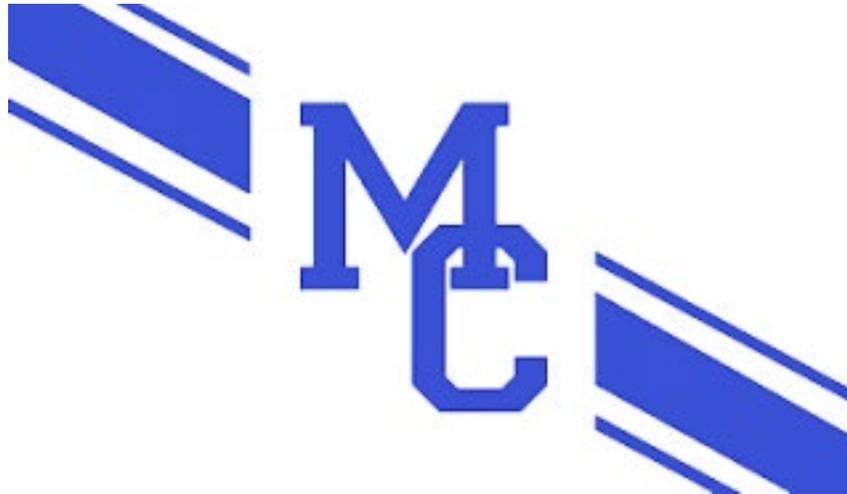


Madison County High School



Course of Studies 2026-2027

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GENERAL INFORMATION

This handbook contains information that will assist you in planning your high school education and career direction. It includes graduation requirements, sample four-year plans, course descriptions, explanations of special academic programs, career clusters, and other academic policies. We strongly encourage you to study this guide prior to registration and to consult your parents, school counselor, and teachers in planning your course of study.

COURSE REGISTRATION

Teachers will place recommendations into PowerSchool for all students; parents and students are encouraged to use these recommendations to select courses for the following school year. Other courses are available to select; however, recommendations have been carefully and specifically determined for each student. We encourage conversations between teachers and families about the recommendations and for the course selection process. Students and parents are also encouraged to access the students' Academic Career Plan (ACP) in Naviance to see the plan that has been established with the school counselor. Parents should request classes and alternate classes using Parent Portal. If you are unable to access the Parent Portal, please contact the MCHS School Counseling Office.

BLOCK SCHEDULING

MCHS follows a 4X4 block schedule. The school year is divided into 2 semesters (fall and spring), each approximately eighteen weeks long. During each semester, students take 4 classes (courses) which meet daily and are worth 1 credit each. This is an accelerated curricular program that permits students to earn 32 credits during their high school years. There are no study halls.

GRADUATION REQUIREMENTS

The Virginia Board of Education has established criteria for graduation from high school. Regular education students can earn a Standard or Advanced Studies diploma. Students receiving services through Special Education have two additional options: a Standard Diploma with credit accommodations or an Applied Studies (formerly called an IEP diploma). Information about these diplomas is available from the student's case manager.

The Virginia State Board of Education establishes the credit requirements for graduation. A standard unit of credit for graduation is based on a minimum of 140 hours of instruction plus successful completion of the requirements of the course. A verified credit is based on a minimum of 140 clock hours of instruction, successful completion of the requirements of the course, and a passing score on the end-of-course Standards of Learning (SOL) test for that course. There are alternate assessments that can be used to earn certain verified credits. This information is available through the counseling office as well as on the Virginia Department of Education website: www.doe.virginia.gov. The MCPS School Board may award locally verified credits in Science, History, Math, and English that may be used to fulfill the requirement of verified credits of the student's own selection. An administrative/faculty committee will review the student's testing history and other required criteria before awarding a verified credit. Please contact a building administrator and/or school counselor for more information on locally verified credits.

HIGH SCHOOL END OF COURSE SOL TESTS

Student will only take SOLs that are required for Graduation.

English	Grade 11 Reading Grade 11 Writing (Multiple Choice & Short Paper)
Mathematics	Algebra I Algebra II Geometry
History/Social Science	World History & Geography to 1500 World History & Geography 1500 to Present U.S. & Virginia History
Science	Earth Science Biology Chemistry

The Commonwealth of Virginia, through the Standards of Learning (SOL) and Standards of Accreditation, has set a goal for academic achievement for all students in public schools. Madison County High School aspires to reach these goals by encouraging each student to develop his or her full potential. A variety of elective courses and co-curricular activities are offered to students. Participation in these activities and courses enables students to have a balanced curriculum that assists them in creativity, critical thinking, communication, collaboration, and citizenship for lifelong learning. All students shall complete credits in core academic and elective courses to satisfy graduation requirements.

Twenty-two credits are required for the Standard Diploma, and twenty-six credits are required for the Advanced Studies diploma. Students are expected to carry a full schedule of four courses in each semester. Students will be enrolled in only one required core course (English, Social Studies, Math, and Science) per year. However, accommodation may be made for students on a case-by-case basis.

CREDIT REQUIREMENTS FOR AWARDING OF A HIGH SCHOOL DIPLOMA

Course Requirements	Advanced Studies Diploma Standard units of credit	Advanced Studies Diploma Verified units of credit	Standard Diploma Standard units of credit	Standard Diploma Verified units of credit
English – 9, 10, 11, and 12	4	2	4	2
Mathematics – Courses shall include at least two different course selections from among Algebra I; Geometry; Algebra, Functions and Data Analysis; Algebra II; or other mathematics courses above the level of Algebra II (Standard Diploma) or at least three different course selections from among Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II (Advanced Studies Diploma).	4	1	3	1
Laboratory Science – Courses shall include at least two different course selections from among Earth Science, Biology, Chemistry, or Physics (Standard Diploma). The Advanced Studies Diploma requires at least three different course selections from among Earth Science, Biology, Chemistry, or Physics.	4	1	3	1
History and Social Sciences – Courses shall include U.S. and Virginia History, U.S. and Virginia Government, and one (Standard Diploma) or both (Advanced Diploma) of the following: World History to 1500; World History from 1500; World Geography may be accepted as one of the required courses for the Advanced Studies diploma for transfer students.	4	1	3	1
World Language Courses – Courses shall include three years of one language or two years each of two languages.	3			
Health/Physical Education	2		2	
Economics and Personal Finance	1		1	
Fine Arts or Career and Technical Education	1			
World Language or Fine Arts, or Career and Technical Education – Credits earned shall include one credit in either fine and performing arts or career and technical education.			2	
Electives – Courses to satisfy this requirement shall include at least two sequential electives	3		4	
TOTAL CREDITS REQUIRED	26	5	22	5

Additional requirements: Virtual course (credit or no-credit), CTE credential OR One Adv Course OR WBL Experience, CPR/First Aid & AED Training

OTHER DIPLOMA & CERTIFICATES

Applied Studies Diploma	For students with disabilities who meet the requirements of their IEP.
Individual Student Alternative Education Plan	For students who are between the ages of 16-18, who meet specific criteria and pass the high school equivalency exam. Note: ISAEP completers do not walk at the MCHS high school graduation program, an alternate ceremony is available upon request.

REQUIREMENTS FOR GRADUATION

The revised regulations reduce the number of SOL tests students must pass to earn a high school diploma — while maintaining high expectations for learning in English, math, science and history/social science — and implement the “Profile of a Virginia Graduate,” a set of skills and attributes identified by employers and higher education as critical for success in the workplace and in college. The new graduation requirements place increased emphasis on the practical application of learned skills and content knowledge by expanding the use of performance-based assessments for the awarding of verified credits. In addition, the career-planning component of the new graduation requirements provides the opportunity for students to learn about employment options aligned with their interests in their own communities and elsewhere. While there is no specific activity that a student must experience to graduate, Madison County Public Schools will collaborate with local employers to create opportunities for students to learn about the workplace expectations, regardless of their plans after high school. Madison County High School will provide opportunities for students to understand and demonstrate civic responsibility and community engagement.

Key points for students and parents to remember about how Virginia’s diploma standards are changing include the following:

- The new graduation requirements are effective with students entering the ninth grade in the fall of 2018 (Class of 2022).
- Under the new requirements, the number of required standard credits for a Standard Diploma remains the same (22) but the number of required verified credits is reduced from six to five (one each in English reading, English writing, mathematics, science, and history/social science).
- Under the new requirements, the number of standard credits required for an Advanced Studies Diploma remains the same (26), but the number of required verified credits is reduced from nine to five (one each in English reading, English writing, mathematics, science, and history/social science).
- School divisions, on a local-option basis, may offer an authentic performance-based assessment as an alternative to the English writing SOL test for the awarding of verified credit.

COURSE LOAD

All students are expected to carry the normal load of classes required to meet the minimum standards necessary for graduation. Exceptions may be made for some students whose program of study includes an off-site placement. Students may leave school early daily only if they have enrolled in:

1. A work-based learning co-op program that awards high school credit through the MCHS Career and Technical Education department; or
2. A program for special needs students that includes job skills and work experience; or a post-secondary course/program not offered at MCHS.
3. An approved Release

REPEATING A COURSE

Students wishing to repeat a course previously passed should request such through their school counselor. While both attempts will appear on the transcript, the final grade (to be calculated in GPA and rank) associated with the credit earned will be an average of the two attempts. For the repeat of courses due to an initial failure, all attempts are included in GPA and class rank.

AUDIT POLICY

Students seeking an audit for a class must meet with their counselor to discuss the request and the audit process. Audit requests will be reviewed on a case-by-case basis and are reserved for extenuating circumstance situations. For example, a student transferring in with enrollment at the prior school in courses not offered at MCHS would possibly require an approved audit. Courses audited do not receive final credit, nor a grade to be calculated in GPA or class rank.

PROMOTIONS

Student promotions are made once a year in June, after final grades are received. (With the exception of approved Early Graduates, who are promoted to senior status after the 1st semester of their 3rd year of high school).

To move from 9th grade to 10th grade, a student must have earned 5 credits including 3 core credits.

To move from 10th grade to 11th grade, a student must have earned 11 credits including 6 core credits.

To move from 11th grade to 12th grade a student must have earned enough credits to enable him or her to complete any remaining courses in time to graduate by May of the upcoming school year.

(Core classes are defined as English, math, science, social studies, and health/PE)

EARLY GRADUATION

Students/Parents/Guardians may request early graduation approval in the spring of their 10th grade year. Students approved to graduate early would start their 3rd year of high school as a junior, being promoted to senior status upon satisfactory completion of 1st semester courses. Please see your school counselor for more information.

HIGH SCHOOL CREDIT AWARDED AT MIDDLE SCHOOL

Grades and credits earned in middle school for high school credit-bearing courses will count toward graduation credits. Credit and the grade will be calculated in the high school GPA unless the parent/guardian requests to have the grade expunged from the child's record. Written requests must be submitted to the school counseling office by June 30th prior to 9th grade year. If a parent wishes, a student who took a high school credit class as a middle school student may re-enroll in the course for which the grade and credit were deleted to earn a higher grade. If the student's deleted final grade is a "C" or better with a passing score on the accompanying SOL test (if applicable), the student may proceed to the next level of the course without the grade or credit for the prerequisite course. Credits earned during middle school allow a student to pursue more rigorous courses in all core areas, foreign languages, and CTE and Fine Arts programs at MCHS.

SCHEDULE CHANGE REQUESTS

Schedule change requests are accepted and reviewed twice a year. Once at the beginning of 1st semester and again at the beginning of 2nd semester. The counseling office has forms and further information on deadlines. Schedule change requests are not allowed past the deadline. Requests are reviewed in the order they are received by a committee consisting of administrators and counselors. Many variables are considered, including class sizes, recommendations, staffing requirements and course requests.

GRADE POINT AVERAGE (GPA) CALCULATION

The final grade for each course is a letter grade. This letter grade is assigned a point value that is used in computing a student's grade point average. The total number of points earned divided by the total number of courses taken determines the GPA. The grades of WP (withdraw-pass) and WF (withdraw-fail) are not used in calculating the GPA.

