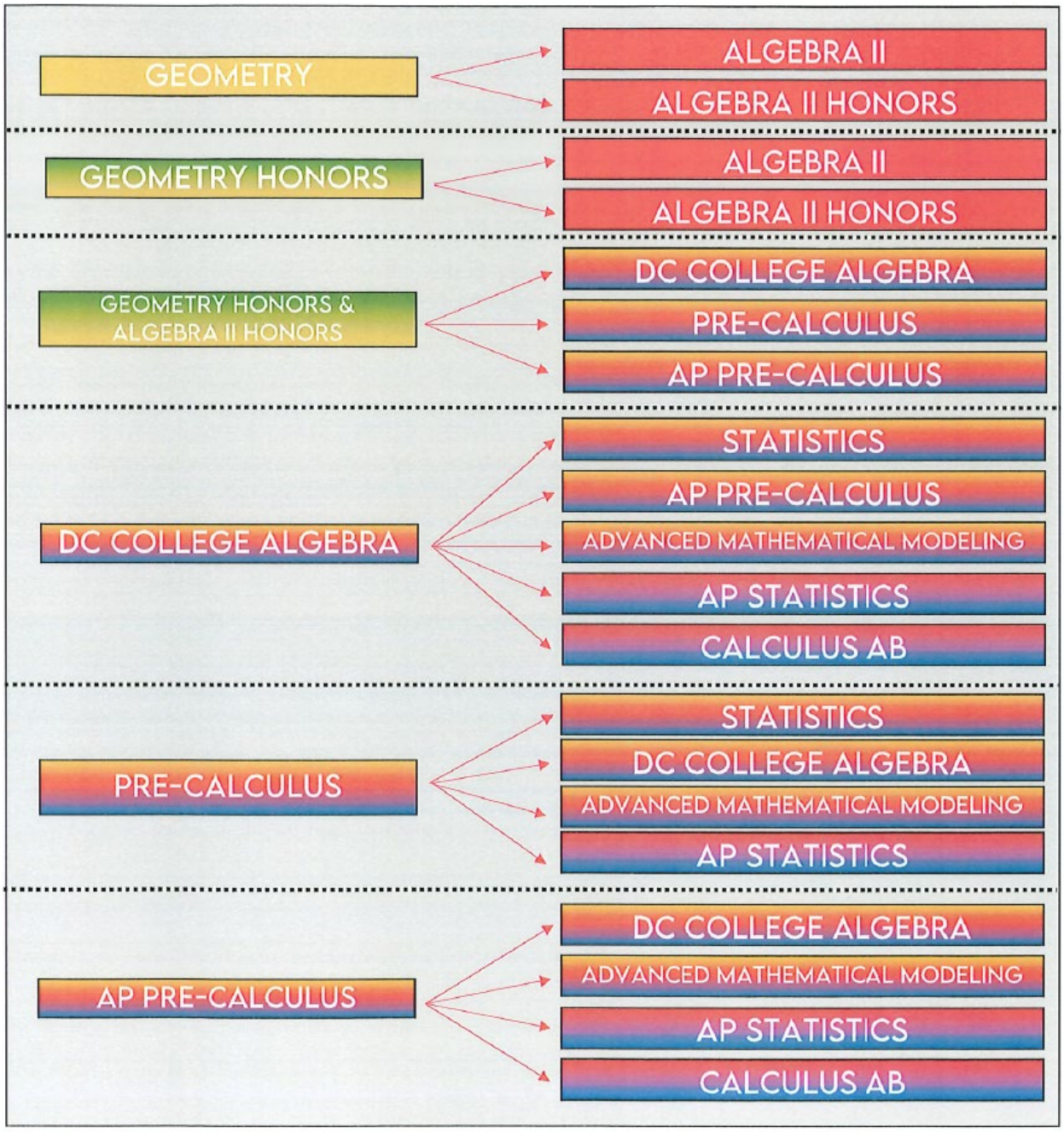
Course Description:
Students design and conduct a year-long research project on a topic of individual interest. Emphasis is placed on research methodology, ethical practices, and academic writing. Students produce a 4,000–5,000-word academic paper and deliver a presentation with oral defense.

MATHEMATICS

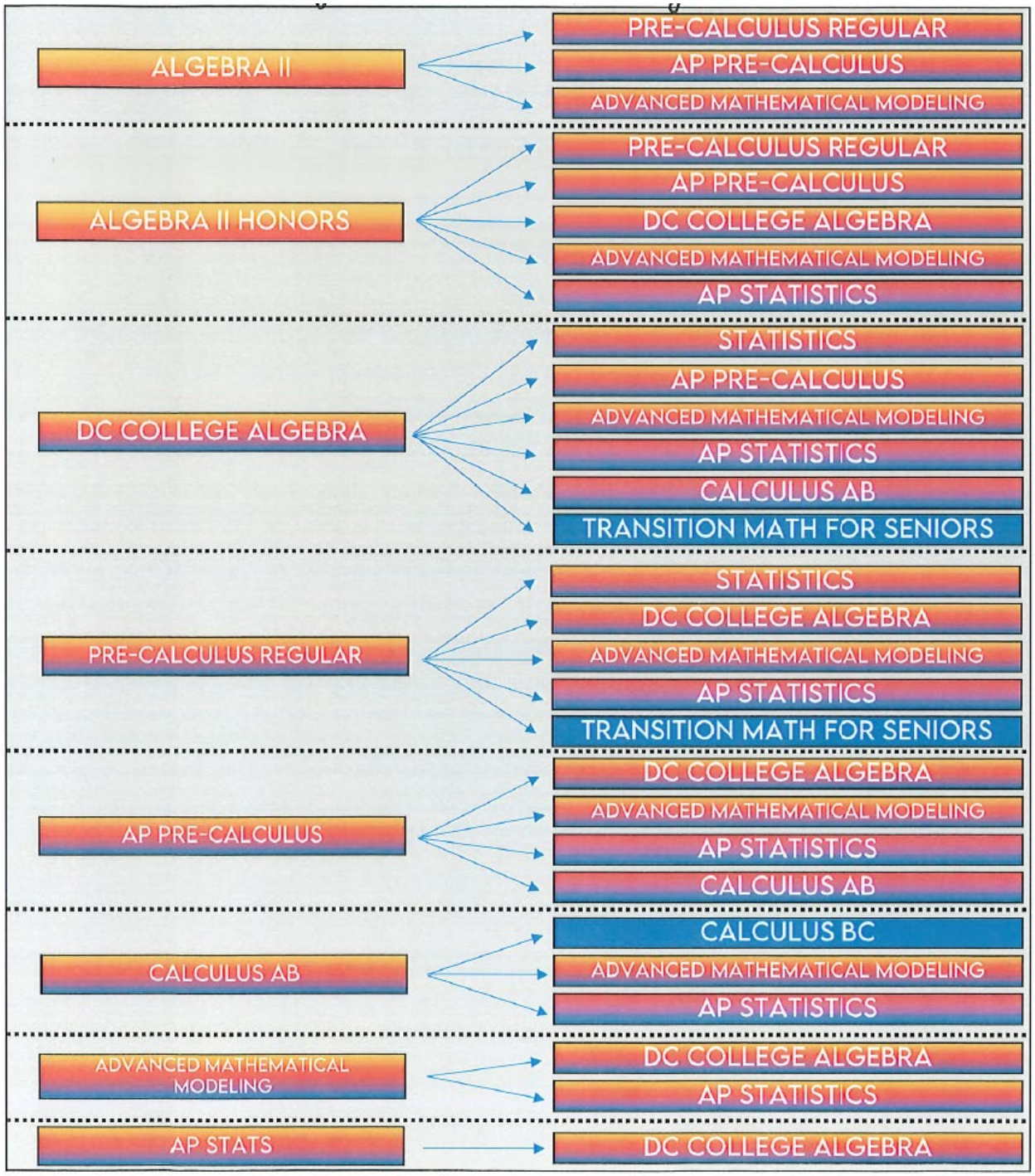
Mathematics Course Progression (9th Grade)



Mathematics Course Progression (10th Grade)



Mathematics Course Progression (11th Grade)



Mathematics Courses

Algebra I

Course Numbers: 306110 (Semester 1), 306120 (Semester 2)
Grade Level: 9
Graduation Credit: 1 Math Credit
Duration: 2 Semesters

Course Description:
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 progression of standards.

Algebra I Honors

Course Numbers: 30611H (Semester 1), 30612H (Semester 2)
Grade Level: 9
Graduation Credit: 1 Math Credit
Duration: 2 Semesters
Prerequisite: Teacher recommendation and a grade of B or above in 8th grade math

Course Description:
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. This course 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 and is targeted to highly motivated students with some understanding of Algebra.

Geometry

Course Numbers: 306210 (Semester 1), 306220 (Semester 2)
Grade Level: 10
Graduation Credit: 1 Math Credit
Duration: 2 Semesters

Course Description:
Students in Geometry will explore more complex geometric situations and deepen their explanations of geometric relationships, moving toward formal mathematical arguments. Transformations are emphasized early in this course, differing from historical approaches. Students will continue developing mathematical proficiency in a developmentally appropriate progression of standards and skill progressions from previous courses.

Geometry Honors

Course Numbers: 30621H (Semester 1), 30622H (Semester 2)
Grade Level: 9–10
Graduation Credit: 1 Math Credit
Duration: 2 Semesters
Prerequisite: Teacher recommendation, passing standardized test scores, and a grade of B or above in Algebra I

Course Description:
Students in Geometry Honors will explore more complex geometric situations and deepen their explanations of geometric relationships, moving toward formal mathematical arguments. Transformations are emphasized early in this course. The curriculum emphasizes critical thinking and real-world problem solving, continuing the mathematical proficiency and skill progression from earlier coursework.

Algebra II

Course Numbers: 306310 (Semester 1), 306320 (Semester 2)
Grade Level: 10–11
Graduation Credit: 1 Math Credit
Duration: 2 Semesters

Course Description:
Students in Algebra II will build on their work with linear, quadratic, and exponential functions and extend their knowledge to include polynomial, rational, and radical functions. They will solve quadratic equations over the complex number set and exponential equations using logarithmic properties. Trigonometric functions will be introduced. Students continue developing mathematical proficiency through a developmentally appropriate progression of standards.

Algebra II Honors

Course Numbers: 30631H (Semester 1), 30632H (Semester 2)
Grade Level: 9–10
Graduation Credit: 1 Math Credit
Duration: 2 Semesters
Prerequisite: Teacher recommendation, passing standardized test scores, and a grade of B or above in Algebra I

Course Description:
This honors-level course builds on linear, quadratic, and exponential functions, and extends to polynomial, rational, and radical functions. Students solve quadratic equations over the set of complex numbers and exponential equations using properties of logarithms. Trigonometric functions are introduced. The course is taught at an accelerated pace and includes additional topics with a strong focus on critical thinking and real-world problem solving.

AP Pre-Calculus

Course Numbers: 30381A (Semester 1), 30382A (Semester 2)
Grade Level: 10–12
Graduation Credit: 1 Math Credit
Duration: 2 Semesters
Prerequisite: Algebra II or Algebra II Honors; student must be on track for Calculus AB.

Course Description:
AP Precalculus prepares students for college-level mathematics and science courses. Students develop deep mastery of modeling and functions and examine real-world scenarios through multiple representations. The course reflects content and skills common to college precalculus and provides a foundation for careers in mathematics, physics, biology, health science, social science, and data science.

Pre-Calculus/Trigonometry

Course Numbers: 306410 (Semester 1), 306420 (Semester 2)
Grade Level: 10–12
Graduation Credit: 1 Math Credit
Duration: 2 Semesters
Prerequisite: Algebra II

Course Description:
Pre-Calculus/Trigonometry extends students' knowledge of functions and equations, including higher-order, exponential, and logarithmic functions. The course prepares students for Calculus and includes foundational trigonometric concepts.

Transition Math for Seniors

Course Numbers: 305210 (Semester 1), 305220 (Semester 2)
Grade Level: 12
Graduation Credit: 1 Math Credit
Duration: 2 Semesters

Course Description:
This course prepares seniors for entry-level, credit-bearing liberal studies mathematics courses in college. Focus areas include numeracy, problem-solving skills, algebra, geometry, and introductory trigonometry. Emphasis is placed on strengthening quantitative literacy.

College Algebra III (Dual Credit)

Course Numbers: 30511X (Semester 1), 30512X (Semester 2)
Grade Level: 10–12

Graduation Credit: 1 Math Credit

College Credit: WVNCC MATH 108 (3 college credits)
Duration: 2 Semesters
Prerequisite: Overall 3.0 GPA; "C" or better in Algebra I, Geometry, and Algebra II; passing grade on WVU placement test

Course Description:
College Algebra III is a dual-credit course worth 3 credits at WVNCC. This is a semester course at JMHS, following WVU's academic calendar. Marshall County provides the textbook; students are responsible for WVU class fees.

Advanced Mathematical Modeling

Course Numbers: 302510 (Semester 1), 302520 (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Math Credit
Duration: 2 Semesters

Course Description:
This course expands on algebra and geometry foundations through experiences with statistical analysis, probability, mathematical decision-making in finance, and geometric modeling. Students utilize multiple representations, real-world applications, and problem-solving strategies. Technology and communication skills are emphasized.

Applied Statistics

Course Numbers: 302810 (Semester 1), 302820 (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Math Credit
Duration: 2 Semesters
Prerequisite: Algebra I and Geometry

Course Description:
Applied Statistics provides students with experience in statistical inquiry and simulation. Students formulate and investigate statistical questions using real data, analyze results through graphical and numerical methods, and interpret findings. Technology and modeling are integrated throughout.

Statistics AP

Course Numbers: 30331A (Semester 1), 30332A (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Math Credit
Duration: 2 Semesters
Prerequisite: Algebra II Honors

Course Description:
This college-level course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Topics include exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, and writing to build conceptual understanding.

AP Calculus AB

Course Numbers: 30311A (Semester 1), 30312A (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Math Credit
Duration: 2 Semesters
Prerequisite: Pre-Calculus/Trigonometry Honors

Course Description:
This course covers differential and integral calculus, including polynomial, exponential, logarithmic, and trigonometric functions. Students should expect 1 to 1.5 hours of homework per night. The primary goal is to prepare students for the AP Calculus AB Exam, with the opportunity to earn three college credits.

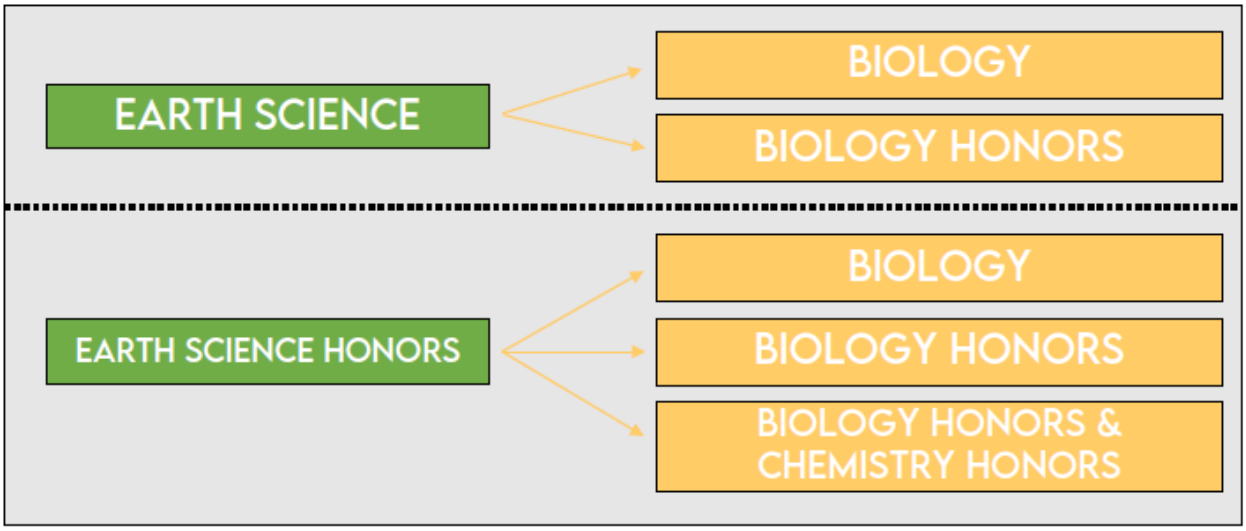
AP Calculus BC

Course Numbers: 30321A (Semester 1), 30322A (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Math Credit
Duration: 2 Semesters
Prerequisite: AP Calculus AB

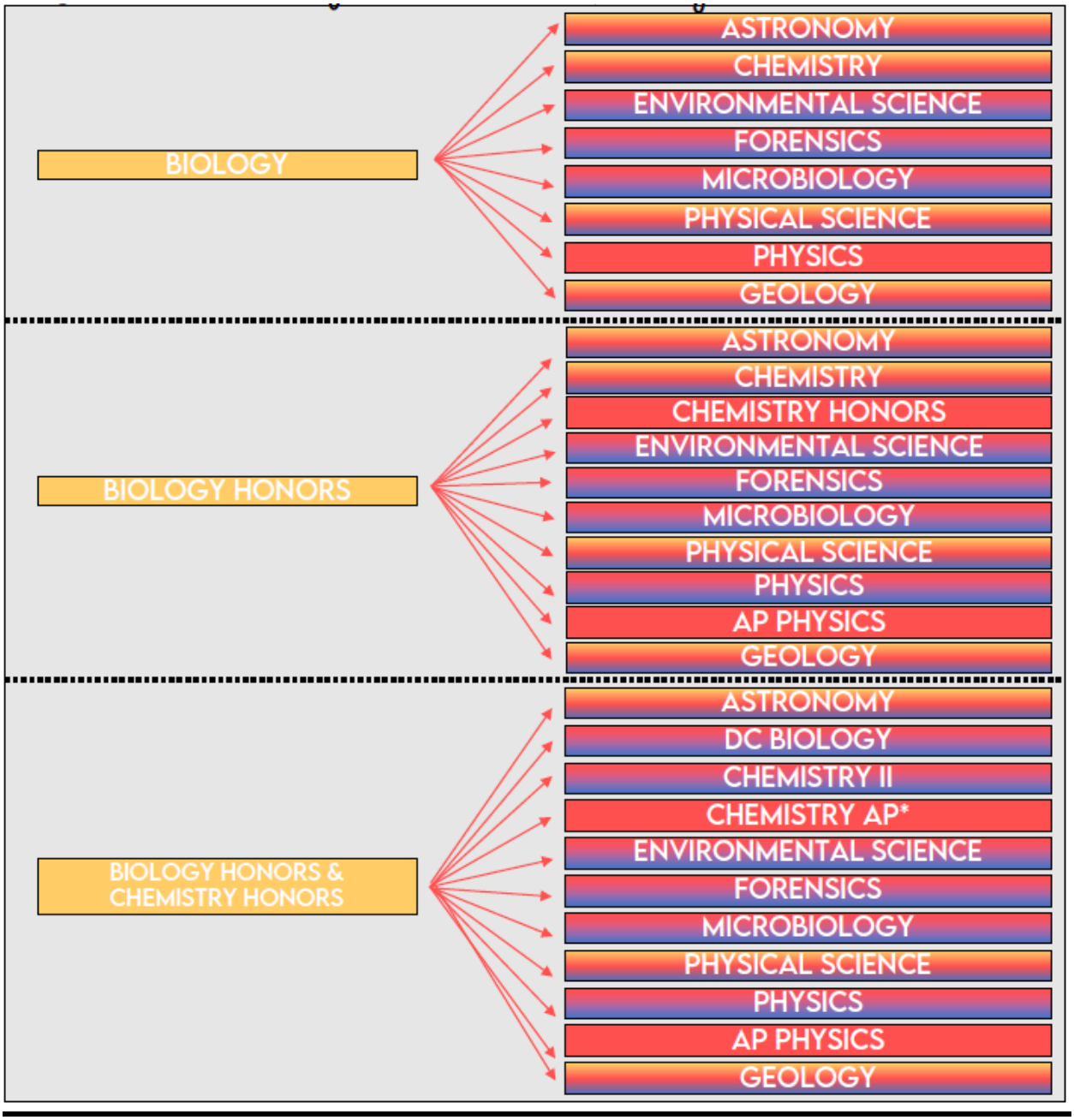
Course Description:
AP Calculus BC extends AB topics and includes arc length, advanced integration techniques, improper integrals, indeterminate forms, and infinite series (Taylor, Maclaurin, Power). It also covers parametric equations, polar coordinates, and vector-valued functions. Homework is 1 to 1.5 hours per night. Students may earn up to six college credits through the AP Exam.

SCIENCE

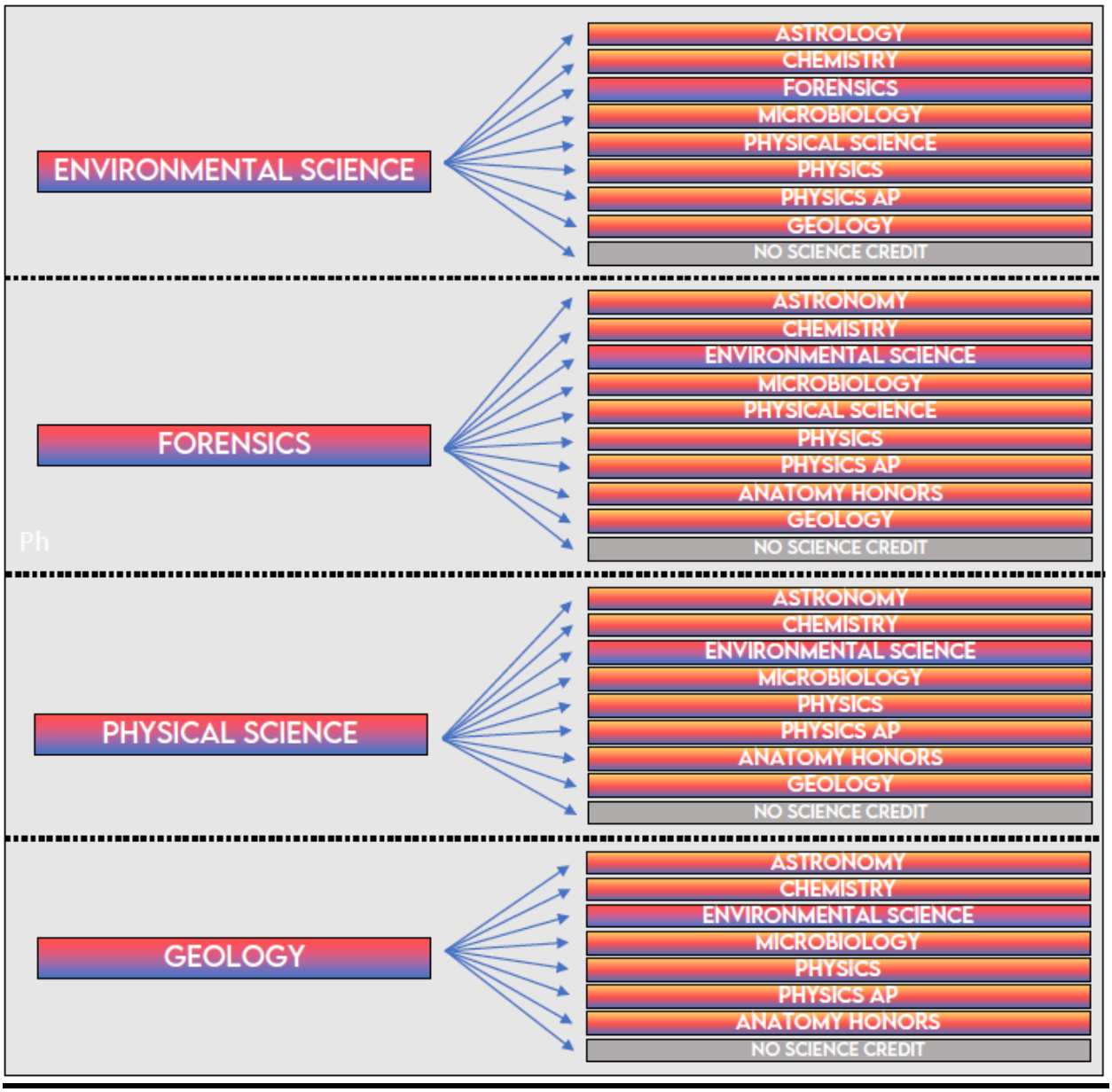
Science Course Progression (9th Grade)



Science Course Progression (10th Grade)



Science Course Progression (11th Grade)



Science Courses

Earth and Space Science

Course Numbers: 620110 (Semester 1), 620120 (Semester 2)
Grade Level: 9
Graduation Credit: 1 Science Credit
Duration: 2 Semesters

Course Description:
This required 9th-grade lab science course focuses on five major topics: Space Systems, History of Earth, Earth's Systems, Weather and Climate, and Human Sustainability. Students use engineering and technology concepts to design solutions to real-world challenges. Emphasis is placed on scientific practices including modeling, investigations, data analysis, computational thinking, and problem-solving. Students engage in active inquiry, hands-on activities, and laboratory work to develop conceptual understanding and scientific skills.

Earth and Space Science Honors

Course Numbers: 62011H (Semester 1), 62012H (Semester 2)
Grade Level: 9
Graduation Credit: 1 Science Credit
Duration: 2 Semesters

Course Description:
This honors-level version of Earth and Space Science covers the same five core topics but in greater depth. Students engage in more advanced investigations and conceptual analysis while applying engineering and scientific practices. Emphasis is placed on problem-solving, data interpretation, model development, and real-world applications. Designed for high-achieving students, this course challenges learners with deeper content exploration and more rigorous expectations.

Biology

Course Numbers: 602110 (Semester 1), 602120 (Semester 2)
Grade Level: 10
Graduation Credit: 1 Science Credit
Duration: 2 Semesters

Course Description:
A required 10th-grade lab science introducing students to life sciences. Topics include Structure and Function, Inheritance and Variation of Traits, Matter and Energy in Organisms and Ecosystems, Interdependent Relationships in Ecosystems, and Natural Selection and Evolution. Students apply engineering and technology concepts, conduct hands-on investigations, and develop research and lab skills through active inquiry.

Biology Honors

Course Numbers: 60211H (Semester 1), 60212H (Semester 2)
Grade Level: 10
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: Teacher recommendation required

Course Description:
An in-depth honors-level study of biology topics including genetics, evolution, ecosystems, and energy transfer. Students engage in complex lab investigations, mathematical modeling, and scientific writing. A strong emphasis is placed on formal lab reports and conceptual understanding. Designed for students with a high level of motivation and academic discipline.

College Biology I (Dual Credit)

Course Numbers: 61211A (Semester 1), 61212A (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Science Credit
College Credit: BIOL 101/101L at WVU
Duration: 2 Semesters
Prerequisite: A/B average in Biology, teacher recommendation; Chemistry strongly recommended.

Course Description:
A rigorous, college-level biology course. Focus areas include inquiry-based labs, critical thinking, and deep conceptual understanding of biological systems. Recommended for students pursuing science/medical careers.

College Biology II (Dual Credit)

Course Numbers: 61211A (Semester 1), 61212A (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Science Credit
College Credit: BIOL 102/102L at WVU
Duration: 2 Semesters
Prerequisite: A/B average in Biology, teacher recommendation; Chemistry strongly recommended.

Course Description:
A rigorous, college-level biology course. Focus areas include inquiry-based labs, critical thinking, and deep conceptual understanding of biological systems. Recommended for students pursuing science/medical careers.

Chemistry I

Course Numbers: 603110 (Semester 1), 603120 (Semester 2)
Grade Level: 10–12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: Successful completion of Algebra I

Course Description:
An introduction to basic chemistry concepts and problem-solving techniques. Students explore atomic structure, bonding, chemical reactions, and more through labs and real-world applications. Prepares students for Chemistry II and college-level chemistry.