For courses taken outside of MCHS with only a letter grade reported, the grade will be applied to the MCHS grading scale with no pluses/minuses included. If a numeric grade is reported, the grade will be applied to the MCHS grading scale, including pluses/minuses.

Courses that receive a P (pass) for a grade are not figured into the GPA. Students receiving an incomplete grade for the nine weeks grading period and/or semester grade have one week to contact the teacher to arrange for make-up work.

MARKING SYSTEM

Grade	Numerical Value	Weighted GPA	Half-weighted GPA	Academic GPA
A+	99-100	5.3	4.8	4.3
A	93-98	5.0	4.5	4.0
A-	90-92	4.7	4.2	3.7
B+	87-89	4.3	3.8	3.3
B	83-86	4.0	3.5	3.0
B-	80-82	3.7	3.2	2.7
C+	77-79	3.3	2.8	2.3
C	73-76	3.0	2.5	2.0
C-	70-72	2.7	2.2	1.7
D+	68-69	-	-	1.3
D	66-67	-	-	1.0
D-	65	-	-	.7
F	0-64	-	-	0

*For weighted classes, letter grades of C- or higher are assigned either an additional point or half point depending on the level of class. Honors, Dual Enrollment, Advanced Placement and upper-level mathematics, sciences and world languages are weighted courses. Students taking AP courses must take the AP exam to earn full weighted credit. Students in DE courses must pass with at least a C to receive weighted credit. Courses receiving a full point of weighting are designated with a superscript W following the course number. Courses receiving a half-point weighting are designated with a superscript HW.

Class rank is determined by using the student's GPA and comparing it to the GPAs of all other students in that grade level. Class rank is only calculated senior year. Three times, in August, January and May.

Progress Reports are issued at the midpoint day of each nine (9) weeks to inform parents and students of their current academic status in each class. Parents are asked to review the report and contact the teacher with any concerns.

Report Cards are distributed to the student approximately five (5) school days after the end of the nine (9) weeks.

VIRGINIA BOARD OF EDUCATION DIPLOMA SEALS

Recognition of Outstanding Academic Performance

Students who demonstrate academic excellence and/or complete additional requirements may be eligible for one or more of the following awards:

- The **Governor’s Seal** is awarded to students who complete the requirements for an Advanced Studies Diploma with an average grade of “B” (GPA 3.0) or better and successfully complete at least nine (9) transferable college credits in Advanced Placement courses and/or dual enrollment courses.
- The **Board of Education Seal** is awarded to students who complete the requirements for a Standard or an Advanced Studies Diploma with an average grade of “A” (4.0).
- The **Board of Education’s Career and Technical Education Seal** will be awarded to students who earn a Standard or Advanced Studies Diploma and complete a prescribed sequence of courses in a career and technical education concentration or specialization that they choose and maintain a “B” (GPA 3.0) or better in those courses; **or**
 - Pass an examination or an occupational competency assessment in a career and technical education concentration or specialization that confers certification or occupational competency credential from a recognized industry, trade, or professional association; **or**
 - Acquire a professional license in that career and technical education field from the Commonwealth of Virginia. The Board of Education must approve all professional licenses and examinations used to satisfy these requirements.
- The **STEM Seal** shall be awarded to students who earn either a Standard Diploma or an Advanced Studies Diploma and satisfy all Math and Science requirements for the Advanced Studies diploma with a “B” average or better in all course work, and
 - successfully complete a 50 hour or more work-based learning opportunity in a STEM area, and
 - satisfy all requirements for a Career and Technical Education concentration (a concentration is a coherent sequence of two or more state-approved courses as identified in the course listing within the [CTE Program Area Guide](#)), and
 - pass one of the following:
 - a Board of Education CTE STEM-H credential examination, or
 - an examination approved by the Board that confers a college-level credit in a STEM field.
- The **Board of Education Seal for Excellence in Civics Education** will be awarded to students who meet the following criteria:
 - Earn a Standard or an Advanced Studies diploma **and**
 - Complete VA/US History and VA/US Government courses with a grade of “B” or better **and** (iii) Have good attendance and no disciplinary infractions as determined by local school board policy **and** (iv) Complete 50 hours of voluntary participation in community service or extracurricular activities:
 - (a) Volunteering for charitable or religious organizations that provide services to the poor, sick, or less fortunate;
 - (b) Participating in Boy Scouts, Girl Scouts, 4-H, or similar youth

organizations;

- (c) Participating in political campaigns, government internships, Boys/Girls State, or Model General Assembly;
 - (d) Participating in school-sponsored extracurricular activities that have a civic focus
 - (e) Any student who enlists in the United States military prior to graduation will be deemed to have met this community service requirement
- The **Board of Education's Seal of Biliteracy** certifies attainment of a high level of proficiency by a graduating high school student in one or more languages in addition to English, and certifies that the graduate meets of the following criteria: The Board of Education's Seal of Biliteracy will be awarded to students who earn either a Board of Education-approved diploma and (i) Pass all required End-of-Course Assessments in English reading and writing at the proficient or higher level; (ii) Be proficient at the intermediate-mid level or higher in one or more languages other than English, as demonstrated through an assessment from a list to be approved by the Superintendent of Public Instruction. [For purposes of this article, "foreign language" means a language other than English, and includes American Sign Language.]
 - The **Board of Education's Seal for Excellence in Science and the Environment** shall be awarded to students who earn either a Standard Diploma or Advanced Studies Diploma and
 - complete at least three different first-level board-approved laboratory science courses and at least one rigorous advanced-level or postsecondary-level laboratory science course, each with a grade of "B" or higher; (ii) (ii) complete laboratory or field-science research and present that research in a formal, juried setting; and (iii) (iii) complete at least 50 hours of voluntary participation in community service or extracurricular activities that involve the application of science such as environmental monitoring, protection, management, or restoration.

DUAL ENROLLMENT CLASSES

DE offerings in partnership with Germanna Community College

Dual Enrollment (DE) is a unique enrichment program in which high school junior and senior students are given the opportunity to take college courses in their own high school through Germanna Community College's program. DE courses hold the same rigor as any other college level course. Students are expected to perform at the same level as their college student counterparts participating in the same course. Credits generally transfer to all Virginia Community Colleges and most Virginia colleges and universities. Courses are taught by high school instructors who have the qualifications to teach at the college level.

Course	GCC Course	Grade Level	MCHS Credit	GCC Credit	MCHS Class Equivalent
Chemistry I	CHM 111	11-12	1	4	Science Credit/Elective
Chemistry II	CHM 112	11-12	1	4	Science Credit/Elective
VA/US History	HIS 121-122	11	1	6	VA/US History
College Composition I & II	ENG 111-112	11-12	1	6	English 11 or English 12
British Literature	ENG 245	12	1	3	English 12
Pre-Calculus with Trigonometry	MTH 167	11-12	1	5	Math Credit/Elective
Statistics	MTH 245	11-12	1	3	Math Credit/Elective
Calculus I	MTH 263	11-12	1	4	Math Credit/Elective
VA Teachers for Tomorrow I*	EDU 201	11-12	1	3	Elective
VA Teachers for Tomorrow II*	EDU 202	12	1	3	Elective

Not all Dual Enrollment courses are at cost to the student/parent/guardian. Tuition for Dual Enrollment is determined by Germanna Community college in August prior to the start of the school year. For those that have tuition/fees due, once tuition has been determined the students will receive payment information at the start of the semester in which the class(es) are taken in. Tuition can be paid in full or with three monthly installments. If a course is dropped after Germanna's "drop without refund" deadline and there were textbook or access fees that MCPS paid, the student/parent/guardian will be responsible to pay that amount. Speak to the assigned School Counselor for more information on Dual Enrollment tuition/fees.

In cases where the Dual Enrollment tuition is considered a financial hardship, parents/guardians are asked to notify the School Counseling Department at MCHS directly, and the counselor will provide the parent with the request for a tuition assistance form to be submitted to the Assistant Superintendent. MCPS will pay all or part of Dual Enrollment tuition if support is deemed necessary.

Through our partnership with Germanna Community College, we are able to expand our dual enrollment offerings to satisfy requirements for MCHS students to have the opportunity to earn a 30-credit hour VCCS Uniform Certificate of General Studies (UCGS) upon high school graduation, which is widely accepted for degree credit across Virginia's universities.

Many of our MCHS students could be in a very good position to earn a UCGS with what DE credits they've already earned or have planned for their junior/senior years.

*DE Teachers for Tomorrow I and II are offered through Shenandoah University, not Germanna Community College.

For more information, please contact the MCHS School Counseling office at (540) 948-3785.

DUAL ENROLLMENT PROCESS

For more information, click the following link to see additional details on Germanna Community College's website: <https://www.germannna.edu/career-and-transfer/>

Prospective students must:

1. Discuss Dual Enrollment options and intention with your school counselor.
2. Complete the on-line GCC Application for Admissions at the following link: https://www.apply.vccs.edu/Home/Sign_In/Logon.aspx
- ~~3.~~ Obtain your GCC student ID number and report it to MCHS counselor.
4. Ensure DE qualification with your MCHS School Counselor or the MCHS Career Coach via GCC Multiple Measures Criteria or qualifying Virginia Placement Test scores.
5. Sign up for the desired DE course during MCHS' course registration (via Parent Portal)
6. Electronically sign (student and parent) the enrollment agreement emailed to student and parent late spring/early summer.

Once a student is enrolled in a dual enrollment class at MCHS:

- Students will earn high school and Germanna Community College credit upon completion of the course with a passing grade of D- or higher. Students must earn a C or better in a DE course for it to be considered for college transfer credit. Please note that certain DE courses require a C or better to continue to the next level.
- Students will pay tuition for the course if applicable. (The Madison County School Board pays a portion of each student's fee and provides the textbook and/or pays any access fees). Payment in full or the 1st payment of a 3-month billing plan is due at the end of the 1st month of school in which the student is taking the course. Failure to submit payment or develop an approved payment plan after the second week of the course will result in a drop and dual-enrollment credit will not be available. A student will not be denied the opportunity to participate in this program if able to provide documented financial need. Tuition will not be refunded if a student does not receive a passing grade for each course.
- Academic dual enrollment courses are weighted on the grading scale (if C- or higher) and are marked with a DE on the transcript.

- Students who earn grades in dual enrollment courses will have a permanent transcript and GPA at GCC. Students must request GCC to have their transcript sent to any college or other institutions.

Course Type	High School Transcript (weighted or unweighted)		SAT		ACT		VPT
Transfer Courses (except Math)	Current cumulative high school GPA of 3.0 or higher	<i>or</i>	ERW score of 480 or higher	<i>or</i>	18 or higher on both English and Writing subject area tests	<i>or</i>	Placement into ENG 111
Career and Technical Courses (except Math)	Current cumulative high school GPA of 2.0 or higher	<i>or</i>	ERW score of 480 or higher	<i>or</i>	18 or higher on both English and Writing subject area tests	<i>or</i>	Placement into ENF 1 or higher
MTH 101- 133	Current cumulative high school GPA of 3.0 or higher and a 2.0 (C) grade or higher in high school math course	<i>or</i>	ERW score of 480 or higher Math score of 530 or higher	<i>or</i>	22 or higher on Math subject area test	<i>or</i>	Placement in MTH 111 or higher (Satisfaction of MTE 1-3)
MTH 154,155	Current cumulative high school GPA of 3.0 or higher and a 2.0 (C) grade or higher in a high school math course	<i>or</i>	ERW score of 480 or higher and Math score of 530 or higher	<i>or</i>	22 or higher on Math subject area test	<i>or</i>	Placement in MTH 154 or higher (Satisfaction of MTE 1-5)
MTH 161,167	Current cumulative high school GPA of 3.0 or higher and a 2.0 (C) grade or higher in Algebra 2 or in a higher-level math course	<i>or</i>	ERW score of 480 or higher and Math score of 530 or higher	<i>or</i>	22 or higher on Math subject area test	<i>or</i>	Placement into MTH 161 or higher (Satisfaction of MTE 1-9)

ADVANCED PLACEMENT COURSES

Advanced Placement (AP) Courses offer students an opportunity to do college-level work. AP courses are offered through an agreement with the Education Testing Service. These are courses with a standardized curriculum that generally matches the introductory level in the subject area at the college level. For a college to award credit, students must take the AP exam after successfully completing the course. Exams are scored on a scale of 1 - 5. Most colleges accept scores of a 3 or higher for college credit. *Additional AP courses are offered through **Virginia's Virtual Advanced Placement School** (distance learning). Students may be responsible for the cost of the AP exam (pending annual funding). See your school counselor for deadlines and further information regarding Virtual Virginia.