Chemistry I Honors

Course Numbers: 60311H (Semester 1), 60312H (Semester 2)
Grade Level: 10–12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: Teacher recommendation required
Course Description:
The first year of a two-year AP Chemistry sequence, this honors course uses a college-level text and explores atomic structure, bonding, and energy changes. The course demands a high level of commitment, well-developed problem-solving skills, and prepares students for AP Chemistry.

Chemistry II

Course Numbers: 603310 (Semester 1), 603320 (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: Grade of C or better in Chemistry I

Course Description:
A continuation of Chemistry I, focusing on reaction rates, equilibrium, acids/bases, and electrochemistry. Laboratory skills are emphasized. Recommended for students planning to study science in college.

Chemistry AP

Course Numbers: 63211A (Semester 1), 63212A (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Science Credit

Duration: 2 Semesters
Prerequisite: Chemistry I Honors and teacher recommendation

Course Description:
A college-level course preparing students for the AP Chemistry Exam. Students must complete all summer assignments. The curriculum mirrors a first-year college chemistry course and requires strong problem-solving and analytical skills.

Physics

Course Numbers: 604110 (Semester 1), 604120 (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: Algebra I and Geometry

Course Description:
A preparatory course for college physics. Designed for students pursuing careers in science, engineering, physical therapy, or health sciences. Emphasizes foundational physics concepts and problem-solving.

Physics I AP

Course Numbers: 63261A (Semester 1), 63262A (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: Algebra I and Geometry
Course Description:
Equivalent to a first-semester algebra-based college physics course. Topics include Newtonian mechanics, energy, waves, sound, and introductory circuits. Prepares students for the AP Physics I exam.

Physics II AP

Course Numbers: 63271A (Semester 1), 63272A (Semester 2)
Grade Level: 12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: Algebra I and Geometry
Course Description:
Equivalent to a second-semester college physics course. Topics include fluid mechanics, thermodynamics, electricity and magnetism, optics, and atomic/nuclear physics.

Physical Science

Course Numbers: 601110 (Semester 1), 601120 (Semester 2)
Grade Level: 10–12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters

Course Description:
Explores chemistry and physics concepts including classification of matter, periodic table, chemical reactions, motion, electricity, magnetism, waves, and energy. Offers a third science credit option.

Environmental Science

Course Numbers: 631210 (Semester 1), 631220 (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: Algebra I and Geometry; Chemistry recommended

Course Description:
Focuses on ecological processes and human impact on the environment. Includes outdoor fieldwork, water testing, tree identification, and GIS analysis. Designed for responsible and independent students.

Forensic Science

Course Numbers: 604410 (Semester 1), 604420 (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Science Credit
Duration: 1 Semester
Prerequisite: Completion of Earth Science, Biology, and Geometry with a C average
Course Description:
An interdisciplinary, hands-on course using biology, chemistry, and physics to solve mock crimes. Offers real-world application of scientific investigation. May fulfill one lab science requirement (verify with colleges).

Human Anatomy & Physiology Honors

Course Numbers: 61031H (Semester 1), 61032H (Semester 2)
Grade Level: 12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: B/C average in Microbiology and/or Chemistry recommended

Course Description:
Intended for students pursuing healthcare or science careers. Covers body systems, cells, tissues, and homeostasis. Labs, including dissection, are central to the course.

Microbiology (Dual Credit)

Course Numbers: 77251X (Semester 1), 77252X (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Science Credit
College Credit: WLU Microbiology
Duration: 2 Semesters
Prerequisite: B average in Biology

Course Description:
Covers microorganisms and genetics with emphasis on lab and microscope skills. Includes a Drosophila genetics project. Designed for students pursuing medical or scientific careers.

Microbiology

Course Numbers: 772510 (Semester 1), 772520 (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: B average in Biology
Course Description:
Focuses on laboratory skills and microbiology content including microbial classification, genetics, and microscope techniques. Includes a genetics component and Drosophila project.

Zoology (Elective Credit)

Course Numbers: 627010 (Semester 1), 627020 (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Elective Credit
Duration: 2 Semesters
Prerequisite: Completion of Physical Science and Biology

Course Description:
Explores animal taxonomy, body plans, and behaviors. Includes dissections and lab activities. Designed for college-bound students. Does **not** count as a lab science credit for graduation.

Physical Geology I

Course Numbers: 626110 (Semester 1), 626120 (Semester 2)
Grade Level: 10–12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: C average or above in Earth & Space Science and Algebra I

Course Description:
Introductory geology course covering Earth materials, plate tectonics, volcanoes, earthquakes, water resources, and more. Includes hands-on lab projects and builds on Earth & Space Science concepts.

Physical Geology II

Course Numbers: 626110 (Semester 1), 626120 (Semester 2)
Grade Level: 10–12
Graduation Credit: 1 Science Credit
Duration: 2 Semesters
Prerequisite: C average or above in Earth & Space Science and Algebra I

Course Description:
Introductory geology course covering Earth materials, plate tectonics, volcanoes, earthquakes, water resources, and more. Includes hands-on lab projects and builds on Earth & Space Science concepts.

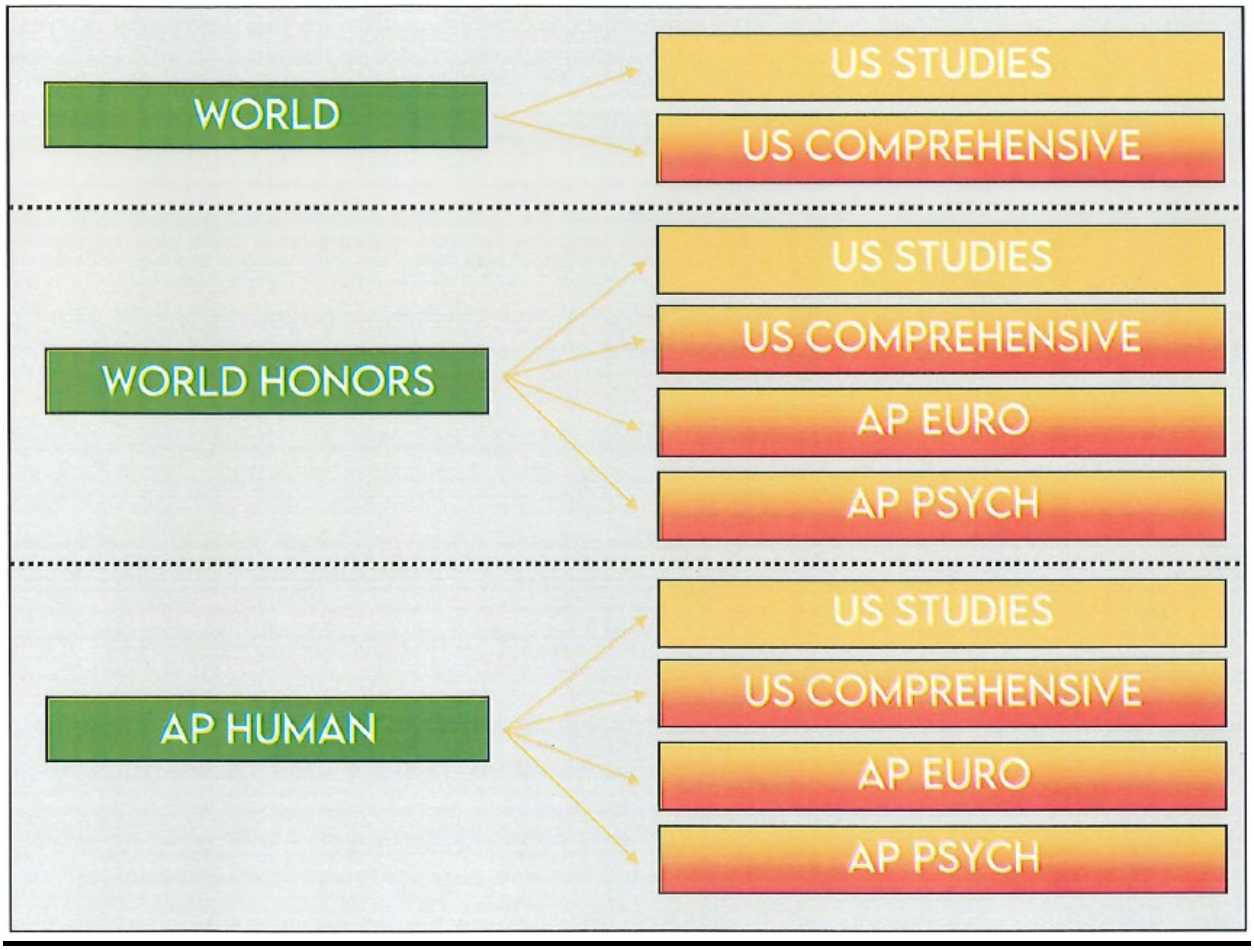
Astronomy (Elective Credit)

Course Numbers: 626210 (Semester 1), 626220 (Semester 2)
Grade Level: 10–12
Graduation Credit: 1 Elective Credit
Duration: 2 Semesters
Prerequisite: Earth & Space Science and Algebra I

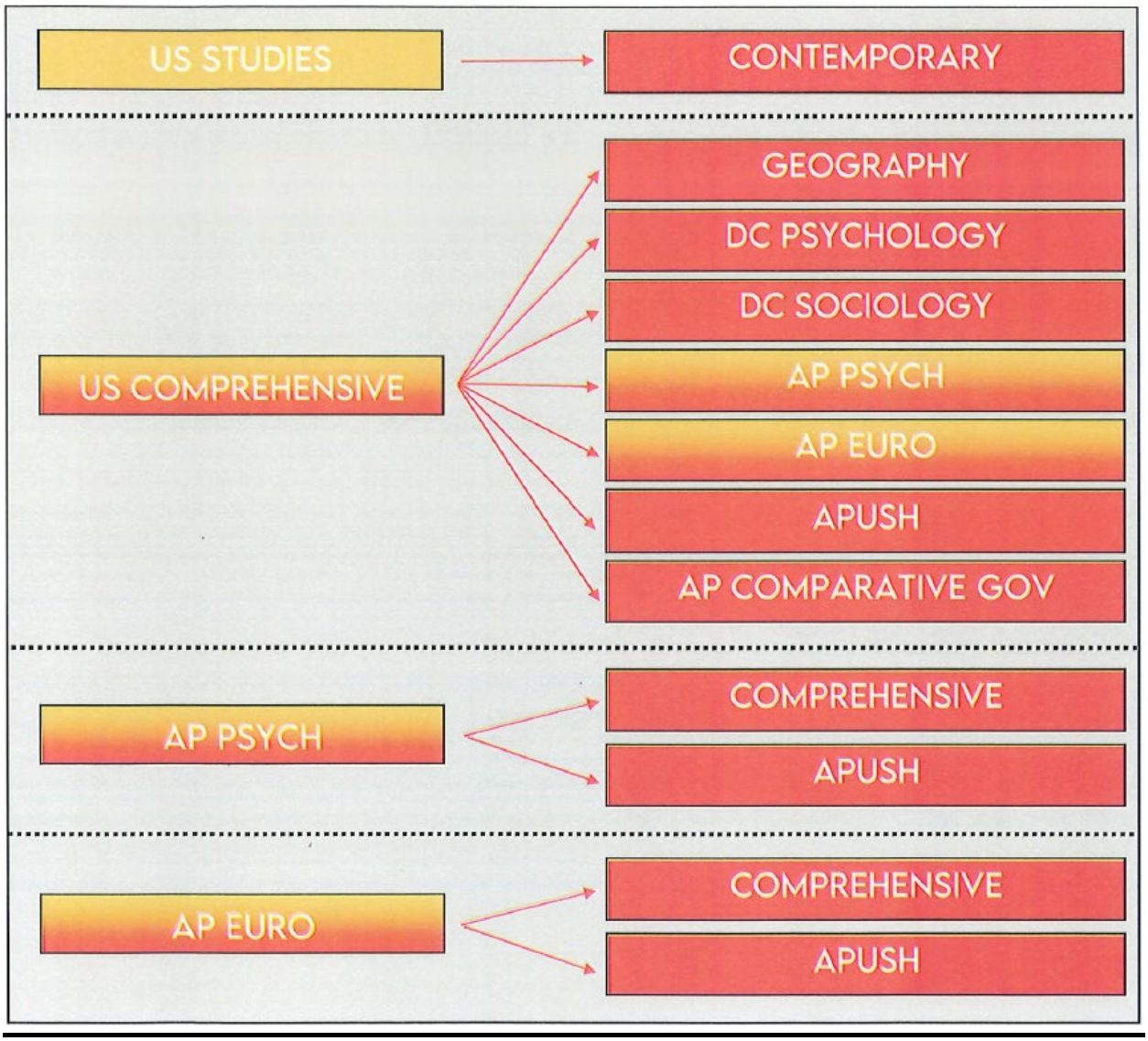
Course Description:
Explores the universe through topics such as the solar system, star life cycles, galaxies, and cosmology. Includes algebra-based problem-solving, critical thinking, and scientific literacy development.