ADVANCED PLACEMENT EXAMS

Advanced Placement exams are given in May in accordance with the schedule established by the College Board. Students enrolled in AP courses must take the AP exam(s) to earn weighted credit (exceptions to this are at the discretion of the principal). MCPS paid AP exam fees for the 2023-2024 school year, funding for future AP exam payments is pending future annual budgets. In addition, any student, who feels qualified, may take an AP exam without taking the course, but will pay the full exam fee. More information is available through the counseling office and the College Board website, found at the following link: <https://collegeboard.org>

VIRTUAL VIRGINIA

Virginia Virtual provides a variety of on-line college-level courses, enabling Virginia students to earn college credit. Each AP course is weighted provided that the student takes the AP exam. Virtual Virginia course selections can be found at the following link: www.virtualvirginia.org. The courses utilize video segments, audio clips, whiteboard, and online discussions, as well as text lessons. Teachers are available for telephone conversations with students during office hours. Courses can be scheduled flexibly throughout the day as courses do not have to be taken in "real" time.

These courses are designed for students who can work independently with minimum supervision, have good time management skills, and a desire to learn. A successful online student can stay on task and maintain a regular schedule of logging on and keeping up with the readings and course assignments. Additional time may be required beyond the time spent in the classroom. AP courses are college-level and require the ability to work at this level.

GOVERNOR'S EARLY COLLEGE SCHOLARS PROGRAM

This program encourages juniors and seniors who are interested in accelerating their coursework to earn college credit while still in high school. To qualify, a student must:

1. Have a "B" average or better and
2. Be on track for an Advanced Studies Diploma and
3. Have potential to earn at least fifteen transferable college credits through Advanced Placement courses and/or Dual Enrollment Courses
4. Complete a signed contract.

See your assigned school counselor for more information.

BLUE RIDGE VIRGINIA GOVERNOR'S SCHOOL

The Blue Ridge Virginia Governor's School (BRVGS) is an academic year governor's school that provides a challenging and differentiated program of studies in core academic subjects, emphasizing mathematics, science, and technology. The program utilizes interactive technology, field trips, student collaboration, and team teaching to create a regional community of learners from the counties of Fluvanna, Goochland, Greene, Louisa, Madison, Nelson, and Orange. The aim of the program is to provide students with instruction in those skills necessary for success beyond high school, and to give individual students both responsibility and freedom in their learning endeavors.

The admissions process for BRVGS is handled at William Wetsel Middle School and the MCPS district office. Students and parents of rising 8th graders are notified of the application process in the fall, and information meetings are held at WWMS. Each year, applications will go out in October and are due back in mid-December. Applicants take standardized tests of ability and achievement, write a timed essay, and participate in an interview process.

As part of the application process, students must provide the following:

- Recommendations from current or past teachers of Math and Science
- A recommendation from one other adult who is not related to the

In addition, applicants to BRVGS take standardized tests of ability and achievement, write a timed essay, and participate in an interview process. Each applicant is scored based on all these components. Each BRVGS school is limited to 18 acceptances per year for incoming freshmen. Ninth graders may apply to be accepted into the program in 10th grade providing their school has an open slot.

Course offerings for BRVGS students can be found at BRVGS' website by using the following link: <https://sites.google.com/brvgs.k12.va.us/brvgs-program-of-studies/home>. This site lists all the BRVGS Board-approved courses by grade levels and subject areas, the BRVGS Skills curriculum, and BRVGS Graduation Requirements. BRVGS students may request a paper copy from the MCHS School Counseling Office.

NAVIANCE

MCHS uses a web-based post-secondary planning tool for students. The Naviance Succeed program guides students through career and college preparation. Students will identify career choices based on four career assessments and see exactly which skills, abilities, and knowledge areas are required to succeed in their chosen field. Students will explore careers and career clusters based on the Holland code to identify careers that match their strengths and areas of interest. High school students will continue developing their Academic Career Plans which were started in middle school.

College searches, applications, recommendations, scholarships, and enrichment programs are managed from one location. Naviance provides our students and families with access to comprehensive information about thousands of colleges as well as a College Match service. A student's Academic Career Plan (ACP), which is reviewed/updated annually, can be found in Naviance. The school counseling office manages, prepares, and sends recommendations and transcripts electronically which allows for documents to arrive in a timely manner. Seniors are responsible for using Naviance to request transcripts for college applications.

The login page for Naviance can be found at the following link:

<https://student.naviance.com/madisonch>

Please see the counseling secretary for assistance logging in.

HOW TO READ A COURSE DESCRIPTION

Course Number & Title: The course number is the state assigned number. This is followed by the title of the course. Superscript **W** or **HW** designates that the course is weighted.

Grade Level: The grade level indicates the most appropriate grade level for taking the course.

Credits: This shows the number of credits earned for the course. A credit is based on a minimum of 140 clock hours of instruction and successful completion of the requirements of the course.

Recommended Background: While not a required prerequisite the recommended background establishes prior knowledge/performance level to lay solid foundation for success moving forward with the next level of coursework.

Course Prerequisite: Prerequisites have been established to increase the student's probability of success in a course. Some courses require a prerequisite, co-requisite, or pre-approval, which may include but is not limited to:

- successful completion of a previous sequential course
- specified grade point average (GPA)
- teacher recommendations, auditions, or other specific requirements.

Instructional Grouping: All students should choose challenging classes that maximize their learning opportunities. Rigorous high school courses prepare students well for further education and successful careers. Considerations for placement include student grades, teacher recommendations, standardized assessments, and post-secondary and career goals.

Academic-These are traditional high school level courses.

Honors (H)- Honors courses are considered pre-AP courses and as such require additional reading and writing at a more rigorous level.

Advanced Placement (AP)-These courses are college preparatory classes. Students can receive college credit based on their AP exam score.

Dual Enrollment (DE)-These courses are college level courses in which students receive high school and college credit.

Core Courses: English, Mathematics, Science and Social Studies

Electives: Core departments offer some electives. Most electives are found in non-core departments. All courses are not offered every year. Courses are offered based on enough student requests to justify offering the course.

Multiple Credit Courses: Students may take specified courses more than once for multiple credits over a period of years. For example: Band may be taken up to eight times for credit. Students are reminded that courses required for graduation take precedent over elective courses taken for multiple credits. The school division is required to ensure that student achievement expectations are raised as a student progresses through subsequent enrollments in the course.

ENGLISH

1130A ENGLISH 9 ACADEMIC

Grade: 9 1 Credit

English 9 covers the Virginia Standards of Learning at the 9th grade level. The curriculum features a study of select novels, short stories, dramatic prose, and nonfiction selections. Students compose a variety of forms with an emphasis on analysis and persuasion utilizing evidence from credible sources. Students will apply research techniques to analyze information gathered from diverse sources by identifying misconceptions, and possible bias citing both quoted and paraphrased information using MLA style with the creation of a research project. This course also includes the continued development of grammar skills, vocabulary enrichment and reading strategies.

1130H^{HW} ENGLISH 9 HONORS

Grade: 9 1 Credit

PREREQUISITE: Passing scores on 8th Grade Reading and Writing SOLs

English 9 Honors covers the same Virginia Standards of Learning as the 9th-grade level English 9 Academic course. While the curriculum also features select novels, short stories, dramatic prose, and nonfiction selections, the literature choices are most often more complex and of a higher Lexile level than Academic English 9. Students in this course will apply research techniques to analyze information gathered from diverse sources by identifying misconceptions, and possible bias citing both quoted and paraphrased information using MLA style with the composition of a research paper. This course also includes the continued development of grammar skills, vocabulary enrichment, and analytical reading strategies. Honors courses exceed standard course requirements and are meant to prepare students for future honors courses, Advanced Placement, and Dual Enrollment courses. This course carries a .5 weighted credit.

1140A ENGLISH 10 ACADEMIC

Grade: 10 1 Credit

PREREQUISITE: English 9

English 10 Academic covers the Virginia Standards of Learning at the 10th grade level. The curriculum includes the coverage of grammar as needed in relation to composition. Composition assignments will relate to various types of literature and will reflect the four types of writing. Students will study world literature thematically. In addition to selected short stories and poems, students will study drama and multiple novels or fiction.

1140H^{HW} ENGLISH 10-HONORS

Grade: 10 1 Credit

PREREQUISITE: B- or higher in English 9 course

English 10-Honors covers the Virginia Standards of Learning at the 10th grade level. The weighted course is a survey of multicultural world literature. The course will focus on poetry, the short story, drama, and the novel. Course readings will include novels covered at a fast pace. Composition, an important component of this course, will focus on themes and interpretations of the literature studied. Writing will vary in purpose and audience.

1150A ENGLISH 11 ACADEMIC

Grade: 11 **1 Credit**

PREREQUISITE: English 10

English 11 Academic covers the Virginia Standards of Learning at the 11th grade level. Students will concentrate on grammar skills as needed to improve composition, focusing on various styles of essay writing, including, but not limited to, the narrative essay, the persuasive essay and technical writing. The study of American literature will be chronological and thematic with an emphasis on non-fiction. Students will focus on skills needed to pass both the End-of-Course Standards of Learning Test in Writing and Reading with an emphasis on strategies for vocabulary development, persuasive writing and reading comprehension.

1150H^{HW} ENGLISH 11 HONORS

Grade: 11 **1 Credit**

PREREQUISITE: B- or higher in English 10 course

English 11 Honors is a weighted course which covers the Virginia Standards of Learning at the 11th grade level with an added level of rigor and depth of study. Students enrolled in an honors section will have work to complete independently at home and will be challenged with reading and writing activities above grade-level standards. Students will concentrate on grammar skills as needed to improve composition, focusing on various styles of essay writing, including, but not limited to, the narrative essay, the persuasive essay and technical writing. The study of American literature will be chronological and thematic with an emphasis on non-fiction. Students enrolled in honors English require strong study habits and high interest in the subject area. Students will focus on skills needed to pass both the End-of-Course Standards of Learning Test in Writing and Reading with an emphasis on strategies for vocabulary development, persuasive writing and reading comprehension. Students will be required to complete a literacy project which includes a multimedia presentation and a formal written paper.

1150DE^W/1160DE^W ENGLISH 11 DE/ENGLISH 12 DE 111/112

Grade: 11-12 **1 High School Credit and 6 College Credits:** ENG 111 & ENG 112

PREREQUISITE: DE eligibility via GCC Multiple Measures Criteria or qualifying Virginia Placement Test scores

ENG 111 Introduces students to critical thinking and the fundamentals of academic writing. Through the writing process, students refine topics; develop and support ideas; investigate, evaluate, and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences, and purposes. Writing activities will include exposition and argumentation with at least one research essay. ENG 112 Continues to develop college writing with increased emphasis on critical essays, argumentation, and research, developing these competencies through the examination of a range of texts about the human experience. Requires students to locate, evaluate, integrate, and document sources and effectively edit for style and usage. Successful completion of ENG 111 is required to move on to ENG 112. Please note that GCC grades below a C will not transfer to 4-year institutions.