SOCIAL STUDIES

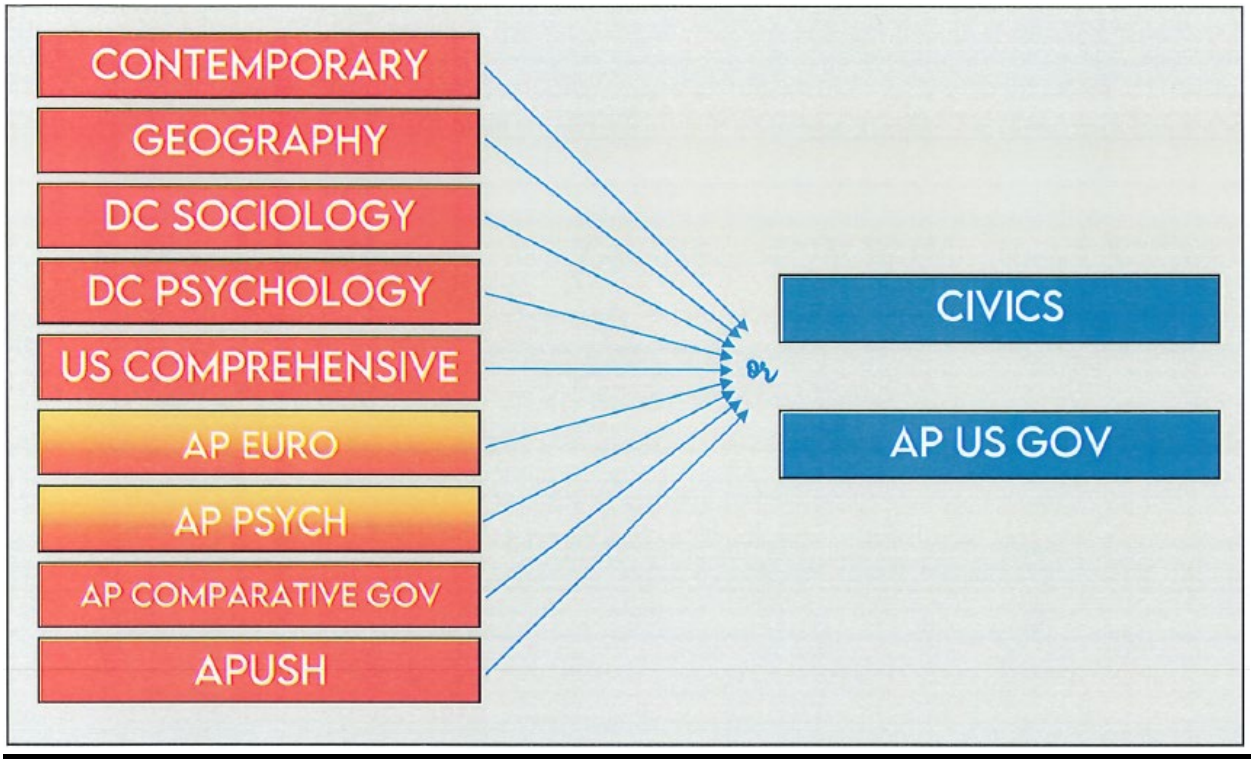
Social Studies Course Progression (9th Grade)



Social Studies Course Progression (10th Grade)



Social Studies Course Progression (11th Grade)



Social Studies Courses

World Studies

Course Numbers: 701010 (Semester 1), 701020 (Semester 2)
Grade Level: 9
Graduation Credit: 1 Social Studies Credit
Duration: 2 Semesters

Course Description:
This course emphasizes the historical, economic, geographic, political, and social structures of various cultural regions of the world from the dawn of civilization to the 20th century. Special attention is given to the formation and evolution of societies into complex political and economic systems.

World Studies Honors

Course Numbers: 70101H (Semester 1), 70102H (Semester 2)
Grade Level: 9
Graduation Credit: 1 Social Studies Credit
Duration: 2 Semesters

Course Description:
Covers the same content as World Studies, but in greater depth. Students must have well-developed reading, writing, and research skills. Designed for highly motivated students who are expected to actively participate in class discussions and activities.

Human Geography AP

Course Numbers: 70421A (Semester 1), 70422A (Semester 2)
Grade Level: 9
Graduation Credit: 1 Social Studies Credit
Duration: 2 Semesters
Prerequisite: Teacher recommendation required

Course Description:
Introduces students to the systematic study of human patterns and processes that shape the Earth's surface. Students use spatial concepts and landscape analysis to examine human social organization and environmental impacts. The course emphasizes analytical and critical-thinking skills.

U.S. Studies

Course Numbers: 700910 (Semester 1), 700920 (Semester 2)
Grade Level: 10
Graduation Credit: 1 Social Studies Credit
Duration: 2 Semesters

Course Description:
Covers U.S. history from Pre-Columbian civilizations to the early 20th century. Emphasizes the development of the U.S. Constitution and the impact of diverse populations on expanding frontiers and environments.

U.S. Studies Comprehensive

Course Numbers: 701210 (Semester 1), 701220 (Semester 2)
Grade Level: 10–11
Graduation Credit: 1 Social Studies Credit
Duration: 2 Semesters

Course Description:
Explores the development of the United States through history, geography, civics, and economics. Focuses on critical thinking, participatory democracy, and the role of citizens in a changing technological society.

European History AP

Course Numbers: 70451A (Semester 1), 70452A (Semester 2)
Grade Level: 10–12
Graduation Credit: 1 Social Studies Credit
Duration: 2 Semesters
Prerequisite: World Studies Honors recommended
Course Description:
Covers European history from 1450 to the present, focusing on major cultural, political, economic, and social developments. Emphasizes historical analysis, evidence-based interpretation, and academic writing skills.

Contemporary Studies

Course Numbers: 701110 (Semester 1), 701120 (Semester 2)
Grade Level: 11
Graduation Credit: 1 Social Studies Credit
Duration: 2 Semesters

Course Description:
Focuses on American history from 1914 to the present, emphasizing reform movements, cultural values, economic and technological change, and global interdependence.

U.S. History AP

Course Numbers: 70461A (Semester 1), 70462A (Semester 2)
Grade Level: 11
Graduation Credit: 1 Social Studies Credit
Duration: 2 Semesters
Prerequisite: "A" or "B" average in Social Studies and teacher/counselor recommendation

Course Description:
Covers U.S. history from the pre-Columbian era to modern day, emphasizing political institutions, public policy, social change, diplomacy, and culture. A college-level textbook is used. Requires a minimum of 5 hours of homework per week.

Government & Politics: Comparative AP

Course Numbers: 70431A (Semester 1), 70432A (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Social Studies Credit
Duration: 2 Semesters
Prerequisite: "A" or "B" average in Social Studies and teacher recommendation

Course Description:
Students analyze and compare political systems in six countries: China, Iran, Mexico, Nigeria, Russia, and the UK. Emphasizes data interpretation and global political literacy. Highly motivated juniors are welcome. Average homework is 3 hours per week.

Government & Politics: U.S. AP

Course Numbers: 70441A (Semester 1), 70442A (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Social Studies Credit

Duration: 2 Semesters
Prerequisite: Should be taken with AP English Language; "A" or "B" average in Social Studies recommended

Course Description:
Covers the structure and function of U.S. government, political behavior, public policy, civil rights, and liberties. Incorporates economics and personal finance. Uses college-level texts. Expect 3–5 hours of homework per week.

Civics for the Next Generation

Course Numbers: 703110 (Semester 1), 703120 (Semester 2)
Grade Level: 12
Graduation Credit: 1 Social Studies Credit
Duration: 2 Semesters

Course Description:
Focuses on civic knowledge, skills, and dispositions necessary for effective citizenship. Includes personal finance, government functions, and the role of civic participation in American democracy.

Civics for the Next Generation (Dual Credit)

Course Numbers: 70311X (Semester 1), 70312X (Semester 2)
Grade Level: 12
Graduation Credit: 1 Social Studies Credit
College Credit: WLU POLS 201
Duration: 2 Semesters

Course Description:
Covers the historical background of American government, the Constitution, political processes, and the interrelationship between federal, state, and local governments. Includes topics such as reapportionment and public finance.

Psychology (Dual Credit)

Course Numbers: 732110 (Semester 1), 732120 (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Social Studies Credit
College Credit: PSYC 105 at WVNCC
Duration: 2 Semesters
Prerequisite: "A" or "B" average in Social Studies is strongly recommended

Course Description:
Provides an introduction to psychology concepts such as research methods, biological behavior, learning, memory, motivation, emotion, and development. Focuses on building college-level study skills. Requires 3–5 hours of study time per week.

Psychology AP

Course Numbers: 70471A (Semester 1), 70472A (Semester 2)
Grade Level: 10–12

Graduation Credit: 1 Social Studies Credit

Duration: 2 Semesters
Prerequisite: "A" or "B" average in Social Studies and Science or teacher/counselor recommendation

Course Description:
Advanced course building upon Psychology I. Topics include cognition, personality, abnormal psychology, and social behavior. Taught at a college level. Requires 5 hours of weekly study.

Sociology (Dual Credit)

Course Numbers: 734110 (Semester 1), 734120 (Semester 2)
Grade Level: 11–12
Graduation Credit: 1 Social Studies Credit
College Credit: SOC 125 at WVNCC
Duration: 2 Semesters
Prerequisite: "A" or "B" average in Social Studies strongly recommended

Course Description:
Introduces the principles of sociology and emphasizes research into current social issues. Uses a college-level text and requires strong reading and writing skills. Expect 5 hours of weekly outside reading.

SOCIAL STUDIES ELECTIVES

History of the Holocaust

Course Number: 714900
Grade Level: 11–12
Graduation Credit: ½ Elective Credit
Duration: 1 Semester
Course Description:
This course provides a detailed examination of the persecution and mass murder carried out by the Nazi regime between 1917 and 1945. Students will explore how policies of exclusion evolved into systematic genocide, placing the Holocaust in the broader context of European history. The central focus is the mass murder of European Jews, while also covering the Nazi regime's targeting of other groups, such as the

Roma, disabled individuals, and Poles. The course also examines how historical research, eyewitness accounts, and media shape our understanding of the Holocaust today.

Sports History

Course Number: 733200
Grade Level: 10–12
Graduation Credit: ½ Elective Credit
Duration: 1 Semester

Course Description:
This course explores the origins and evolution of various sports, from ancient Greece to the modern era. Topics include sportsmanship, racial integration, Title IX, and steroid use. Students will engage in discussions, conduct web research, complete book reviews, and write research papers. Related videos and multimedia content are integrated throughout the course.

Pop Culture I & II

Course Numbers: 724310 (Pop Culture I), 724320 (Pop Culture II)
Grade Level: 11–12
Graduation Credit: ½ Elective Credit
Duration: 1 Semester

Course Description:
Using the "Rock and Roll: An American Story" online resource, this course examines the roots and evolution of Rock and Roll, tracing its influences from Southern Blues, Jazz, and Country music. Students will also analyze influential film genres and explore how popular culture trends impact areas such as television and fashion. Coursework includes creating music videos, utilizing multimedia tools, and researching cultural movements that shaped American society.

HEALTH / PHYSICAL EDUCATION

Health 9 (Online Option)

Course Number: 690901
Grade Level: 9–12
Graduation Credit: ½ Health
Duration: 1 Semester

Course Description:
Health 9 is designed to explore issues that are relevant to students' daily lives. Topics include healthy lifestyle choices, self-esteem, stress management, drug, alcohol, and tobacco abuse, nutrition, and physical fitness.

Health 10 (Online Option)

Course Number: 690902
Grade Level: 9–12
Graduation Credit: ½ Health
Duration: 1 Semester
Prerequisite: Health 9

Course Description:
Health 10 focuses on improving and prolonging mental, physical, and social well-being through a holistic wellness approach. Topics include personal responsibility for health, mental and social health, family relationships, marriage and interpersonal skills, sexually transmitted diseases, stress management, and substance abuse.
Note: Also available online through John Marshall for scheduling flexibility.

PE High School 9

Course Number: 660901
Grade Level: 9
Graduation Credit: ½ Physical Education
Duration: 1 Semester
Prerequisite: Automatically scheduled for all incoming freshmen

Course Description:
This course introduces students to a variety of lifetime sports and activities. All students are required to complete the **FitnessGram Physical Education Fitness Test** (WV state-mandated). Grades are based on class participation, proper gym attire, behavior, and sportsmanship.

PE High School 10

Course Number: 660902
Grade Level: 10
Graduation Credit: ½ Physical Education
Duration: 1 Semester
Prerequisite: Automatically scheduled for all sophomores

Course Description:
This course continues the development of skills and knowledge in lifetime sports. Includes the **FitnessGram PE Fitness Test**. Grades are based on participation, gym attire, behavior, and sportsmanship.

Extracurricular Inter-Scholastic PE

Course Number: 794800
Grade Level: 9–10
Graduation Credit: ½ Physical Education
Duration: 1 Semester

Course Description:
Students who participate in a **WVSSAC-sanctioned sport** can receive PE credit for each completed season. Coaches must verify attendance and season completion.
Note: This is a **non-graded** course and is **not included in GPA**.

PE High School 10 – Walking/Jogging

Course Number: 6609
Grade Level: 10–12
Graduation Credit: ½ Physical Education
Duration: 1 Semester

Course Description:
This course offers flexibility in developing personal cardiovascular fitness. Students will use **pedometers** to track progress in walking and jogging activities and explore various fitness techniques.

Individual Sports/Fitness Conditioning

Course Numbers: 672510, 672520
Grade Level: 11–12
Graduation Credit: 1 Physical Education
Duration: 1 Semester
Prerequisite: Must have passed PE High School 9 and PE High School 10

Course Description:

Designed for athletes and non-athletes to stay in peak physical condition. Focus areas include speed, agility, endurance, and flexibility through diverse cardio workouts.

Recreational Sport/Advanced Physical Education

Course Number: 674100
Grade Level: 11–12 *(Seniors given priority)*
Graduation Credit: ½ Physical Education
Duration: 1 Semester
Prerequisite: Must have passed PE High School 9 and PE High School 10

Course Description:
This is a weight training class. This class is for students who wish to strength train using both free weight and machines. You will learn proper form, technique, and spotting. This class will help you increase muscular strength, muscular endurance, and body composition as well as help you to feel confident to perform the exercises on your own outside of the school day.

Weight Training

Course Numbers: 676510, 676520
Grade Level: 10–12
Graduation Credit: 1 Physical Education
Duration: 1 Semester or 2 Semesters
Prerequisite: Must have passed PE High School 9

Course Description:
Students will design and follow a **personalized weight training program**. Grades are based on daily participation, gym attire, and attendance.

Life Fitness Education

Course Number: 673300
Grade Level: 9–12
Graduation Credit: ½ Physical Education
Duration: 1 Semester

Course Description:
This is a weight training class. This class is for students who wish to strength train using both free weight and machines. You will learn proper form, technique, and spotting. This class will help you increase muscular strength, muscular endurance, and body composition as well as help you to feel confident to perform the exercises on your own outside of the school day.

HEALTH / PHYSICAL EDUCATION ELECTIVES

Driver's Education

Course Number: 681100
Grade Level: 10–12
Graduation Credit: ½ Elective
Duration: 1 Semester

Course Description:
This course is designed to promote **safe driving habits** and teach **defensive driving techniques** as essential lifelong skills. Topics include the fundamentals of vehicle operation, traffic laws, and accident prevention.
Note: Enrollment is limited. Priority is given to seniors, followed by juniors, and then sophomores. A **Learner's Permit is NOT required** to enroll.

Sports Medicine I & II

Course Numbers:

- *Sports Medicine I:* 693310, 693320
- *Sports Medicine II:* 693410, 693420

Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
This course introduces students to the field of **Athletic Training** and **Sports Medicine**. Emphasis is placed on the **prevention**, **care**, and **rehabilitation** of athletic injuries. Students will explore topics such as anatomy, injury mechanisms, taping techniques, emergency procedures, and therapeutic modalities.

FINE ARTS (PERFORMING and VISUAL)

Vocal and Instrumental Music Courses

Band I, II, III, IV

Course Numbers:

- Band I: 361110, 361120
- Band II: 361210, 361220
- Band III: 361310, 361320
- Band IV: 361410, 361420

Grade Level: 9–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters

Course Description:
Students prepare selected marching and concert band music for performance and adjudication. Participation in All-State Band, Solo & Ensemble, or Regional Honors Band requires enrollment in this course. Students must attend all scheduled rehearsals and performances, both during and outside school hours. Honors credit is available through specific criteria provided by Mrs. Filben. Students must pass each level to advance.

Steel Drum Band

Course Numbers: 374210, 374220
Grade Level: 9–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters

Course Description:
Open to any band student or by permission of Mrs. Filben. Students rehearse and perform steel drum music and must attend all scheduled rehearsals and performances both during and outside school hours.

Chorus I, II, III, IV

Course Numbers:

- Chorus I: 362110, 362120

- Chorus II: 362210, 362220
- Chorus III: 362310, 362320
- Chorus IV: 362410, 362420

Grade Level: 9–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters

Course Description:
Chorus I is open to all students. Students develop vocal techniques and music fundamentals. Performance and class participation are required. Students in all levels will perform with the concert choir. To progress to the next level, students must pass the previous course.

Monarch Choir

Course Numbers:

- 377010, 377020
- 377110, 377120
- 377210, 377220
- 377310, 377320

Grade Level: 9–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters
Prerequisite: Audition Required

Course Description:
Advanced choral group focused on performance and technique. Prior choral experience is strongly encouraged. Participation and attendance at all rehearsals and performances are required. Students with poor attendance records may not be admitted.

Music Theory / Music Appreciation

Course Numbers:

- Music Theory: 375600
- Music Appreciation: 374600

Grade Level: 9–12
Graduation Credit: ½ Fine Arts/Elective
Duration: 1 Semester

Course Description:
An introduction to the fundamentals of written music theory. This course prepares students in vocal, instrumental, piano, or string studies for college-level music theory.

Piano I, II, III, IV

Course Numbers:

- Piano I: 368100
- Piano II: 368200
- Piano III: 368300
- Piano IV: 368400

Grade Level: 9–12
Graduation Credit: ½ Fine Arts/Elective
Duration: 1 Semester

Course Description:
This course provides instruction in piano, from beginner to advanced levels. Students must pass each level to advance to the next.

Orchestra I, II, III, IV

Course Numbers:

- Orchestra I: 376400
- Orchestra II: 376500
- Orchestra III: 377600
- Orchestra IV: 377700

Grade Level: 9–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters

Course Description:
Open to students with experience playing violin, viola, cello, or bass. Includes scheduled rehearsals and performances inside and outside school hours. Honors credit available through criteria provided by Mr. Jones. Students must pass each level to advance.

Guitar I

Course Number: 3726
Grade Level: 9–12
Graduation Credit: ½ Fine Arts/Elective
Duration: 1 Semester

Course Description:
Introductory course in guitar. Students learn correct technique, chords, cadences, sight-reading, and basic musical evaluation skills.

Visual Arts Courses

Art I

Course Numbers: 321110, 321120
Grade Level: 9–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters

Course Description:
An introduction to two- and three-dimensional media, art history, art criticism, and cultural movements. Students practice responsible workplace skills and explore careers in art.

Art II

Course Numbers: 321210, 321220
Grade Level: 10–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters
Prerequisite: Pass Art I

Course Description:
Expands on Art I, developing skills in various media and promoting personal expression through themes, symbols, and motifs.

Art III

Course Numbers: 321310, 321320
Grade Level: 11–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters
Prerequisite: Pass Art I and II

Course Description:
A deeper focus on historical, cultural, and critical aspects of art. Students develop personal portfolios and form a personal philosophy of art.

Art IV

Course Numbers: 321410, 321420
Grade Level: 12

Graduation Credit: 1 Fine Arts/Elective

Duration: 2 Semesters
Prerequisite: Pass Art I–III or be a senior planning to major in Art in college

Course Description:
Portfolio-focused course preparing students for post-secondary art study. Emphasis on value, drawing, and artistic exploration.

AP 2-D Art and Design

Course Numbers: 32231A, 32232A
Grade Level: 10–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters
Prerequisite: Art I

Course Description:
College-level course in 2-D design including graphic design, collage, printmaking, and fashion illustration. Students submit a portfolio for AP evaluation.

AP 3-D Art and Design

Course Numbers: 32241A, 32242A
Grade Level: 10–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters
Prerequisite: Art I

Course Description:
College-level 3-D design course exploring sculpture, ceramics, metalwork, and architectural rendering. Final AP portfolio submission required.

Graphic Arts

Course Numbers: 331310, 331320
Grade Level: 10–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters

Course Description:
Introductory studio course in Graphic Design using both traditional media and digital tools like Photoshop. Focus on design development and concept communication.

Ceramics / Pottery I & II

Course Numbers:

- Pottery I: 330710, 330720
- Pottery II: 330810, 330820

Grade Level: 11–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters
Prerequisite: Art I

Course Description:
Hands-on course in clay fundamentals, including wheel-thrown and hand-built pottery. Students must attend consistently and be prepared to work independently. Fingernails must be kept short.

Sculpture

Course Numbers: 333710, 333720
Grade Level: 10–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters
Prerequisite: Art I

Course Description:
Students work with a variety of materials to explore three-dimensional design and expression. Emphasis on the elements and principles of 3D art.

Performing Arts Courses

Theatre I / Theatre II

Course Numbers:

- Theatre I: 380110
- Theatre II: 380220

Grade Level: 10–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters

Course Description:

An introduction to dramatic arts for students interested in communications, TV, radio, or theatre. Covers drama history, improvisation, mime, and vocal techniques to build self-confidence.

Theatre / Stagecraft

Course Numbers: 385910, 385920
Grade Level: 9–12
Graduation Credit: 1 Fine Arts/Elective
Duration: 2 Semesters

Course Description:
This course focuses on the technical side of theatre production. Students learn about staging, lighting, and set construction through hands-on experience.

FOREIGN LANGUAGE

Spanish I

Course Numbers: 566110, 566120
Grade Level: 9–12
Graduation Credit: 1 Foreign Language / Elective
Duration: 2 Semesters

Course Description:
An introductory course in Spanish focused on developing basic oral and written communication skills. Emphasis is placed on listening, speaking, and writing. Students are also introduced to the cultures of the Spanish-speaking world through engaging cultural activities.

Spanish II

Course Numbers: 566210, 566220
Grade Level: 9–12
Graduation Credit: 1 Foreign Language / Elective
Duration: 2 Semesters
Prerequisite: Spanish I

Course Description:
This course builds upon the skills developed in Spanish I. Students improve listening and speaking skills and begin to comprehend more spoken Spanish. Grammar and vocabulary acquisition continue through structured skill development.

Spanish III (Dual Credit)

Course Numbers: 56631X, 56632X
Grade Level: 10–12
Graduation Credit: 1 Foreign Language / Elective
College Credit: WLU SPAN 101
Duration: 2 Semesters
Prerequisite: Spanish II

Course Description:
An honors-level course offering dual credit through West Liberty University. Students further develop fluency in Spanish by working with more advanced grammatical structures, expanding vocabulary, and beginning the study of Spanish literature and culture in greater depth.

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 graduated 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://nths.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 Programs

Below is a comprehensive list of CTE pathways available to students at John Marshall:

- Agribusiness Systems
- Automotive Technology
- Biomedical Science
- Broadcasting Technology
- Building Maintenance and Operations
- Business Enterprise
- Careers in Education
- Carpentry
- Collision Repair Technology
- Computer Aided Drafting and Design
- Computer Science
- Computer Systems Repair Technology
- Machine Tool Technology
- Marketing Management
- Pre-Engineering
- ProStart Restaurant Management
- Therapeutic Servcies
- Welding



CTE ELECTIVES

CTE Electives are courses that can be taken idependently of a CTE Completer program (see Completer Program pg 33). Some of these electives are designed to be exploratory courses taken in 9th and 10th 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 isted under the corresponding programs.

Courses listed below may have prerequisites to enroll:

Agribusiness
- 0200 – Natural Resource Management
- 0101 – Intro to Agriculture

Broadcasting Technology
- 1515 – Digital Photography
- 2421 – Communication Systems

Business
- 1439 – Business & Marketing Essentials
- 1411 – Business Computer Applications I

Comuter Systems Repair Technology
1706 – Imaging For The Web
Drafting
1727 – Drafting Techniques
Therapeutic Services
0700 – Exploring Health Professions
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

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

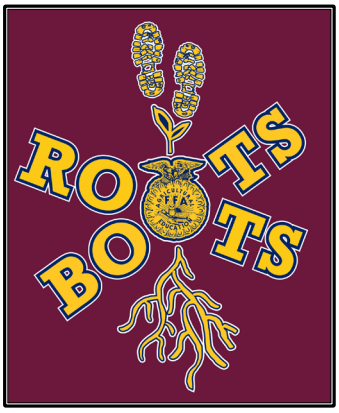
- Automotive Technology
- Building and Maintenance Operations
- Carpentry
- Collision Repair Technology
- Machine Tool Technology
- Welding

Career Exploration

Course Numbers: 762710, 762720
Grade Level: 10
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
This course is divided into six-week segments, with each segment completed in a different vocational area. The six areas include Automotive Technology, Collision Repair Technology, Welding Technology, Building Maintenance and Operations, Carpentry, and Machine Tool Technology. This course will expose students to various technologies, helping them choose a future Career Technical area or gain general hands-on experience.

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
4. 0111 – Food Science Technology
   OR
   0212 - Horticulture

Related Electives:

1. 0200 – Natural Resource Management

Introduction to Agriculture, Food, and Natural Resources

Course Numbers: 010110, 010120
Grade Level: 9–12
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
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

The Science of Agriculture

Course Numbers: 010210, 010220
Grade Level: 10–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Introduction to Agriculture

Course Description:
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

Agriculture Experience

Course Numbers: 013410, 013420
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 4 Semesters of enrollment during Junior/Senior Year (½ credit each year)
Prerequisite: Teacher Recommendation

Course Description:
Required for summer projects for agricultural completers only. Projects must be pre-approved. Credit is awarded for completion of the Agriculture Experience Project.
#3 Completer Course

Horticulture

Course Numbers: 021210, 021220
Grade Level: 10–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Introduction to Agriculture

Course Description:
Horticulture is one of four courses to complete the Plant Systems Program. This course offers an in-depth look at concepts of plant growth and plant usage in our environment for aesthetics, ecosystem support, and as plant products for human consumption. Topics include plant growth requirements, plant processes, and propagation. Students will use the greenhouse as a laboratory.
#4 Completer Course

Food Science Technology

Course Numbers: 011110, 011120
Grade Level: 10–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Introduction to Agriculture

Course Description:
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

Natural Resource Management (Semester Course)

Course Numbers: 020000
Grade Level: 10–12
Graduation Credit: ½ Elective
Duration: 1 Semester
Prerequisite: Introduction to Agriculture

Course Description:
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.
CTE Elective

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**

Auto-Tech MLR1 / Auto-Tech MLR2 (2-Period Block)

Course Numbers: 162310, 163120
Grade Level: 11–12
Graduation Credit: 2 Electives
Duration: 2 Semesters

Course Description:
This course is the first of a two-year program in Automotive Technology. Units of study include automotive electrical systems, theory and operation of brake systems, fundamentals of steering and suspension systems, basic engine concepts, engine performance, climate controls, standard and automatic transmissions, computerized data systems, and computer operations related to automotive technology.
#1 and #2 Completer Courses

Auto-Tech MLR3 / Auto-Tech MLR4 / Auto-Tech AST3 (3-Period Block)

Course Numbers: 162510, 163720, 163310, 163320
Grade Level: 12
Graduation Credit: 3 Electives
Duration: 2 Semesters
Prerequisite: Auto-Tech MLR1 / Auto-Tech MLR2

Course Description:
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 include computerized engine controls, heating and air conditioning, engine performance, computerized wheel alignments, suspension systems, antilock brakes, manual drive trains, front-wheel drive systems, electrical/electronic systems, fuel injection, and use of electronic analyzers.
#3 and #4 Completer Courses

BIOMEDICAL SCIENCE

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

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

Principles of Biomedical Science (PLTW Pathway: Biomedical)

Course Numbers: 07271H, 07272H
Grade Level: 9–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
CTE Elective

Course Description:
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.

Human Body Systems (PLTW Pathway: Biomedical)

Course Numbers: 07661H, 07662H
Grade Level: 10–12
Graduation Credit: 1 Science
Duration: 2 Semesters
Prerequisite: Students must have passed Principles of Biomedical Science

Course Description:
In this second course for the Biomedical pathway, 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.
This course can count as a third-year lab science.

Medical Interventions (PLTW Pathway: Biomedical)

Course Numbers: 07801H, 07802H
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Students must have passed Human Body Systems

Course Description:
Students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

Biomedical Innovation (PLTW Pathway: Biomedical)

Course Numbers: 07951H, 07952H
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Students must have passed Medical Interventions

Course Description:
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.

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. **1515 – Digital Photography**
3. **2421 – Communication Systems**

Fundamentals of Broadcasting

Course Numbers: 168110, 168120
Grade Level: 11
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Teacher Recommendation

Course Description:
This course introduces 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 radio and television broadcasts.