1160A ENGLISH 12 ACADEMIC

Grade: 12 **1 Credit**

PREREQUISITE: English 11

English 12 Academic covers the Virginia Standards of Learning at the 12th grade level. This course is a chronological study of British literature. Course readings will include poetry, drama, short stories, and novels. Emphasis will be on improving language through usage in speaking and writing. Grammar will be reviewed as needed. Composition will be related primarily to the literature studied. Students will be required to complete a major research paper or project.

1160H^{HW} ENGLISH 12 HONORS

Grade: 12 **1 Credit**

PREREQUISITE: B- or better in English 11 course

English 12 Honors is a weighted course which covers the Virginia Standards of Learning at the 12th grade level with an added level of rigor and depth of study. Students enrolled in honors English require strong study habits, a high interest in the subject area, and will have work to complete independently at home. Students will be challenged with reading and writing activities above grade-level standards. This course is a chronological study of British literature. Course readings will include poetry, drama, short stories, and novels. Emphasis will be on improving language through usage in speaking and writing. Grammar will be reviewed as needed. Composition will be related primarily to the literature studied. Students will be required to complete a major research project which includes a multimedia presentation and formal written paper.

1163DE^W ENGLISH 12 DE 245

Grade: 12 **1 High School Credit and 3 College Credits: ENG 245**

PREREQUISITE: English 11 DE 111/112

ENG 245 covers British literary traditions and texts from diverse time periods, genres, and authors. Develops critical thinking and interpretive skills through close reading, discussion, and analysis of literary texts in their historical, cultural, social, and/or literary contexts. Involves critical reading and writing. Please note that GCC grades below a C will not transfer to 4-year institutions. This course is approved as a BRVGS local partner class, effective for 26-27 school year and beyond.

1171 CREATIVE WRITING

Grades: 9-12 **1 Credit**

RECOMMENDED BACKGROUND: Keen interest in writing & honing skills in 3 creative genres: poetry, creative nonfiction, and fiction

Creative Writing is an elective course for students who enjoy writing and want to develop their skills. Students will write in many genres, using a variety of techniques and for a range of purposes and audiences. Students will produce polished writing in fiction, non-fiction, and poetry. Students will study contemporary authors and the composing processes of professional writers. Students will create a portfolio of their writing and submit multiple works for publication. Students will contribute to the content and production of the MCHS literary magazine, and the MAHI (the school yearbook) This course does not count as an English credit; however, it may be counted

as an elective credit toward graduation. This course is repeatable.

1410 DRAMA

Grades: 9-12 **1 Credit**

RECOMMENDED BACKGROUND: Interest in reading, writing, and performing plays.

Drama is an English elective course for students who are looking for a theatre-centric class experience. Students will read, write, and practice reciting works of drama from Elizabethan England all the way through 21st century New York City. Students will study the history of theatre through working closely with the genre's greats. There will be an element of performance in nearly every class meeting. Students will be expected to produce reflective, analytical, and creative writing projects through the semester. This course does not count as an English credit but is applicable towards elective credit requirements. This course is repeatable.

118010 YEARBOOK PRODUCTION I

Grades: 10-12 **1 Credit**

This course offers students an introduction to the basic elements of visual communication and the print world. This class will focus on basic skills to create our printed yearbook. This includes the basics of photography, camera usage, and compositional skills. We will also focus on layout and page design. Writing assignments will include interviewing techniques, caption writing, and printed story methods, including polls, surveys, feature stories, and headline construction. In addition, we will focus on ethics in journalism, including libel, copyright, and proper use of trademarked materials.

118110 YEARBOOK PRODUCTION II

Grades: 11-12 **1 Credit**

PREREQUISITE: Yearbook Production I and Yearbook teacher recommendation

This course offers continuation of school development and encourages more enhanced skills that can lead and guide the yearbook development process. This includes the use of photography, camera usage, and compositional skills to tell the story of our school year at Madison County High School. Writing assignments will include interviewing techniques, caption writing, and printed story methods, including polls, surveys, feature stories, and headline construction. In addition, we will focus on ethics in journalism, including libel, copyright, and proper use of trademarked materials.

118210^{HW} YEARBOOK LEADERSHIP I

Grades: 11-12 **1 Credit**

PREREQUISITE: Yearbook Production I and Yearbook teacher recommendation

Students in Yearbook Leadership will be assigned editorial roles for the current version of the yearbook and serve as a student leader among peers in developing the process, systems, and yearlong operational deadlines for the final delivery of the yearbook. These students will partner with the teacher of this course to create a simulated workplace environment of a journalistic production business. These students will be required to show mastery for the techniques and skills covered in Yearbook Production I and Yearbook Production II.

118310^{HW} YEARBOOK LEADERSHIP II

Grades: 12 **1 Credit**

PREREQUISITE: Yearbook Leadership I and Yearbook teacher recommendation

Students in Yearbook Leadership will be assigned editorial roles for the current version of the yearbook and serve as a student leader among peers in developing the process, systems, and yearlong operational deadlines for the final delivery of the yearbook. These students will partner with the teacher of this course to create a simulated workplace environment of a journalistic production business.

5710 ESL I

Grades: 9-12 **1 Credit**

This course is designed to provide instruction to speakers of other languages who are classified as less than independent in English. The main goal of the program is the acquisition of English communication skills.

5720 ESL II

Grades: 9-12 **1 Credit**

This course is designed to provide instruction to speakers of other languages who are classified as less than independent in English. The main goal of the program is the acquisition of intermediate English communication skills.

HEALTH AND PHYSICAL EDUCATION

7300 HEALTH AND PHYSICAL EDUCATION I

Grade: 9 1 Credit

This course will help students develop an understanding of health concepts, behaviors, and promote ways to enhance one's health. Topics within the curriculum include disease prevention, consumer health, environmental health, First Aid, personal and family survival, drugs, alcohol, tobacco, and Family Life. The physical education program offers students opportunities to participate in badminton, ping pong, volleyball, basketball, football, soccer, softball, as well as a course-long emphasis on cardiovascular and muscular fitness. The Virginia Wellness tests are administered during this course.

7405 HEALTH, PHYSICAL EDUCATION & DRIVER EDUCATION II

Grades: 10-12 1 Credit

PREREQUISITE: Health & Physical Education I

This course will provide students with 36 + hours of classroom training in Driver's Education as required for students to obtain their Driver's License. The Physical Education offerings include activities that promote lifelong fitness activities such as pickleball and recreational games. The course also has a strong emphasis on personal fitness and uses state-based fitness assessments as a way of having each student set personal fitness goals. Students in grade ten demonstrate comprehensive health and wellness knowledge and skills. Students will advocate for personal health and well-being and promote health-enhancing behaviors for others. *Students must be 15 years and 6 months old to be eligible for a learner's permit. Students must have a learner's permit for 9 months and be 16.5 years old to be eligible for a driver's license. When the student successfully completes the classroom phase and has secured a learner's permit, then he or she may take behind-the-wheel driver instruction. Students must sign up with the teacher for driving time. There is a fee for behind-the-wheel driver instruction.

7638 ADVANCED PHYSICAL EDUCATION: LIFETIME ACTIVITIES

Grades: 10-12 1 Credit

PREREQUISITE: Health & Physical Education I

Lifetime Activities is an upper-level elective physical education course that provides students with the opportunity to participate in a variety of physical activities. Students will be able to demonstrate the knowledge and understanding necessary to analyze movement performance in various activities using scientific principles and implement effective practice procedures for skillful performance in specialized movement forms. Students will apply advanced movement-specific information so that they develop the ability to learn, self-assess, and improve movement skills independently. Examples of activities in this course include but are not limited to: Aquatics (swimming, kayaking, canoeing), dance, individual sports, lifelong activities, outdoor pursuits, team sports, weight management, weight training/conditioning. This course is repeatable.

7640 ADVANCED PHYSICAL EDUCATION: PERSONAL FITNESS

Grades: 10-12 **1 Credit**

PREREQUISITE: Health & Physical Education I

Personal Fitness is an elective physical education course that focuses on fitness, strength training, physical conditioning, and lifetime health concepts, activities, and knowledge to promote health and wellness. This course is structured to develop individualized knowledge of weight training and physical conditioning for the beginning student and the advanced student. The course requires mastery of training principles and thorough understanding of fitness center safety rules prior to participation in weight room laboratory experiences. The course content is presented so that teachers may select strategies and instructional techniques designed to improve muscular strength and endurance, flexibility, and cardiorespiratory endurance. Students will gain the necessary information and skills to plan and implement a personal fitness and conditioning program that includes skill- and health-related fitness components to achieve and maintain a health-enhancing level of physical fitness for a lifetime. Various training models will be presented that allow flexibility of instruction among diverse student needs. Students will continue to implement and modify personal fitness and conditioning programs. This course is repeatable.

764210 UNIFIED PHYSICAL EDUCATION

Grades: 10-12 **1 Credit**

PREREQUISITE: Health & Physical Education I and Teacher Recommendation

Unified Physical Education provides a unique opportunity for students with and without disabilities to come together through ongoing educational and physical activities. The Unified Physical Education course is structured around grade-level outcomes, which include gaining the knowledge and skills necessary to maintain a health-enhancing level of fitness. Additionally, the class supports the development of leadership skills for all students, and the empowerment of ALL students to foster an inclusive class and school-wide environment. The class will include involvement in Medford Basketball, Kickball, the Special Olympics, and other related activities/field trips. This course is repeatable.

MATHEMATICS

3130 ALGEBRA I

Grades: 8-12 **1 Credit**

PREREQUISITE: Pass 8th grade math SOL and pass 8th grade math course with a grade of 73 (C) or higher

This is the fundamental course for any study of advanced mathematics. The topics studied include radical expressions, polynomial operations, laws of exponents, linear equations and inequalities, quadratic equations, functions, and the data cycle. This course will involve extensive use of the graphing calculator in solving problems, verifying solutions, and making connections. The semester course is faster paced than the year-long course, and homework completion is necessary for success.

3131-32 ALGEBRA I (Year-long)

3131 – Algebra I Part I

3132 – Algebra I Part II

Grades: 9-12 **1 Math Credit and 1 Elective credit**

This is the fundamental course for any study of advanced mathematics. The topics studied include radical expressions, polynomial operations, laws of exponents, linear equations and inequalities, quadratic equations, functions, and the data cycle. This course will involve extensive use of the graphing calculator in solving problems, verifying solutions, and making connections.

3143 GEOMETRY

Grades: 8-12 **1 Credit**

PREREQUISITE: Pass Algebra I with a grade of 73 (C) or higher and pass Algebra I SOL

Topics include congruency, parallelism, perpendicularity, similarity as applied to polygons, deductive reasoning and proof, and 2-D and 3-D figures. Students will also study right triangle trigonometry, transformations, circles, and constructions. The semester course is a rigorous course that will be faster paced than the year-long course.

3144-45 GEOMETRY (Year-long)

3144 – Geometry Part I

3145 - Geometry Part II

Grades: 9-12 **1 MATH Credit and 1 ELECTIVE Credit**

PREREQUISITE: Algebra I

Topics include congruency, parallelism, perpendicularity, similarity as applied to polygons, deductive reasoning and proof, and 2-D and 3-D figures. Students will also study right triangle trigonometry, transformations, circles, and constructions.

3134A ALGEBRA FUNCTIONS AND DATA ANALYSIS [AFDA]

Grades: 9-12 1 Credit

PREREQUISITE: Algebra I

Algebra, Functions and Data Analysis is a course for students who find math challenging and who need to sharpen their algebra skills before taking Algebra II. Algebra, Functions and Data Analysis will focus on real-world problems through the use of mathematical modeling and data analysis. Students will study functions, probability, experimental design, and data analysis and explore many advanced algebra topics. Data will be generated by practical applications in the areas of science, business, and finance.

3135 ALGEBRA II

Grades: 9-12 1 Credit

PREREQUISITE: Geometry

Recommended background: Pass Alg I SOL, Algebra I C or above and/or teacher recommendation

In this course, a thorough treatment of advanced algebraic concepts will be covered through the study of functions, “families of functions,” equations, inequalities, systems of equations and inequalities, polynomials, rational and radical equations, complex numbers, statistics, and the data cycle. Oral and written communication concerning the language of algebra, logic of procedures, and interpretation of results will also permeate the course. This course will take a theoretical approach.

313610 DATA SCIENCE

Grades: 10-12 1 Credit

PREREQUISITE: Geometry

Recommended background: Algebra II

In this course, students will identify and explore problems that involve real world data sets in a data science problem solving structure. Students will interact with large data sets as a means to formulate problems, collect and clean data, visualize data, model using data, and communicate effectively about data-formulated solutions. Students will use a variety of open-source technology tools.

3150^{HW} TRIGONOMETRY

Grades: 10-12 1 Credit

PREREQUISITE: Algebra II

Recommended background: Algebra II B- or above, and/or teacher recommendation

This is an advanced functions course that follows Algebra II. This course is a prerequisite for Math Analysis, Pre-Calculus. The course begins with a detailed study of trigonometry and the use and application of trig functions. Other topics include exponential and logarithmic functions, equations, and modeling.

3163DE^W DE PRE-CALCULUS [MTH 167]

Grades: 11-12 **1 High School Credit** and **5 College Credits:** MTH167

PREREQUISITE: Trigonometry and DE eligibility via GCC Multiple Measures Criteria or qualifying Virginia Placement Test scores

Recommended Background: Trigonometry with a C or better

Presents college algebra, analytic geometry, trigonometry, and algebraic exponential, and logarithmic functions. This weighted course carries one (1) weighted high school credit and six (6) semester hours of college credit.

3233DE^W DE COLLEGE STATISTICS [MTH 245]

Grades: 11-12 **1 High School Credit** and **3 College Credits:** MTH245

PREREQUISITE: DE Precalculus with a grade of a C or better (per GCC)

This course presents an overview of statistics, including descriptive statistics, elementary probability, probability distribution, estimation, hypothesis testing, and correlation and regression. Lecture 3 hours per week. Note MTH 245 is recommended for students who will consistently apply statistics within their major/career (biology, business, environmental science, liberal arts, and social sciences). This weighted course carried one (1) weighted high school credit and 3 semester hours of college credit. Please note, GCC grades below a C will not transfer to 4-year institutions. Note: There may be DE fees associated with this course.

3231DE^W DE CALCULUS WITH ANALYTIC GEOMETRY I [MTH 263]

Grades: 11-12 **1 High School Credit** and **4 College Credits:** MTH263

PREREQUISITE: DE Precalculus with a grade of a C or better (per GCC)

Presents analytic geometry and the calculus of algebraic and transcendental functions including the study of limits, derivatives, differentials, and introduction to integration along with their applications. Designed for chemistry, engineering, mathematics, physics, and technology. This weighted course carries one (1) weighted high school credit and four (4) semester hours of college credit. Please note, GCC grades below a C will not transfer to 4-year institutions. Note: There may be DE associated with this course.

MUSIC

9234S ADV BAND (Marching Band)

[Semester 1]

Grades: 9-12 1 Credit

PREREQUISITE for wind and percussion players: Rising 9th grade students must have been enrolled in middle school band and demonstrated proficiency on their instrument by the end of their 8th grade year, OR enrolled in a high school band class during the previous school year.

Recommended Background for color guard: Dance experience is beneficial but not required.

The Advanced Band course takes place during the Fall Semester. The course primarily focuses on Marching Band for the duration of the semester, but switches gears to prepare for a Winter Concert stage performance after the marching competition season ends. This is a co-curricular course, meaning there is a large portion of the course that takes place outside of the school day. Attendance at all rehearsals and performances is mandatory and graded. This course is repeatable.

923210 SYMPHONIC WOODWINDS

[Semester 2]

Grades: 9-12 1 Credit

PREREQUISITE: Rising 9th grade students must have been enrolled in middle school band and demonstrated proficiency on their instrument by the end of their 8th grade year, OR enrolled in a high school band class during the previous school year.

The Symphonic Band course is for woodwind players only and is the counterpart to the Symphonic - Brass/Percussion course. This course focuses on concert stage performances for the semester. This is a co-curricular course, meaning there is a portion of the course that takes place outside of the school day. Attendance at all rehearsals and performances is mandatory and graded. This course is repeatable.

923410 SYMPHONIC BRASS/PERCUSSION

[Semester 2]

Grades: 9-12 1 Credit

PREREQUISITE: Rising 9th grade students must have been enrolled in middle school band and demonstrated proficiency on their instrument by the end of their 8th grade year, OR enrolled in a high school band class during the previous school year.

The Symphonic - Brass/Percussion course is for brass and percussion players only and is the counterpart to the Symphonic - Woodwinds course. This course focuses on concert stage performances for the semester, including both concert band and percussion ensemble. This is a co-curricular course, meaning there is a portion of the course that takes place outside of the school day. Attendance at all rehearsals and performances is mandatory and graded. This course is repeatable.

9289S CONCERT CHOIR

Grades: 9-12 **1 Credit**

Recommended background: Previous enrollment in choir at the middle school or high school level.

This course is for students interested in developing vocal techniques for good vocal production. Students will sing music written in two or more parts. Attendance at all performances and rehearsals, both during school and out of school time, is mandatory and graded in the gradebook. Many different musical styles will be studied and performed. Students are urged to stay for two semesters. This course is repeatable.

SCIENCE

422010 ENVIRONMENTAL SCIENCE

Grades: 9-12 **1 Credit**

Environmental Science is the study of abiotic (nonliving) and biotic (living) factors in the environment, including human impact on planet Earth. Major units of study include an overview of scientific skills, cycles of matter on Earth, physical aspects of Earth (including rocks and plate tectonics), the living environment (including ecology and population studies), and natural resources. Additional focus is placed on human impact on the environment, including habitat destruction, resource use, pollution, and global climate change. Civic responsibility through resource conservation and protection is also included with the inclusion of environmental policies in Virginia.

422020 ENVIRONMENTAL SCIENCE HONORS

Grades: 9-12 **1 Credit**

PREREQUISITE: B- or better in 7th grade science

Environmental Science is the study of abiotic (nonliving) and biotic (living) factors in the environment, including human impact on planet Earth. Major units of study include an overview of scientific skills, cycles of matter on Earth, physical aspects of Earth (including rocks and plate tectonics), the living environment (including ecology and population studies), and natural resources. Additional focus is placed on human impact on the environment, including habitat destruction, resource use, pollution, and global climate change. Civic responsibility through resource conservation and protection is also included with the inclusion of environmental policies in Virginia. The course will go beyond the standard requirements and challenge students to extend beyond the curriculum. Projects will be heavily incorporated into student work and will require students to do work outside of class. A number of laboratory experiments, case studies, and scientific journal readings are performed and will require students to work cooperatively and collaboratively with other students.

4310A BIOLOGY I ACADEMIC

Grades: 10-12 **1 Credit**

Biology is the study of living things. Topics studied include basic ecology, chemistry, the cell, homeostasis, photosynthesis, DNA and RNA, mitosis and meiosis, sexual and asexual reproduction, heredity, taxonomy, microorganisms, infectious diseases, the human body, the effects of foreign substances on the human body, and evolution. A number of laboratory experiments are performed and will require students to work cooperatively and collaboratively with other students.

◆ **Alternatives to animal dissection techniques within each relevant curriculum will be provided.**

4310H^{HW} BIOLOGY I HONORS

Grades: 9-12 **1 Credit**

PREREQUISITE: Enrollment in the BRVGS program required to take this course 9th grade year

Recommended Background: B or better in Science 7

Biology is the study of living things. Topics studied include basic ecology, chemistry, the cell, homeostasis, photosynthesis, DNA and RNA, mitosis and meiosis, sexual and asexual reproduction, heredity, taxonomy, microorganisms, infectious diseases, the human body, the effects of foreign substances on the human body, and evolution. The course will go beyond the SOL requirements and challenge students to extend beyond the curriculum. Projects will be heavily incorporated into student work and will require students to do work outside of class. A number of laboratory experiments, case studies, and scientific journal readings are performed and will require students to work cooperatively and collaboratively with other students.

◆ **Alternatives to animal dissection techniques within each relevant curriculum will be provided.**

4210A EARTH SCIENCE ACADEMIC

Grades: 10-12 **1 Credit**

PREREQUISITE: Biology I

Earth Science includes astronomy (the universe, galaxies, stars, the solar system, and the moon), geology, (mapping, rocks and minerals, soils, volcanoes, earthquakes, and other earth processes), meteorology (atmospheric studies, climate, weather, and the water cycle), and oceanography (sea floor topography, sea water, ocean currents, and the wetlands). Current environmental issues are investigated. Demonstrations and laboratory exercises are used to enhance the learning of the topics being considered. Opportunities for field trips and study of additional topics are available.

421020^{HW} EARTH SCIENCE HONORS

Grades: 10-12 **1 Credit**

PREREQUISITE: Biology I

This rigorous laboratory course focuses on the complex nature of Earth, including Earth's composition, structure, processes, and history; its atmosphere, fresh water, and oceans; and its environment in space as a set of complex, interacting and overlapping systems. Students explore the nature of science and learn to interpret maps, charts, tables, and profiles; use technology to collect, analyze, and report data; and utilize science skills in systematic investigation. This is a very rigorous course with a strong application component that requires students to apply the concepts learned to real life scenarios. Honors Earth Science students will be challenged to learn, to research, and to present topics in Earth Science in greater depth, utilizing both classroom experimentation and literature reviews from written and electronic resources.

4330^{HW} ANATOMY & PHYSIOLOGY HONORS

Grades: 11-12 **1 Credit**

PREREQUISITE: C or better in Biology I

The course will include microbiology, advanced genetics; human anatomy and physiology; human diseases; and a more in-depth view of the public health of our community, state, nation, and world, and how each affects a given individual. Guest speakers may be used to give students insight into jobs related to the subject matter considered, and how relevant these topics are to everyday life. The class is heavily based on projects and an independent learning environment, meant to challenge students. A number of laboratory experiments are performed and will require students to work cooperatively and collaboratively with other students. Students have the following options for a final exam: comparative anatomy dissection or a cumulative final. As of the 2021-2022 school year, this is an approved BRVGS Local Partner course (remains half-weighted)

◆ Alternatives to animal dissection techniques within each relevant curriculum will be provided.

4315 BIOLOGY II: BIOTECHNOLOGY

Grades: 11-12 **1 Credit**

PREREQUISITE: Biology I

This course will introduce students to the vast scope of biotechnology, its applications in medicine, agriculture, and the environment, implications for the future, and the many careers available in this field. Covering foundational topics such as molecular biology, genetics, and cell biology, the course progresses to hands-on experiences with tools like PCR, gel electrophoresis, and recombinant DNA technology. By the end of this course, students will have a solid foundation in the principles of biotechnology as well as develop critical thinking skills and ethical awareness necessary for responsible engagement in the rapidly evolving field.

441020^{HW} CHEMISTRY Honors

Grades: 10-12 **1 Credit**

PREREQUISITE: Biology; Algebra II or enrolled in Algebra II

Chemistry Honors is a course for students in which the following topics are investigated in some depth: atomic structure, chemical bonding, the mole, formulas and equations, the gas laws, solutions, acids and bases, chemical reactions, and stoichiometry. Algebra-based calculations are integrated into the study of most of these topics. Both open ended laboratory experiments and standard verification-type laboratory experiments are performed by small groups of students.