Radio Broadcasting Presentations

Course Numbers: 168310, 168320
Grade Level: 11
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Teacher Recommendation

Course Description:
This course provides students with the knowledge to perform, either in a live or mock setting, a radio broadcast. Areas of study include on-air news presentations, deejay presentations, radio production and management, and student organizations.

Television Production Applications

Course Numbers: 168510, 168520
Grade Level: 12

Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Teacher Recommendation

Course Description:
This course provides students with an entry-level understanding of the components of television broadcasting. Areas of study include writing television news, conducting interviews, preproduction, production, and student organizations. Students will show knowledge and technical expertise in television production equipment and applications.

Producing Live TV

Course Numbers: 168910, 168920
Grade Level: 12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Teacher Recommendation

Course Description:
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 one another for the success of the broadcast, consistent attendance is required. Students who fail to meet attendance expectations may be removed from the class.

Video Editing

Course Numbers: 168410, 168420
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Fundamentals of Broadcasting and Teacher Recommendation

Course Description:
This full-year course is designed to train students in advanced-level video editing using nonlinear editors. Instruction includes video effects, keying, color correction, and other higher-level processes. Students will explore how packaging and imaging of a product impacts the sales of videos.

Digital Photography (Semester One)

Course Number: 151500
Grade Level: 9–12
Graduation Credit: ½ Elective Credit

Duration: 1 Semester
CTE Elective

Course Description:
This course introduces students 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 is placed on photojournalism and advertising photography. Units of Study: Camera Basics, Photo Editing, Photo Printing.

Communication Systems (Semester Two)

Course Number: 242100
Grade Level: 9–12
Graduation Credit: ½ Elective Credit
Duration: 1 Semester
CTE Elective

Course Description:
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.

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**

Building Maintenance and Operations I

Course Numbers: 177410, 177420
Grade Level: 9–10
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
This course introduces students to the knowledge base and technical skills of the Building Maintenance and Operations industry. The course begins with the **NCCER Core Curriculum**, a prerequisite for all Level I completions. Students complete modules in Basic Safety, Construction Math, Hand and Power Tools, Construction Drawings, Rigging, Communication Skills, Employability Skills, and Materials Handling. They then begin skill development in areas such as Site Layout One: Distance Measurement and Leveling, and an Introduction to Concrete, Reinforcing Materials, and Forms. Students utilize problem-solving techniques and participate in hands-on activities to deepen their understanding of course concepts.

Building Maintenance and Operations II

Course Numbers: 177510, 177520
Grade Level: 9–10
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Building Maintenance and Operations I

Course Description:
This course continues the development of technical skills in Building Maintenance and Operations. Areas of focus include Handling and Placing Concrete, Introduction to Masonry, and Masonry Units and Installation Techniques. Students utilize problem-solving techniques and engage in hands-on activities to strengthen their understanding of real-world construction concepts.

Building Maintenance and Operations III

Course Numbers: 177610, 177620
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Building Maintenance and Operations II

Course Description:
This course further develops technical skills in Building Maintenance and Operations. Areas of study include Floor Systems, Wall and Ceiling Framing, Roof Framing, and Roofing Applications. Students continue to use problem-solving strategies and hands-on learning to reinforce construction knowledge.

Building Maintenance and Operations IV

Course Numbers: 177710, 177720
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Building Maintenance and Operations III

Course Description:
In the final level of the Building Maintenance and Operations sequence, students build skills in Exterior Finishing, Basic Stair Layout, Electrical Safety, and Residential Electrical Services. Hands-on activities and problem-solving applications support students in developing job-ready skills aligned with industry standards.

BUSINESS ENTERPRISE

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

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

Monarch Industries

Business Computer Applications I

Course Numbers: 141110, 141120
Grade Level: 10–12
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
This course utilizes the Microsoft IT Academy curriculum to provide students with IT skills training and technology essentials for professional environments. Students will develop in-demand skills in Microsoft Word and PowerPoint, and will complete the **Microsoft Office Specialist Exams** for Word 2013 and Excel 2013 upon course completion.

Business and Marketing Essentials

Course Numbers: 143910, 143920
Grade Level: 9–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Course Description:
This course is designed to provide students with a working knowledge of the business environment. It covers different forms of business and the activities involved in operating a business. The course helps students understand what businesses expect from their employees.

Business Law and Ethics – Honors

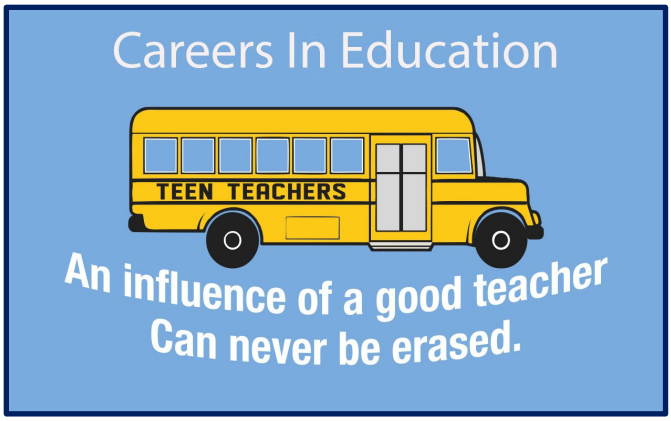
Course Numbers: 14171H, 14172H
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
Business Law provides students with foundational knowledge of legal concepts they are likely to encounter in everyday life. Topics include contracts, credit, employment law, insurance, commercial paper, property, and bailments. This course is offered at the honors level for students seeking a deeper understanding of business law and ethics.

Entrepreneurship I

Course Numbers: 147410, 147420
Grade Level: 11-12
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
This course serves as an introduction into the nature of entrepreneurship, entrepreneurial mindsets, problem framing (identifying, clarifying, and contextualizing problems), and the design thinking process. Attention will be focused on the local community context with a core theme of the discovery of entrepreneurial opportunities. The course will equip students with an overview of entrepreneurship, help assess and develop their entrepreneurial mindset and provide a foundation of problem framing and customer discovery through the design thinking process.



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**

Intro to Education and the Classroom / Intro to Child Development (2-Period Block)

Course Numbers: 13061X, 13072X
Grade Level: 11–12
Graduation Credit: 2 Electives
Duration: 2 Semesters
Dual Credit
Prerequisite: Teacher Recommendation

Course Description:
This dual-credit course block explores both the teaching profession and child development.

Introduction to Education and the Classroom introduces students to the foundational knowledge and skills necessary for effective teaching. Students investigate the roles and responsibilities of educators, school and community relationships, and the importance of creating a positive, inclusive classroom and school culture.

Introduction to Child Development provides insight into how students learn at different developmental stages. Students explore psychological, behavioral, and social learning theories, examine developmental characteristics, and relate these to effective pedagogy. A **clinical experience** is required for course completion.

Introduction to Educational Psychology / Intro to Social Emotional and Behavioral Wellness (2-Period Block)

Course Numbers: 13081X, 13092X
Grade Level: 11–12
Graduation Credit: 2 Electives
Duration: 2 Semesters
Dual Credit
Prerequisite: Teacher Recommendation

Course Description:
This dual-credit block focuses on the psychological and emotional aspects of education.

Introduction to Educational Psychology provides an in-depth look at learning theories and their application to instructional strategies. Topics include intelligence, learning styles, information retention, motivation, student engagement, and assessment.

Introduction to Social, Emotional, and Behavioral Wellness prepares future educators to recognize and support students' social and emotional needs. Students will learn about trauma, adverse childhood experiences, and behavioral challenges. The course emphasizes classroom strategies and collaboration with families, agencies, and the broader community to implement multi-tiered systems of support.

CARPENTRY

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

Carpentry I / Carpentry II (2-Period Block)

Course Numbers: 184210, 184320
Grade Level: 11
Graduation Credit: 2 Electives
Duration: 2 Semesters
Prerequisite: Teacher Recommendation

Course Description:
This course introduces students to the knowledge base and technical skills required in the carpentry industry.

Carpentry I begins with the **NCCER Core Curriculum**, a prerequisite for all Level I completions. Students complete foundational modules such as:

- Basic Safety
- Introduction to Construction Math
- Introduction to Hand & Power Tools
- Construction Drawings
- Basic Rigging
- Communication and Employability Skills
- Materials Handling

Students then move into carpentry-specific topics including:

- Orientation to the Trade
- Building Materials, Fasteners, and Adhesives
- Hand and Power Tool Use

Carpentry II builds upon these skills with hands-on instruction in:

- Reading Plans and Elevations
- Floor, Wall, and Ceiling Framing
- Roof Framing
- Introduction to Concrete and Reinforcing Materials
- Windows and Exterior Doors
- Basic Stair Layout

Students engage in real-world projects, utilize problem-solving techniques, and are encouraged to participate in **WV SkillsUSA**.

Carpentry III / Carpentry IV / Framing Practices and Applications (3-Period Block)

Course Numbers: 184410, 184520, 182410/20
Grade Level: 12
Graduation Credit: 3 Electives
Duration: 2 Semesters
Prerequisite: Teacher Recommendation

Course Description:
This advanced course sequence further develops the technical and hands-on skills introduced in the first year.

Carpentry III focuses on:

- Commercial Drawings
- Roofing Applications
- Thermal and Moisture Protection
- Exterior Finishing

Carpentry IV includes advanced topics such as:

- Cold-Formed Steel Framing
- Drywall Installation and Finishing
- Doors and Door Hardware
- Suspended Ceilings
- Trim Work (Window, Door, Floor, Ceiling)
- Cabinet Installation and Fabrication

Students continue to engage in project-based learning and problem-solving activities while developing skills aligned with industry standards. Involvement in **WV SkillsUSA** is encouraged. Teachers provide real-world learning opportunities and integrate technology and career-readiness skills into instruction.

COLLISION REPAIR TECHNOLOGY

RT 2
CUSTOMS & REPAIR

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**

Fundamentals of Collision Repair Technology / Nonstructural Analysis and Damage Repair (2-Period Block)

Course Numbers: 167110, 167520
Grade Level: 11–12
Graduation Credit: 2 Electives
Duration: 2 Semesters

Course Description:
This course sequence introduces students to the foundational knowledge and technical skills required in the Collision Repair Technology field.

Fundamentals of Collision Repair Technology covers:

- Career opportunities and industry practices
- Tool and equipment identification and use
- Panel straightening techniques
- Introduction to vehicle preparation
- Integrated academics and safety procedures

Nonstructural Analysis and Damage Repair builds upon these fundamentals by focusing on:

- Repair of metal and composite parts
- Nonstructural damage analysis
- Lab-based skill development using problem-solving techniques and hands-on applications

Safety and real-world learning are emphasized throughout both courses.

Structural Analysis and Damage Repair / Surface Preparation and Refinishing / Custom Finishing Processes (3-Period Block)

Course Numbers: 167710, 167920, 167610/20
Grade Level: 12
Graduation Credit: 3 Electives
Duration: 2 Semesters
Prerequisite: Fundamentals of Collision Repair Technology and Nonstructural Analysis and Damage Repair

Course Description:
This advanced course sequence develops higher-level skills in collision repair and refinishing.

Structural Analysis and Damage Repair covers:

- Repair techniques for frame and unibody vehicles
- Use of welding equipment, measuring tools, and frame machines

Surface Preparation and Refinishing focuses on:

- Preparing surfaces for refinishing
- Spraying equipment operation and maintenance
- Vehicle detailing
- Diagnosis and correction of finish defects

Custom Finishing Processes offers further skill refinement in specialized refinishing techniques.

Students utilize hands-on experiences, integrated academics, and industry tools to prepare for employment in the collision repair field.

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**

Fundamentals of Drafting

Course Numbers: 172910/20
Grade Level: 9–10
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Algebra and Geometry Suggested

Course Description:
This introductory course provides students with foundational knowledge and technical skills for success in the Drafting Program. Areas of study include:

- Drafting tools and equipment
- Measurement and basic drafting techniques
- Freehand technical sketching
- Orthographic projection and dimensioning
- Basic computer skills and drawing techniques

Emphasis is placed on real-world application, personal and professional ethics, and exploration of drafting-related careers. Hands-on activities and problem-solving are integrated throughout. Participation in **WV SkillsUSA** is encouraged.

Drafting Techniques

Course Numbers: 172710/20
Grade Level: 9–10
Graduation Credit: 1 Elective / 1 Fine Arts Credit
Duration: 2 Semesters
Prerequisite: Algebra and Geometry Suggested

Course Description:
This course builds on the fundamentals and introduces advanced orthographic projection techniques. Topics include:

- Sectioning, pictorial views, auxiliary views
- Patterns and developments
- Dimensioning
- Advanced 2D CAD techniques
- Basic 3D modeling in CAD

Students will apply their skills through problem-solving and hands-on projects, developing greater drafting precision and technical understanding.

Mechanical Drafting

Course Numbers: 172510/20
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Fundamentals of Drafting and Drafting Techniques

Course Description:
This course focuses on technical skills required in mechanical drafting. Areas of study include:

- Advanced dimensioning
- Assembly drawings
- Threads, fasteners, gears, cams, and welding symbols
- Basic solid modeling techniques

Students engage in hands-on activities that simulate real-world mechanical drafting projects and explore career pathways in the field.

Architectural Drafting

Course Numbers: 172110/20
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Fundamentals of Drafting and Drafting Techniques

Course Description:
This course introduces students to architectural drawing and residential design. Areas of focus include:

- Architectural styles
- Floor plan layout and dimensioning
- Site plans, foundation plans, and elevation drawings
- Section views and residential utility planning
- Students explore careers in architecture and use CAD tools to produce drawings that align with industry standards.