4422DE^W CHEMISTRY DE 111

Grades: 11-12 **1 High School Credit and 4 College Credits**

PREREQUISITE: Chemistry and DE eligibility via GCC Multiple Measures Criteria or qualifying Virginia Placement Test scores

Emphasizes experimental and theoretical aspects of inorganic, organic, and biological chemistry. Discusses general chemistry concepts as they apply within our society and environment. Please note, a grade of C or better in CHM 111 is required by GCC to move on to CHM 112. As of the 2022-2023 school year, this is an approved BRVGS Local Partner course.

4423DE^W CHEMISTRY DE 112

Grades: 11-12 1 High School Credit and 4 College Credits

PREREQUISITE: Chemistry DE 111

Explores the fundamental laws, theories, and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. As of the 2022-2023 school year, this is an approved BRVGS Local Partner course. Note: There may be DE fees associated with this course.

SOCIAL STUDIES

2215A WORLD GEOGRAPHY/WORLD HISTORY I

Grades: 9 **1 Credit**

This course focuses on the world's people, places, and environments with historical emphasis on ancient times until about 1500 A.D.

2215H^{HW} WORLD GEOGRAPHY/WORLD HISTORY I HONORS

Grades: 9 **1 Credit**

This honors course focuses on the world's people, places, and environments with historical emphasis on ancient times until about 1500 A.D.(C.E.) The fast-paced course places an emphasis on reading primary and secondary sources and writing as well as a greater depth of content and understanding. This is a rigorous history course designed for highly motivated students and will provide the students with the knowledge and skills to be successful in future honors and dual enrollment social studies classes. Students should expect frequent homework. The course carries a .5 weighted credit.

2216^{HW} WORLD GEOGRAPHY/WORLD HISTORY II HONORS

Grades: 10-12 **1 Credit**

Recommended Background: Pass World History I SOL Test

This course covers geography and history from 1500 A.D. to the present with emphasis on Western Europe. The fast-paced course places an emphasis on reading primary and secondary sources and writing as well as a greater depth of content and understanding. This is a rigorous history course designed for highly motivated students and will provide the students with the knowledge and skills to be successful in future honors and dual enrollment social studies classes. Students should expect frequent homework. The course carries a .5 weighted credit.

2360A VIRGINIA/US HISTORY ACADEMIC

Grade: 11 **1 Credit**

This course covers the development of American ideals and institutions through the study of major events, eras, and personalities of Virginia and United States history from the Age of Discovery to the present.

2996D^W DUAL ENROLLMENT: VIRGINIA/US HISTORY [HIS 121/122]

Grades: 11-12 **1 High School Credit and 6 College Credits**

PREREQUISITE: DE eligibility via GCC Multiple Measures Criteria or qualifying Virginia Placement Test scores

This college course surveys United States history from its beginning to the present. This honors course meets the Virginia/United States history graduation requirement. This weighted course carries one (1) weighted high school credit and six (6) semester hours of college credit. Payment will be required. Successful completion of HIS 121 is required to move on to HIS 122. Please note that GCC grades below a C will not transfer to 4-year institutions.

2440A VIRGINIA/US GOVERNMENT ACADEMIC

Grade: 12 1 Credit

In this course the principles of American democracy are examined. Some of the major topics studied are the three branches of government, the US Constitution and other significant documents, civil rights and liberties, state and local governments, American public policy, and comparative government.

244540^W ADVANCED PLACEMENT U.S. GOVERNMENT AND POLITICS

Grade: 12 1 Credit

PREREQUISITE: DE U.S. History

Recommended Background: B or higher in DE U.S. History

The AP U.S. Government and Politics course provides a college-level, nonpartisan introduction to key political concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States. Students will study U.S. foundational documents, Supreme Court decisions, and other texts and visuals to gain an understanding of the relationships and interactions among political institutions, processes, and behaviors. They will also engage in practices that require them to read and interpret data, make comparisons and applications, and develop evidence-based arguments. The goal of this course is to prepare students for the end of the year Advanced Placement Test which could earn the student college credit for the course.

2900 PSYCHOLOGY

Grades 11-12 1 Credit

The course is designed for students interested in the psychological perspective. Basic theories, research techniques, and detailed psychological methods are examined. Students will engage in a variety of activities and experiments to gain an understanding of psychology concepts.

WORLD LANGUAGES

5110 FRENCH I

Grades: 9-12 **1 Credit**

This beginner course will focus on high frequency words and phrases used in the language to maximize the students' ability to communicate and understand quickly. In this introductory course, the primary objective is French comprehension (reading and listening) while also helping students develop their French production (writing and speaking) naturally. Additionally, students will enhance their communication in French by studying, in French, particular cultural aspects of the French speaking world.

5120 FRENCH II

Grades: 9-12 **1 Credit**

PREREQUISITE: French I

Students in French II will continue to acquire structure of basic language patterns, high frequency structures, and vocabulary. As students develop in their acquisition and mastery of French, there is still a heavy focus on reading and listening in French. However, in this second year of instruction, students will demonstrate their skills more frequently in speaking and writing. Students will continue to study the culture and customs of the French-speaking world.

5130 FRENCH III

Grades: 9 -12 **1 Credit**

PREREQUISITE: French II

French III students continue to acquire language like in earlier levels. Reading, listening, writing, and speaking all receive emphasis as students now increase their efforts in expanding their skill set. French III student abilities will continue to evolve, and students will produce more language in writing and speaking. Students will also continue to learn in the target language about historical events, current issues, culture, and customs of French- speaking countries and people.

5140^{HW} FRENCH IV

Grades: 11-12 **1 Credit**

PREREQUISITE: French III

Recommended background: B- or higher in French III

French IV students will continue to acquire more complex language through comprehensible listening, reading, conversation, and discussion. At this level, students will engage in more spontaneous conversation and continue to develop and improve their skills in all four modes of communication (reading, listening, speaking, and writing). This is a half-weighted class and is required for membership in the MCHS French honor society, La Société Honoraire de Français.

5510 SPANISH I

Grades: 9-12 **1 Credit**

This beginner course will focus on high frequency words and phrases used in the language to maximize the students' ability to communicate and understand quickly. In this introductory course, the primary objective is Spanish comprehension (reading and listening) while also helping students develop their Spanish production (writing and speaking) naturally. Additionally, students will enhance their communication in Spanish by studying, in Spanish, particular cultural aspects of the Spanish speaking world.

5520 SPANISH II

Grades: 9-12 **1 Credit**

PREREQUISITE: Spanish I

Students in Spanish II will continue to acquire structure of basic language patterns, high frequency structures, and vocabulary. As students develop in their acquisition and mastery of Spanish, there is still a heavy focus on reading and listening in Spanish. However, in this second year of instruction, students will demonstrate their skills more frequently in speaking and writing. Students will continue to study the culture and customs of the Spanish-speaking world.

5530 SPANISH III

Grades: 10-12 **1 Credit**

PREREQUISITE: Spanish II

Spanish III students continue to acquire language like in earlier levels. Reading, listening, writing, and speaking all receive emphasis as students now increase their efforts in expanding their skill set. Spanish III student abilities will continue to evolve, and students will produce more language in writing and speaking. The customs and culture of Spanish-speaking countries and people will continue to be a focus of this class.

5540^{HW} SPANISH IV

Grades: 11-12 **1 Credit**

PREREQUISITE: Spanish III

Recommended background: B- or higher in Spanish III

Spanish IV students will continue to acquire more complex language through comprehensible listening, reading, conversation, and discussion. At this level, students will engage in more spontaneous conversation and continue to develop and improve their skills in all four modes of communication (reading, listening, speaking, and writing). Students will also learn in the target language about historical events, current issues, culture, and customs of Spanish-speaking countries and people. This is a half-weighted class and is required for membership in the MCHS Spanish honor society, La Sociedad Honoraria Hispánica.

VISUAL ARTS

9120 ART I

Grades: 9-12 **1 Credit**

Art 1 is an introductory studio course that invites 9th through 12th grade students to become active participants in the visual arts. This course is designed to assist students in gaining more meaningful knowledge of a broad range of ideas, artistic styles, media, and processes in the production of art. In addition to creating artworks, Art 1 promotes visual literacy and the understanding of enduring ideas and concepts about art.

9130 ART II

Grades: 10-12 **1 Credit**

PREREQUISITE: Art I

Art 2 is designed for students interested in developing more sophisticated issues, ideas, and questions as well as skills in working with a variety of media. The study of concepts through aesthetics, art history, art criticism, and art production are included in classroom projects. Each student will create a portfolio that illustrates development of ideas and design fundamentals that may be carried forward to Art 3.

9140 ART III

Grades: 10-12 **1 Credit**

PREREQUISITE: Art II

This course is designed to expand students' knowledge, skill development, and independent thinking in both two- and three-dimensional media. Students build a unique style and a portfolio that reflects personal investigation of ideas or themes. Students will also keep a digital sketchbook to document/reflect on their artmaking process.

9147 ART IV

Grades: 11-12 **1 Credit**

PREREQUISITE: Art III

This advanced course provides the opportunity for students to develop a portfolio that reflects personal investigation of an idea or theme. Students will develop artwork that exhibits quality, thematic development, breadth of experience, and technical skill. The course will provide in-depth and independent study of media, techniques, processes, aesthetics, art criticism, and art history.

CAREER & TECHNICAL EDUCATION COURSE OF STUDIES



AGRICULTURAL EDUCATION

800610 FOUNDATIONS OF AGRICULTURE

Grades 9-12 1 Credit

This course covers a wide variety of information about agriculture and related fields. The intent is to allow the instructor to customize instruction to meet the needs of the students enrolled in the agricultural education program. Content areas include agribusiness operations, animal science and care, ecology and natural resource management, plant science and landscaping, woodworking, and basic mechanics. Instructors should select the content areas that will prepare students for the pathways offered in the school. The competencies for the selected content areas are considered essential for the course.

Certification: [Workplace Readiness](#)

CTSO: Future Farmers of America

High-Quality Work-Based Learning Experience: Foundational Supervised Agriculture Experience

Animal Systems Pathway

8008 INTRODUCTION TO ANIMAL SYSTEMS

Grades 9-12 1 Credit

Recommended background: Foundations of Agriculture

Spring Semester

Students develop competency in each of the major areas of the animal systems career pathway including animal nutrition, reproduction, breeding, care, management, and safety. Students also learn agricultural mechanics skills applicable to animal systems.

Certification: [Beef Quality Assurance](#)

CTSO: Future Farmers of America

High-Quality Work-Based Learning Experience: Foundational Supervised Agriculture Experience

808810 VET SCIENCE I

Grades 11-12 1 Credit

THIS COURSE IS PENDING APPROVAL FOR THE '26-'27 SCHOOL YEAR.

NOTE: If approved, students would travel off site to take this course; transportation would be provided. Students would spend half of their school day off MCHS' campus.

PREREQUISITE: Course must be taken concurrently with Vet Science II, Biology Veterinary Science I prepares students for postsecondary education and/or careers in veterinary medicine or related fields. Major topics include characteristics and care of common companion and livestock animals, safety practices, anatomy and physiology, nutrition, medical terminology, sanitation, and clinical exams. Course content also includes communication, facility operations, office functions, and professional etiquette in the workplace. Opportunities to handle live animals may occur. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations. Career Strategies and Development skills are embedded throughout this program. There is significant emphasis placed on not only Workplace Readiness Skills, but also learning related to careers and industry. Students investigate career clusters and pathways, analyze career assessment results, and develop or revise plans related to their academic and career related goals. In addition, students create industry-relevant resumes, create a personal brand, and connect with local business and industry representatives for the purpose of practicing interview skills, which may lead to employment.

Certification: Certified Veterinary Assistant, Small Animal CPR, Small Animal First Aid, Workplace Readiness Certification:

CTSO: Future Farmers of America

808910 VET SCIENCE II

Grades 11-12 1 Credit

THIS COURSE IS PENDING APPROVAL FOR THE '26-'27 SCHOOL YEAR.