COMPUTER SCIENCE

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

Completer Courses:

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

Computer Science Essentials (PLTW Pathway – CS)

Course Numbers: 14081H, 14082H
Grade Level: 9–12
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
This is the recommended entry-level course in the PLTW Computer Science program for students with no prior programming experience. Students:

- Work in teams to develop mobile apps using **MIT App Inventor®**
- Learn about digital citizenship, cybersecurity, and the social impact of computing
- Begin programming fundamentals and computational thinking
- Transition from block-based coding to text-based **Python®**
- Create algorithms for games and simulations

This course builds a strong foundation for advanced computer science study.
CTE Elective

Computer Science Principles AP (PLTW Pathway – CS)

Course Numbers: 28061A, 28062A
Grade Level: 10–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Computer Science Essentials

Course Description:
An AP-level course endorsed by the College Board, this class builds on fundamental skills by exploring deeper computer science concepts. Students:

- Use **Python®** and other platforms to explore computational thinking
- Investigate data visualization, app development, cybersecurity, and internet infrastructure
- Collaborate on hands-on projects and real-world problem solving

This course prepares students for the **AP Computer Science Principles** exam and supports exploration of CS-related careers.
CTE Elective

Computer Science Applications AP (PLTW Pathway – CS)

Course Numbers: 28011A, 28012A
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Computer Science Principles AP or Principles of Engineering

Course Description:
This advanced AP-level course emphasizes deep coding skills and programming logic. Students:

- Analyze, write, and test structured and modular code
- Study advanced topics including variables, control structures, and object-oriented programming
- Prepare for the **AP Computer Science A** exam for potential college credit

This course is ideal for students pursuing careers in software engineering, game development, or IT systems.
CTE Elective

Cybersecurity (PLTW Pathway – CS)

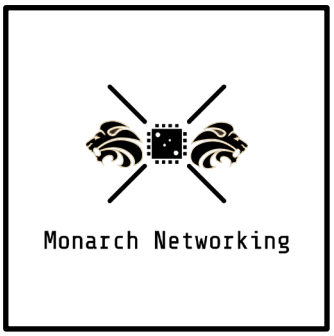
Course Numbers: 14181H, 14182H
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Computer Science AP

Course Description:
This course introduces students to the principles, challenges, and ethics of cybersecurity. Students:

- Explore threats to digital systems and strategies to protect data
- Use tools and processes to detect vulnerabilities
- Develop responsible computing practices and ethical behaviors
- Learn how secure infrastructure supports business, government, and personal systems

Cybersecurity prepares students for in-demand careers in IT security and digital forensics.
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**

CompTIA A+ 220-901 / CompTIA A+ 220-902 (2 Period Block)

Course Numbers: 166410, 166520
Grade Level: 10–12
Graduation Credit: 2 Electives
Duration: 2 Semesters
Prerequisite: Business Computer Applications I

Course Description:
This foundational course prepares students for the **CompTIA A+ certification exams**, focusing on both hardware and software components of computer systems. Students will:

- Learn to build, maintain, and troubleshoot computer hardware (motherboards, memory, storage, etc.)
- Install, operate, and troubleshoot multiple operating systems including **Windows 9X, 2000, XP, Vista, 7, 8**, and various **Linux distributions**
- This course serves as both the **#1 and #2 Completer Courses** in the program.

Networking+ N10-006 / Server+ (2 Period Block)

Course Numbers: 169410, 169520
Grade Level: 12
Graduation Credit: 2 Electives
Duration: 2 Semesters
Prerequisite: CompTIA A+ 220-901/902

Course Description:
This advanced **ARIES** class focuses on professional IT training and network administration. Students will:

- Build a foundation in **network protocols, OSI model, LAN design**, and hardware
- Practice **network troubleshooting**, server configuration, and computer repair
- Study computer hardware, data representation, operating systems, and Internet technologies
- Emphasize ethical computing and explore a range of IT career opportunities
- This course serves as the **#3 and #4 Completer Courses** in the program.

Imaging for the Web

Course Numbers: 170610, 170620
Grade Level: 10–12
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
This course introduces students to the creation and manipulation of digital images for **websites** and **multimedia applications**. Students will:

- Explore **digital imaging concepts**, imaging hardware/software, and image editing
- Develop skills in creating, capturing, and altering digital content
- Learn about **legal and ethical issues** surrounding digital media

Recommended as an **Elective** in the Computer Systems Repair Technology Program of Study.

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**

Fundamentals of Machine Tool Technology / Machine Tool Operations (2 Period Block)

Course Numbers: 190310, 190720
Grade Level: 11
Graduation Credit: 2 Electives
Duration: 2 Semesters

Course Description:
This is the **first year** of a two-year program in Machine Tool Technology. Students will be introduced to essential concepts and skills including:

- **Safety procedures**
- **Precision measurement**
- **Basic machining processes**
- **Blueprint reading**
- **Applied shop math**
- **Introduction to computerized machining**

This course is designed to build foundational skills for advanced study in metal trades.

Fundamentals of Machine Processes / Metal Trades Processes and Applications / Machine Tool Technology (3 Period Block)

Course Numbers: 190510, 190920, 190210, 190220
Grade Level: 12
Graduation Credit: 3 Electives
Duration: 2 Semesters
Prerequisite: Fundamentals of Machine Tool Technology and Machine Tool Operations

Course Description:
This **second-year** course in Machine Tool Technology emphasizes **advanced machining processes** on both **manual and computer-controlled machines**. Students will:

- Deepen their skills in **machine setup and operation**
- Explore more complex **metalworking techniques**
- Gain further experience with **blueprints and precision measuring tools**
- Practice **problem-solving and process applications** used in the metal trades industry

MARKETING MANAGEMENT

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

Marketing Principles

Course Numbers: 042210, 042220
Grade Level: 10–11
Graduation Credit: 1 Elective
Duration: 2 Semesters
CTE Elective

Course Description:
This course provides students with foundational knowledge and skills related to **marketing occupations**. Areas of study include:

- Marketing principles
- Human relations
- Marketing math
- Economic concepts
- School store operations
- Cash handling and the sales process
- Job-seeking and job-keeping skills
- **Recommended for students in grade 10 or 11** and required for the **Marketing concentration**.

Marketing Applications

Course Numbers: 042510, 042520
Grade Level: 12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Marketing Principles

Course Description:
This course builds on the skills developed in **Marketing Principles** and prepares students for **entry-level employment** in the field of marketing. Areas of study include:

- Promotion and pricing strategies
- Finance and distribution
- Risk management and purchasing
- Marketing research

- Entrepreneurship

Required for the **Marketing concentration**.

Cross-Media Marketing

Course Numbers: 042610, 042620
Grade Level: 10–12
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
This course introduces students to a broad range of **marketing strategies and digital media applications**. Topics include:

- Advertising and promotion
- Retail and digital marketing
- Customer service and sales
- Marketing communication and technology use
- Marketing strategies in cross-media formats

Required for the **Marketing concentration**.

Marketing Work Experience / Internship

Course Numbers: 042810, 042820
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
College Credit: West Liberty University (WLU)

Course Description:
This course provides students with **hands-on, practical experience** in the marketing field through structured **internships or simulated work experiences** with local businesses or organizations. Under the mentorship of industry professionals, students will:

- Participate in real-world marketing tasks and projects
- Explore marketing strategies and consumer behavior
- Gain exposure to the day-to-day operations of marketing departments
- Develop critical thinking, problem-solving, and professional skills

An essential component of the **Marketing concentration**, this course bridges classroom learning with real-world application.

PRE-ENGINEERING

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

Completer Courses:
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**

Intro to Engineering

Course Numbers: 24611H, 24612H
Grade Level: 9–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
CTE Elective

Course Description:
This introductory Project Lead the Way (PLTW) course engages students in open-ended problem solving using the engineering design process. Students apply math and science concepts while using industry-standard technology and software. Topics may include:

- Aerodynamics and astronautics
- Biological and environmental engineering
- Digital electronics and circuit design
-

This course introduces a broad scope of engineering fields to help students explore potential future careers before college.

Principles of Engineering

Course Numbers: 24631H, 24632H
Grade Level: 9–12
Graduation Credit: 1 Science (Qualifies as 3rd-year lab science)
Duration: 2 Semesters
Prerequisite: Intro to Engineering

Course Description:
This course provides students with a comprehensive overview of engineering concepts such as:

- Mechanisms and structural strength

- Material properties
- Automation and control systems

Students build research, design, and teamwork skills, learning professional documentation and presentation techniques. Great preparation for post-secondary engineering study.

Civil Engineering and Architecture

Course Numbers: 24661H, 24662H
Grade Level: 11–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Intro to Engineering

Course Description:
This course focuses on building and site design, both residential and commercial. Students:

- Apply engineering and architectural standards
- Use 3D design software to model projects
- Collaborate to solve real-world design challenges

Emphasis is placed on applying math and science principles in practical settings and developing teamwork, communication, and critical thinking skills.

Computer Science Principles AP

Course Numbers: 28061A, 28062A
Grade Level: 10–12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Computer Science Essentials

Course Description:
An AP-level course endorsed by the College Board, this class builds on fundamental skills by exploring deeper computer science concepts. Students:

- Use Python® and other platforms to explore computational thinking
- Investigate data visualization, app development, cybersecurity, and internet infrastructure
- Collaborate on hands-on projects and real-world problem solving

This course prepares students for the AP Computer Science Principles exam and supports exploration of CS-related careers.

Engineering Design and Development

Course Numbers: 24641H, 24642H
Grade Level: 11–12
Graduation Credit: 1 Elective

Duration: 2 Semesters
Prerequisite: Intro to Engineering, Principles of Engineering (POE), and a third PLTW engineering elective

Course Description:
This capstone course is the culmination of the PLTW Engineering Pathway. Students apply the knowledge and skills they've gained throughout the program to tackle a real-world problem of their choosing. The process includes:

- Identifying and defining a problem
- Conducting research
- Designing and testing a solution
- Presenting findings to a panel of industry professionals

Students follow a formal engineering design process, document their work to industry standards, and develop essential professional and technical skills.
By completing this course, students will be well-prepared for post-secondary engineering programs or entry-level careers in engineering and technology fields.

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**
3. **0951 – Food Preparation**

Restaurant and Culinary Foundations / Restaurant Management Essentials (ProStart I)

Course Numbers: 1013E1, 1014E2
Grade Level: 11
Graduation Credit: 2 Electives
Duration: 2 Semesters
Prerequisite: None

Course Description:
This is the first year of a two-year program designed to develop entry-level skills for the food service industry. Students will explore the fundamentals of food technology, basic food production, quick service techniques, sanitation and safety standards, and dining room customer service. Emphasis is placed on hands-on experience, professionalism, and preparing students for the fast-paced hospitality field.

Advanced Principles in Food Production / Restaurant Professional (ProStart II)

Course Numbers: 1019E1, 1020E2
Grade Level: 12
Graduation Credit: 2 Electives
Duration: 2 Semesters
Prerequisite: Completion of ProStart I

Course Description:
This is the second year of the ProStart program and focuses on professional food service techniques, advanced kitchen operations, dining room service, and real-world work experiences in the food service industry. Students refine their culinary and hospitality skills, preparing them for industry certifications, post-secondary programs, or immediate employment in culinary careers.

Hospitality and Tourism Internship

Course Numbers: 121010, 121020
Grade Level: 12
Graduation Credit: 1 Elective
Duration: 2 Semesters
Prerequisite: Enrollment in Advanced Principles in Food Production / Restaurant Professional (ProStart II)
Additional Requirement: Letter verifying current employment in a food service establishment

Course Description:
This internship provides students with hands-on, real-world work experience in the food service and hospitality industries. Under the supervision of an industry professional, students apply classroom knowledge in a workplace setting, gaining valuable skills in customer service, food preparation, time management, and professional communication.

Baking and Pastry Applications

Course Number: 101800
Grade Level: 9–12
Graduation Credit: ½ Elective
Duration: 1 Semester
Prerequisite: None

Course Description:
This elective course focuses on the fundamentals of baking and pastry arts, including weights and measures, ingredient handling and storage, safety procedures, and preparation of baked goods such as yeast-raised products, cakes, cookies, muffins, pies, and specialty desserts. Students use problem-solving and hands-on techniques to build essential culinary skills in a practical kitchen environment.

Food Preparation

Course Number: 095100
Grade Level: 10–12
Graduation Credit: ½ Elective
Duration: 1 Semester
CTE Elective

Course Description:
Food Preparation focuses on developing practical skills in food selection, preparation, storage, and service. Students learn how to manage food and nutrition resources to meet personal and family dietary needs, emphasizing the principles of nutrition and the connection between diet and overall health and well-being. This course includes hands-on activities and is ideal for students interested in culinary arts, nutrition, or hospitality careers.

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**

Foundations of Health Science (Honors) / Advanced Principles of Health Sciences

Course Numbers: 07111H / 071520
Grade Level: 11
Graduation Credit: 2 Electives
Duration: 2 Semesters

Course Description:
This two-period block course prepares students for a wide range of healthcare careers by providing foundational knowledge and technical skills. Instruction emphasizes healthcare and environmental safety procedures, ethical and legal responsibilities, and healthcare-related mathematical computations. Students will gain in-depth exposure to medical terminology, human biology, and the pathophysiology of diseases and disorders. Emphasis is placed on project- and problem-based learning, allowing students to practice real-world healthcare procedures and develop skills in patient privacy (HIPAA), communication, teamwork, and occupational safety. Students may earn industry-recognized certifications in HIPAA/Data Privacy and Healthcare Safety.

Clinical Specialty I / Clinical Specialty II / Medical Terminology

Course Numbers: 07891X / 07902X / 07210X
Grade Level: 12
Graduation Credit: 3 Electives
Duration: 2 Semesters
Prerequisite: Successful completion of *Foundations of Health Science* and *Advanced Principles of Health Sciences*

Course Description:
This three-period block is designed to provide students with hands-on work-based learning experiences in various healthcare settings. In the first semester, students complete a clinical rotation as Nursing Assistant volunteers at Good Shepherd Nursing Home. Upon completion and passing the state exam, students are eligible for Certified Nursing Assistant (CNA) certification. The course also includes in-depth medical terminology instruction and specialized training based on student interest areas. Students may earn up to 13 college credits through WVNCC, and the course qualifies for Dual Credit and Advanced Placement (DC/AP) opportunities.

Exploring Health Professions

Course Number: 070000
Grade Level: 10
Graduation Credit: ½ Elective
Duration: 1 Semester
CTE Elective

Course Description:
This course provides students with an overview of career opportunities in the healthcare field. Students will explore a wide range of health professions, learning about the roles, responsibilities, educational requirements, and work environments of various healthcare providers. Ideal for students considering a future in health sciences, this introductory course helps guide career and academic planning.