NOTE: If approved, students would travel off site to take this course; transportation would be provided. Students would spend half of their school day off MCHS' campus.

PREREQUISITE: Course must be taken concurrently with Vet Science I DE, Biology, must meet VCCS dual-enrollment requirements

Students expand their knowledge of animal science and the care of animals, including animal structure and function, microbes and disease prevention, parasitology, and genetics and breeding. Students develop more advanced skills and techniques for assisting the veterinarian and/or technician in the following areas: performing first aid and surgery, applying aseptic techniques, performing technical functions, administering medication, handling death and dying, working with wildlife, and performing office functions. Opportunities to handle live animals may occur. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations. Career Strategies and Development skills are embedded throughout this program. There is significant emphasis placed on not only Workplace Readiness Skills, but also learning related to careers and industry. Students investigate career clusters and pathways, analyze career assessment results, and develop or revise plans related to their academic and career related goals. In addition, students create industry-relevant resumes, create a personal brand, and connect with local business and industry representatives for the purpose of practicing interview skills, which may lead to employment.

Certification: Certified Veterinary Assistant, Small Animal CPR, Small Animal First Aid, Workplace Readiness Certification

: Future Farmers of America

Plant Systems Pathway

8034 HORTICULTURE SCIENCE

Grades 9-12 1 Credit

This course prepares students for post-secondary educational career programs and entry-level positions in the horticulture industry. Instruction includes industry safety standards, the applied science of plant production, greenhouse operation and management, landscape design, and the turfgrass industry. Students will use plant and soil science to propagate and cultivate horticultural crops in a greenhouse and/or land lab.

Certification: [Horticulture/Landscape Assessment](#)

CTSO: Future Farmers of America

High-Quality Work-Based Learning Experience: Foundational Supervised Agriculture Experience; School-Based Enterprise

803510 GREENHOUSE PLANT PRODUCTION & MANAGEMENT

Grades 10-12 1 Credit

PREREQUISITE: Horticulture Science

This course prepares students for postsecondary educational career programs and entry-level positions in the greenhouse plant production and management industry. Instruction includes industry safety in greenhouse plant production, development of plant production facilities, greenhouse management and operations, plant identification, the science of plant production, business management, and marketing skills.

Certification: [Greenhouse Operators Certification](#)

CTSO: Future Farmers of America

High-Quality Work-Based Learning Experience: School-Based Enterprise SAE; AG Internship

803610 LANDSCAPING I

Grades 10-12 1 Credit

Recommended Background: Foundations of Agriculture

Landscaping offers skilled workers satisfying career opportunities in varying working environments. The expanding and ever-evolving green industry requires skilled workers for high-demand occupations offering educational and leadership opportunities. This course focuses on preparing students for entry-level employment, post-secondary opportunities, and advancement in the landscape design, construction, and maintenance industries.

Certification: [Horticulture/Landscape Assessment](#)

CTSO: Future Farmers of America

High Quality Work-Based Learning Experience: Foundational Supervised Agriculture Experience, AG Co-Op, AG Internship

803910 LANDSCAPING II

Grades 11-12 1 Credit

PREREQUISITE: Landscaping I

Landscaping II offers skilled workers satisfying career opportunities in varying work environments. The expanding and ever-evolving green industry requires skilled workers for high-demand occupations that offer educational and leadership opportunities. This course focuses on preparing students for entry-level employment in the landscaping industry through hands-on experiences, to include landscape design, installation, and maintenance, incorporating technology, plant and soil science, and utilizing landscaping tools, equipment, and machinery.

Certification: [Horticulture/Landscape Assessment](#)

CTSO: Future Farmers of America

High-Quality Work-Based Learning Experience: Foundational Supervised Agriculture Experience, AG Co-Op, AG Internship

Power, Structural, and Technical Pathway

801910 AG FABRICATION & EMERGING TECHNOLOGIES

Grades 10-12 1 Credit

Recommended background: Foundations of Agriculture

Students will receive instruction in metal fabrication, including cutting, welding, and cold metalworking processes, for agricultural applications. The course will also include the investigation of emerging technologies used within the field of agriculture. Leadership and career skills will be incorporated throughout. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

CTSO: Future Farmers of America

Certification: [Welding Assessment NOCTI](#) or [Welding Assessment Level One NCCER](#)

High- Quality Work-Based Learning Experience: Foundational Supervised Agriculture Experience, AG Internship

8082 SMALL ENGINE REPAIR

Grades 11-12 1 Credit

Recommended background: Foundations of Agriculture

This course offers an intensive study of the operation, maintenance, and repair of small gasoline engines. Instructional topics include principles of operation of internal combustion engines, repair and service procedures, and disassembly, overhaul, and reassembly. Instruction may also include the operation of two-cycle and four-cycle engines commonly found on lawnmowers, garden tractors, snow blowers, rotary tillers, chainsaws, and other equipment. (Note: This course is offered every other year, to be offered next in the '24-'25 school year)

Certification: [EETC Technician 2 Stroke Engine](#) or [EETC Technician 4 Stroke Engine](#)

CTSO: Future Farmers of America

High Quality Work-Based Learning Experience: Foundational Supervised Agriculture Experience, AG Internship

Senior Capstone Experience

801420^{HW} OPERATING THE FARM BUSINESS

Grade 12 1 Credit

PREREQUISITE: Teacher Recommendation

In this capstone course, students research successful business and management practices. Students explore the role of new and evolving technologies related to managing and operating an agricultural enterprise. Emphasis is placed on best management practices used in production agriculture, safety in an agricultural enterprise, and understanding agricultural markets.

High Quality Work-Based Learning Experience: Immersion Supervised Agriculture Experience; SAE Internship

Certification: Options to take [Beef Quality Assurance](#) or [Production Agriculture Assessment](#) or [Principles of Livestock Selection & Examination Certification](#)

CTSO: Future Farmers of America

ARCHITECTURE & CONSTRUCTION

Construction Pathway

860110 CARPENTRY I

Grades 9-12 1 Credit

With an emphasis on safety, students are taught to use hand and power tools, cut stock, apply construction mathematics, interpret blueprints, and understand basic rigging. Students will become proficient in identifying types of residential construction components to frame walls, floors, ceilings, roofs, doors, and windows. All students will obtain the required Construction Industry OSHA 10 safety credential.

Certification: [CORE: Introduction to Basic Construction Skills Assessment](#)

CTSO: Skills USA

860210 CARPENTRY II

Grades 10-12 2 Credits

PREREQUISITE: Carpentry I

Students are taught the safe use of hand and power tools common to the industry to complement their Construction Industry OSHA 10 safety credential earned in Carpentry I. Students will become proficient in assembling and installing various types of residential construction components according to industry standards, including forming foundations, framing floors, walls, ceilings, roofs, trusses, roofing materials, stairs, and exterior doors and windows.

Certification: [Carpentry Level One Assessment](#)

CTSO: Skills USA

9093 MOUNTAINEER CONSTRUCTION ENTREPRENEURSHIP

Grade 11-12 1 Credit

PREREQUISITE: Carpentry II, Teacher Recommendation and Application

Students will establish a construction school-based enterprise.

Certification: [Customer Service and Sales Certification](#)

CTSO: SkillsUSA

High Quality Work-Based Learning Experience: School-Based Enterprise, Entrepreneurship, Externship

9094 MOUNTAINEER CONSTRUCTION ENTREPRENEURSHIP ADV

Grade 12 1 Credit

PREREQUISITE: Carpentry II, Teacher Recommendation and Application

Students will establish a construction school-based enterprise.

Certification: [Customer Service and Sales Certification](#)

CTSO: SkillsUSA

High Quality Work-Based Learning Experience: School-Based Enterprise, Entrepreneurship, Externship

AUTOMOTIVE

850610 AUTO TECH I

Grades 10-11

2 Credits

THIS COURSE IS PENDING APPROVAL FOR THE '26-'27 SCHOOL YEAR.

NOTE: If approved, students would travel off site to take this course; transportation would be provided. Students would spend half of their school day off MCHS' campus.

PREREQUISITE: Algebra I

In this course, students explore, handle, and perform basic functions in engine repair, automatic transmission and transaxle, manual drive train and axles, suspension and steering systems, and brakes. Students who successfully complete the Automotive Technology program may be eligible to take the Automotive Service Excellence (ASE) Student Certification examination. The ASE Student Certification is the first step in building a career as a service professional in the automotive industry. Career Strategies and Development skills are embedded throughout this program. There is significant emphasis placed on not only Workplace Readiness Skills, but also learning related to careers and industry. Students investigate career clusters and pathways, analyze career assessment results, and develop or revise plans related to their academic and career related goals. In addition, students create industry-relevant resumes, create a personal brand, and connect with local business and industry representatives for the purpose of practicing interview skills, which may lead to employment.

Certification: [Workplace Readiness](#), [ASE](#)

CTSO: FBLA

BUSINESS

6115 PRINCIPLES OF BUSINESS & MARKETING

Grades 9-12 1 Credit

Students discover the roles of business and marketing in the free enterprise system and the global economy. Students examine basic financial concepts of banking, insurance, credit, taxation, and investments to provide a strong background for making sound decisions as consumers, wage earners, and citizens. The real-world effects of technology, effective communication, and interpersonal skills are evident throughout the course. This course also supports career development skills and explores career options.

Certification: [Workplace Readiness](#)

CTSO: FBLA

General Management Pathway

6135 BUSINESS MANAGEMENT

Grades 10-12 1 Credit

PREREQUISITE: Principles of Business & Marketing

Students study basic management concepts and leadership styles as they explore business ownership, planning, operations, marketing, finance, economics, communications, the global marketplace, and human relations. Quality concepts, project management, problem-solving, and ethical decision-making are an integral part of the course.

Certification: [Workplace Readiness](#)

CTSO: FBLA

909310 BUSINESS ENTREPRENEURSHIP

Grades 11-12 1 Credit

PREREQUISITE: Business Management or Teacher Recommendation

This course introduces students to the exciting world of creating, owning, and launching their own business. Students will learn concepts and techniques for planning an entrepreneurial venture, using design thinking and business model development. Students will learn about financial statements, marketing principles, sales and customer service, and basic economic principles for successful operations. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

Certification: [Entrepreneurship and Small Business \(ESB\) Examination](#)

CTSO: FBLA

6120 ECONOMICS & PERSONAL FINANCE *Graduation Requirement*

Grades 11-12 1 Credit

Students learn how economies and markets operate and how the U.S. economy is interconnected with the global economy. Additionally, students learn how to navigate financial decision-making and to make informed decisions relating to career exploration, budgeting, banking, credit, insurance, spending, financing postsecondary education, taxes, saving and investing, buying/leasing a vehicle, and living independently. Students also learn the importance of investing in themselves to gain valuable knowledge and skills. Development of financial literacy skills and an understanding of economic principles will provide the basis for responsible citizenship, more effective participation in the workforce, and career success. The course incorporates all economic and financial literacy objectives included in the Code of Virginia §22.1-200-03B.

Certification: [W.I.S.E. Financial Literacy](#)

CTSO: FBLA

Middle School Course Offerings

12151 MAKE IT YOUR BUSINESS

Grade 8

This course introduces students to the dynamic world of business ownership and entrepreneurship. Students explore concepts and techniques for planning and navigating the challenges of operating a business using best practices, ethics, and management skills. Course focus includes product/service planning, financial statements, marketing concepts, sales and customer service, and basic economic principles necessary for successful business operation. Students operate the school incentive store.