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**

Welding I / Welding II *(2-period block)*

Course Numbers: 18621X / 18632X
Grade Level: 11
Graduation Credit: 2 Electives
Duration: 2 Semesters

Course Description:
This first-year course in the Welding Technology program provides students with foundational knowledge and hands-on experience in various welding techniques. Instruction includes:

- Introduction to Welding Technology
- Oxy-Fuel Cutting and Welding (OFC/OAW)
- Shielded Metal Arc Welding (SMAW)
- Gas Metal Arc Welding (GMAW)
- Basic Blueprint Reading for Welders

Students will develop essential technical and safety skills, preparing them for advanced welding applications in year two. This course is part of a two-year completer program and includes opportunities for dual credit through partner institutions.

Welding III / Welding IV / Blueprint Reading and Metallurgy *(3-period block)*

Course Numbers: 18643X / 18654X / 198310 / 198320
Grade Level: 12
Graduation Credit: 3 Electives
Duration: 2 Semesters
Prerequisite: Welding I and Welding II

Course Description:
The second year of the Welding Technology program focuses on advanced welding processes and preparation for WV State Welding Certification in plate and pipe welding. Students refine their skills using four different welding methods and explore advanced concepts in:

- Gas Tungsten Arc Welding (GTAW/TIG)

- Flux Cored Arc Welding (FCAW)
- Gas Metal Arc Welding (GMAW)
- Plasma Arc Cutting (PAC)
- Advanced Blueprint Reading and Metallurgy

This intensive 3-period block allows students to perform high-quality welds in a variety of positions and materials. Students may qualify for state certifications **and** dual credit opportunities, preparing them for entry into the welding industry or post-secondary education.

ADDITIONAL COURSES

Fab Lab

Course Numbers: 762010 / 762020
Grade Level: 9–12
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
Do you want to use state-of-the-art equipment to design, build, and test almost anything? In Fab Lab, students will utilize cutting-edge digital fabrication technologies such as 3D printers, laser cutters, CNC routers, vinyl cutters, and milling machin**es** to transform product ideas into tangible creations.
This hands-on course emphasizes problem-solving**,** engineering design, and technological skills in a lab-based setting. Students will explore interrelated fields including engineering**,** mathematics**,** art**,** graphic design**,** CAD**,** electronics, and entrepreneurship, preparing them for both creative and technical careers.

Special Programs Peer Tutor

Course Number: 763199
Grade Level: 10–12
Graduation Credit: Non-credit
Duration: 1 Semester

Course Description:
Students enrolled in this course will serve as peer tutors for students with special needs, assisting them in completing daily classroom activities. Peer tutors will help promote socialization, communication, and inclusion while developing empathy, leadership, and interpersonal skills. This is a non-credit course focused on service, support, and personal growth.

Reading Support

Course Numbers: 481010 / 481020
Grade Level: 9–12
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
Reading Support is designed to strengthen students' reading proficiency through targeted instruction using research-based literacy strategies. Students will receive small group instruction in the five essential areas of reading: phonemic awareness, phonics, fluency, vocabulary, and comprehension.

This course emphasizes growth through hands-on activities, engaging texts, and informational content across disciplines, helping students become more confident, capable readers across all subject areas.

Robotics I / II / III / IV

Course Numbers:
Robotics I: 186610 / 186620
Robotics II: 186710 / 186720
Robotics III: 186810 / 186820
Robotics IV: 186910 / 186920
Grade Level: 9–12
Graduation Credit: 1 Elective (per level)
Duration: 2 Semesters (each course level)

Course Description:
This multi-level robotics program offers students progressive opportunities to explore robot design, construction, and programming **using** VEX Robotics systems.

- **Robotics I** introduces foundational engineering principles, basic programming, and team-based problem solving.
- **Robotics II–IV** build on those fundamentals, challenging students to develop advanced robotics projects, compete in challenges, and refine technical and programming skills.
-

Students use real-world engineering processes to solve problems and bring creative robotic solutions to life in a hands-on, collaborative environment.

Life

Course Numbers: 092910 / 092920
Grade Level: 9–10
Graduation Credit: 1 Elective
Duration: 2 Semesters

Course Description:
Life is a comprehensive course designed to help students build essential skills for personal development and everyday living. Areas of study include:

- Foods and Nutrition
- Parenting
- Life Relationships
- Financial Literacy
- Personal Wellness

Resource Management
Students will explore topics relevant to becoming responsible individuals, family members, and citizens, with an emphasis on making informed, healthy life choices.

Parenting and Strong Families

Course Number: 090300
Grade Level: 10–12
Graduation Credit: ½ Elective
Duration: 1 Semester

Course Description:
This course helps students evaluate their readiness for parenting and understand the characteristics of strong families. Topics include child development, parenting roles and responsibilities, and the challenges of modern parenting. Students will participate in the Real Care Baby Project, a hands-on baby simulation experience that mimics the 24/7 responsibilities of caring for an infant. This activity helps students develop empathy and decision-making skills related to parenting and family life.

Appendix A - AP Course Equivalency Guide

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.

West Liberty University

AP Course Equivalency West Liberty University			
Exam Name	**Minimum Score Required**	**Number of Credits**	**Equivalent Course**
AP 2-D Art and Design	3	3	ART 110
AP 3-D Art and Design	3	3	ART160
AP Biology	3	8	BIO 105-106 or BIO 124-125 & BIO Elective
AP Calculus AB	3	4	MATH 210
AP Calculus BC	3	9	MATH 210 & 211
AP Chemistry	3	8	CHEM 110, 111, 112 & 113
AP Comparative Government and Politics	3	3	POLS 304
AP Computer Science A	3	4	CIS 270 & 271
AP Computer Science Principles	3	3	CIS Elective
AP English Language and Composition	3	3	ENG 101
AP English Language and Composition	5	3	ENG 103
AP English Literature and Composition	3	3	ENG 199
AP European History	3	6	HIST 104 & HIST Elective
AP Human Geography	3	3	GEO 205 or 206
AP Physics 1	3	3	PHYS 101 & 110
AP Physics 2	3	3	PHYS 102 & 111
AP Precalculus	3	3	MATH 145
AP Psychology	3	3	PSYC 101
AP Research	3	3	HUM 199
AP Seminar	3	3	HUM 199
AP Statistics	3	3	MATH 160
AP United States Government and Politics	3	3	POLS 201
AP United States History	3	6	HIST 210 & 211

West Virginia Northern Community College

AP Course Equivalence at WVNCC			
AP Course	**Min. Score Required**	**Number of Credits**	**Equivalent Course**
AP 2-D Art and Design	NA	NA	NA
AP 3-D Art and Desing	NA	NA	NA
AP Biology	3	8	BIO 110 / BIO Elective
AP Calculus AB	3	4	MATH 279
AP Calculus BC	NA	NA	NA
AP Chemistry	3	8	CHEM 108 / CHEM 109
AP Comparative Government	NA	NA	NA
AP Computer Science A	NA	NA	NA
AP Computer Science Principles	NA	NA	NA
AP English Language	3	3	ENG 102
AP English Literature	3	3	ENG 101
AP European History	NA	NA	NA
AP Human Geography	3	3	GEOG 205
AP Physics 1	NA	NA	NA
AP Physics 2	NA	NA	NA
AP Precalculus	NA	NA	NA
AP Psychology	3	3	PSYC 105
AP Research	NA	NA	NA
AP Seminar	NA	NA	NA
AP Statistics	NA	NA	NA
AP US Government	3	3	POLS 102
AP US History	3	6	HIST 110 / HIST 111

Bethany College

AP Course Equivalency at Bethany College			
Exam Name	**Minimum Score Required**	**Number of Credit**	**Equivalent Course**
AP Biology	4	4	BIOL-100
AP Calculus AB	4	4	MATH-201, Calculus I

Wheeling University

AP Course Equivalence at Wheeling University			
Exam Name	**Minimum Score Required**	**Number of Credit**	**Equivalent Course**
AP 2-D Art and Design	3	3	ARTS - XXX
AP 3-D Art and Design	3	3	ARTS - XXX
AP Biology	3	3	BIOL - 105
AP Calculus AB	4	4	MATH - 191
AP Calculus BC	4	4	MATH 191/192
AP Chemistry	3	3	General Elective Hours
AP Chemistry	4	4	CHE-110
AP Chemistry	5	8	CHE-110 and CHE-120
AP Comparative Government and Politics	3	3	General Elective Hours
AP Computer Science A	NA	NA	NA
AP Computer Science Principles	NA	NA	NA
AP English Language and Composition	3	3	General Elective Hours
AP English Language and Composition	4	3	ENGL - 110
AP English Literature and Composition	3	3	General Elective Hours
AP English Literature and Composition	4	3	ENGL - 115W
AP European History	4	3	HIS - 115
AP Human Geography	3	3	SOCI - 121
AP Physics 1	NA	NA	NA
AP Physics 2	NA	NA	NA
AP Precalculus	NA	NA	NA
AP Psychology	3	3	PSYC - 110
AP Research	NA	NA	NA
AP Seminar	NA	NA	NA
AP Statistics	3	3	MATH - 115
AP United States Government and Politics	3	3	POSC - 120
AP United States History	4	6	HIST - 120

West Virginia University

AP Course Equivalency at West Virginia University			
Exam Name	**Minimum Score Required**	**Number of Credit**	**Equivalent Course**
AP 2-D Art and Design	4	3	ART 121
AP 2-D Art and Design	3	3	ART 1AP
AP 3-D Art and Design	3	3	ART 1AP
AP 3-D Art and Design	4	3	ART 122
AP Biology	3	3	BIOL 1AP
AP Biology	4	3	BIOL 101
AP Calculus AB	3	4	MATH 129
AP Calculus AB	4	4	MATH 155
AP Calculus BC	3	4	MATH 155
AP Calculus BC	4	4	MATH 156
AP Chemistry	3	4	CHEM 1AP
AP Chemistry	4	4	CHEM 116 and CHEM 116L
AP Comparative Government and Politics	3	3	POLS 250
AP Computer Science A	3	3	CS 1AP
AP Computer Science A	4	4	CS110 and 110L
AP Computer Science Principles	3	3	CS 1AP
AP English Language and Composition	4	3	ENGL 101
AP English Language and Composition	3	3	ENGL 1AP
AP English Language and Composition	5	3	ENGL 103
AP English Literature and Composition	3	3	ENGL 1AP
AP English Literature and Composition	4	3	ENGL 132
AP European History	3	3	HIST 102
AP Human Geography	3	3	GEOG 108
AP Physics 1	3	4	PHYS 101
AP Physics 2	3	4	PHYS 102
AP Precalculus	3	3	MATH 1AP
AP Precalculus	4	4	MATH 129
AP Psychology	3	3	PSYC 101
AP Research	3	2	HONR 297
AP Seminar	3	1	HONR 297
AP Statistics	3	3	STAT 211
AP United States Government and Politics	3	3	POLS 102
AP United States History	3	3	HIST 153
AP United States History	4	3	HIST 153

Fairmont State University

AP Course Equivalency Fairmont State University			
Exam Name	**Minimum Score Required**	**Number of Credit**	**Equivalent Course**
AP 2-D Art and Design	3	3	ART Elective
AP 3-D Art and Design	3	3	ART Elective
AP Biology	3	4	BIOL 1104
AP Biology	4	8	BIOL 1105 & 1106
AP Calculus AB	3	4	MATH 2501
AP Calculus BC	3	4	MATH 2501
AP Calculus BC	4	8	MATH 2501 & 2502
AP Chemistry	3	8	CHEM 1101 & 1102
AP Chemistry	4	5	CHEM 1105
AP Chemistry	5	9	CHEM 1105 & 2200
AP Comparative Government and Politics	3	6	POLI 2200
AP Computer Science A	3	3	COMP Elective
AP Computer Science A	4	3	COMP 1120
AP Computer Science Principles	3	3	COMP Elective
AP English Language and Composition	3	3	ENGL 1101
AP English Literature and Composition	3	3	ENGL 2240
AP European History	3	6	HIST Elective
AP Human Geography	3	3	GEOG 2210
AP Physics 1	3	4	PHYS 1101
AP Physics 2	3	4	PHYS 1102
AP Precalculus	3	3	MATH Elective
AP Psychology	3	3	PSYC 1101
AP Research	3	3	
AP Seminar	3	3	
AP Statistics	3	3	MATH 1550
AP United States Government and Politics	3	3	POLI 1100
AP United States History	3	6	HIST 1107 & 1108

Marshall University

AP Course Equivalency Marshall University			
Exam Name	**Minimum Score Required**	**Number of Credit**	**Equivalent Course**
AP 2-D Art and Design	3	3	ART 214
AP 3-D Art and Design	3	3	ART 215
AP Biology	3	8	BSC 104 & 105
AP Biology	4	8	BSC 120 & 121
AP Calculus AB	3	5	MTH 132
AP Calculus AB	4	5	MTH 229
AP Calculus BC	3	5	MTH 229
AP Calculus BC	4	9	MTH 229 & 230
AP Chemistry	3	3	CHM 205
AP Chemistry	4	5	CHM 211 & 217
AP Chemistry	5	10	CHM 211, 212, 217 & 218
AP Comparative Government and Politics	3	3	PSC 207
AP Computer Science A	3	3	IST 264
AP Computer Science Principles	3	3	CS 105
AP English Language and Composition	3	3	ENG 101
AP English Language and Composition	4	6	ENG 101 & 201
AP English Literature and Composition	3	3	ENG 231
AP English Literature and Composition	4	6	ENG 231 & 213
AP European History	3	6	HST 102 & 220
AP Human Geography	3	3	GEO 100
AP Physics 1	3	3	PHY 201
AP Physics 1	4	4	PHY 201, 202
AP Physics 2	3	3	PHY 203
AP Physics 2	4	4	PHY 203, 204
AP Psychology	3	3	PSY 201
AP Statistics	3	3	STA 225, MGT 218 or PSY 223
AP United States Government and Politics	3	3	PSC 104
AP United States History	3	6	HST 230 & 231