CTSO: FBLA

High-Quality Work-Based Learning Experience: School-Based Enterprise

HEALTH & MEDICAL SCIENCES

8302 INTRODUCTION TO HEALTH & MEDICAL SCIENCES

Grades 9-12 1 Credit

This course introduces the student to a variety of healthcare careers and develops basic skills required in all health and medical sciences. It is designed to help students understand the key elements of the U.S. healthcare system and to learn basic healthcare terminology, anatomy and physiology for each body system, pathologies, diagnostic and clinical procedures, therapeutic interventions, and the fundamentals of traumatic and medical emergency care. Throughout the course, instruction emphasizes safety, cleanliness, asepsis, professionalism, accountability, and efficiency within the healthcare environment. Students also begin gaining job-seeking skills to enter the health and medical sciences field.

Certification: [First Aid/CPR/AED](#)

CTSO: HOSA

Therapeutic Services Pathway

834110 NURSE AIDE

Grades 11-12 1 Credit

PREREQUISITE: Course must be taken concurrently with Nurse Aide Lab, two forms of legal identification required. Must be at least 16 years of age at start of the course.

Recommended background: Introduction to Health & Medical Sciences

Nurse Aide is a comprehensive occupational training course that focuses on human body systems and common diseases. This course is regulated by the Virginia Board of Nursing. Students are prepared for advanced clinical care of patients in medical-surgical, rehabilitative, and community health settings. Students receive skills training in patient care, safety, and infection control, and hands-on clinical experiences in a healthcare setting that include patient-nurse aide communication and professionalism, measuring and recording vital signs, cardiopulmonary resuscitation, and proper documentation. Work-based learning in a healthcare facility is a required component of the course, and students must maintain the American Heart Association Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC) training during this course. This course requires students to meet the Virginia Board of Nursing required clock hours to be eligible to take the Nurse Aide Examination: Virginia Board of Nursing.

High-Quality Work-Based Learning Experience: Clinical Experience

Certification: [Certified Nurse Aide](#)

CTSO: HOSA

835610 NURSE AIDE LAB

Grades 11-12 1 Credit

PREREQUISITE: Course must be taken concurrently with Nurse Aide. Two forms of legal identification required. Must be at least 16 years of age at start of the course.

The clinical experience requires additional hours of direct client care outside of Course 8341-Nurse Aide. Students will gain these clinical experience hours within an established health care facility that has an agreement with MCHS and will have teacher supervision within the facility. Hours of observation and simulation practices in the classroom shall not be included in the required hours of clinical training. Simulation within the lab does not count as direct client care but will be used in the required additional time needed for skills and training. During the lab block, students will be gaining their direct client care required hours, practice simulations and prepare these skills for the Virginia Board of Nursing Nurse Aide Examination. This lab section covers the minimum 40 hours of direct client care in the clinical experience, the minimum of 20

hours in skills acquisition and additional skills hours needed to prepare for the Virginia Board of Nursing Nurse Aide exam. This time will also be used for students to make up any of the 140 hours required in course 8341 Nurse Aide as all 140 hours must be documented before sitting for the exam.

High-Quality Work-Based Learning Experience: Clinical Experience

CTSO: HOSA

833310 EMT I

Grades 11-12

1 Credit

THIS COURSE IS PENDING APPROVAL FOR THE '26-'27 SCHOOL YEAR.

NOTE: If approved, students would travel off site to take this course; transportation would be provided. Students would spend half of their school day off MCHS' campus.

PREREQUISITE: Course must be taken concurrently with EMT II, Biology, 2.0 cumulative gpa required, other requirements as set forth by the Virginia Office of Emergency Medical Services, must be 16 or older by the start of school.

The tasks for this course represent the [National Emergency Medical Services Educational Standards \(NEMSES\)](#). Students explore and apply the fundamentals of emergency medical services (EMS), anatomy, physiology, and medical terminology while demonstrating skills in assessing and managing patient care, including assessing the scene and understanding shock, resuscitation, and trauma. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations. Career Strategies and Development skills are embedded throughout this program. There is significant emphasis placed on not only Workplace Readiness Skills, but also learning related to careers and industry. Students investigate career clusters and pathways, analyze career assessment results, and develop or revise plans related to their academic and career related goals. In addition, students create industry-relevant resumes, create a personal brand, and connect with local business and industry representatives for the purpose of practicing interview skills, which may lead to employment.

Certification: Virginia EMT, National Registry EMT, CPR, Workplace Readiness Certification

CTSO: HOSA

833410 EMT II

Grades 11-12

1 Credit

THIS COURSE IS PENDING APPROVAL FOR THE '26-'27 SCHOOL YEAR.

NOTE: If approved, students would travel off site to take this course; transportation would be provided. Students would spend half of their school day off MCHS' campus.

PREREQUISITE: Course must be taken concurrently with EMT I, Biology, 2.0 cumulative gpa required, other requirements as set forth by the Virginia Office of Emergency Medical Services, must be 16 or older by the start of school

The tasks for this course represent the [National Emergency Medical Services \(EMS\) Educational Standards](#). Students build on their knowledge and skills for providing basic life support by focusing on the areas of emergency medical services (EMS) operations, medical emergencies, and management of special patient populations. Supervised field experience that includes at least 10 patient contacts outside school hours is required. Successful completion of all course requirements and instructor endorsement may lead to eligibility to take the National Registry of

Certification: [First Aid/CPR/AED](#)

CTSO: HOSA

831710 SPORTS MEDICINE/ATHLETIC TRAINING II

Grades 12 **1 Credit**

PREREQUISITE: Sports Medicine I

Upon successful completion of this course, students will be eligible to take the National Academy of Sports Medicine-Certified Personal Trainer (NASM-CPT) exam. This course builds upon basic knowledge acquired in Sports Medicine I on topics such as exercise physiology, biomechanics, exercise program design, and injury prevention, assessment, treatment, and management. Students will assess fitness, measure body composition, and design exercise programs. Students prepare for a career in sports medicine, including completing an internship, practicing interview skills, and building a resume. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

High-Quality Work-Based Learning Experience: Job Shadowing

Certification: [Performance Enhancement Specialization](#)

CTSO: HOSA

830310^{HW} PATIENT CARE TECHNICIAN

Grades 12 **1 Credit**

PREREQUISITE: Nurse Aide

Offered as an occupational course after the completion of Nurse Aide at the 12th-grade level, Patient Care Technician emphasizes the study of nursing occupations as related to the healthcare system. Students study normal growth and development, simple body structure and function, medical terminology, and are introduced to microbes and disease. Upon completing the course, students will have mastered the skills needed to perform electrocardiograms (ECGs); execute basic medical, lab, and exam procedures; draw blood; and provide basic patient/client care. Students will be eligible to take the National Certification Exams to become Certified ECG Technicians, and Certified Patient Care Technicians.

High-Quality Work-Based Learning Experience: Clinical Experience

Certification: [Certified EKG Technician](#) and [Patient Care Technicians](#)

CTSO: HOSA

HUMAN SERVICES

8229 NUTRITION AND WELLNESS

Grades 9-12 1 Credit

Students investigate the principles of nutrition and wellness, use science and technology in food management, ensure food safety, plan menus, prepare food, and explore careers. Students prepare for careers by using critical thinking and practical problem-solving skills as well as other workplace readiness skills. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

NOTE: In this course, students will be preparing and tasting a variety of foods and beverage products. These foods and beverages may contain ingredients that cause an allergic reaction in some individuals. Students with known food allergies are encouraged to carefully consider the severity of his/her allergies before selecting this course. The communication of any such allergies to the instructor is the responsibility of the student and parent. The School Division cannot guarantee that identified allergens will NOT be used in the course by either the instructor or other students.

Certification: Workplace Readiness [ServSafe](#)

CTSO: FCCLA

825910 INTRODUCTION TO HOSPITALITY, TOURISM & RECREATION

Grades 9-12 1 Credit

Students begin preparation for employment in hospitality industries by focusing on principles of operations in food services, recreation, hospitality planning, and business relations. Special attention is paid to developing culinary skills (food sanitation, food preparation, and serving) and customer service skills. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

Certification: [Workplace Readiness Skills](#)

CTSO: FCCLA

8275 CULINARY ARTS I

Grades 10-11 2 Credits

THIS COURSE IS PENDING APPROVAL FOR THE '26-'27 SCHOOL YEAR.

NOTE: If approved, students would travel off site to take this course; transportation would be provided. Students would spend part of their school day off MCHS' campus.

Culinary Arts I provides students with a foundational understanding of the food service industry and opportunities to build technical skills in food preparation and service. Students examine basic rules of kitchen safety and sanitation, purchasing and receiving, nutrition, and menu development. The curriculum incorporates culinary applications of math, science, and technology. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

NOTE: In this course, students will be preparing and tasting a variety of foods and beverage products. These foods and beverages may contain ingredients that cause an allergic reaction in some individuals. Students with known food allergies are encouraged to carefully consider the severity of his/her allergies before selecting this course. The communication of any such allergies to the instructor is the responsibility of the student and parent. The School Division cannot guarantee that identified allergens will NOT be used in the course by either the instructor or other students.

Certification: [Workplace Readiness Skills](#), [ServSafe](#)

CTSO: FCCLA

Education & Training Pathway

823410 INTRODUCTION TO EARLY CHILDHOOD EDUCATION

Grades 9-11 1 Credit

PREREQUISITE: Rising 9th grades must have 8th grade FCS teacher recommendation

Introduction to Early Childhood Education students explore different types of early childhood education programs and delivery models, develop safe and healthy learning environments for children, and identify the ages and stages of child development and developmentally appropriate practices that support child development from birth through age 12. Students explore balancing work and family, professionalism, and education and training requirements for multiple early childhood education career pathways during the course.

Certification: [Early Childhood Education Assessment](#)

CTSO: FCCLA

906210 VA TEACHERS FOR TOMORROW I

Grades 10-12 1 Credit

Virginia Teachers for Tomorrow I (VTfT) fosters student interest, understanding, and appreciation of the teaching profession and allows secondary students to explore careers in the education and training career cluster and related pathways. Students build a foundation for teaching; learn the history, structure, and governance of teaching; apply professional teaching techniques in classroom and field experiences; and reflect on their teaching experiences.

Certification: [Para Professional Teacher Certification](#)

CTSO: FCCLA

907210 VA TEACHERS FOR TOMORROW II

Grades 11-12 1 Credit

PREREQUISITE: Virginia Teachers for Tomorrow I

Students continue to explore careers in the education and training career cluster and related pathways. This course provides hands-on opportunities for students to examine careers in education, observe professional practice, and apply professional standards and educational theory. In an authentic practicum experience, students will be able to teach lessons, manage classrooms, create learning opportunities, and build their professional portfolio in the process.

Certification: [Praxis Core Academic Skills for Educators Test](#)

CTSO: FCCLA

9062DE VA TEACHERS FOR TOMORROW I DE 201

Grades 11-12 1 Credit

PREREQUISITE: 2.7 cumulative GPA, teacher recommendation, and approval via application
Virginia Teachers for Tomorrow (VTfT) I fosters student interest, understanding, and appreciation of the teaching profession and allows secondary students to explore careers in the education and

training career cluster and related pathways. Students build a foundation for teaching; learn the history, structure, and governance of teaching; apply professional teaching techniques in classroom and field experiences; and reflect on their teaching experiences. Note: DE fees are associated with this course.

Certification: [Paraprofessional Teacher Certification](#)

CTSO: FCCLA

9072DE VA TEACHERS FOR TOMORROW II DE 202

Grades 11-12 1 Credit

PREREQUISITE: Virginia Teachers for Tomorrow I

Students continue to explore careers in the education and training career cluster and related pathways. This course provides hands-on opportunities for students to examine careers in education, observe professional practice, and apply professional standards and educational theory. In an authentic practicum experience, students will be able to teach lessons, manage classrooms, create learning opportunities, and build their professional portfolio in the process. Note: DE fees are associated with this course.

Certification: [Praxis Core Academic Skills for Educators Test](#)

CTSO: FCCLA

FUTURE EDUCATORS ACADEMY

Grades 11-12

Overview: The Future Educators Academy (FEA) is a distinctive college partnership lab school designed to prepare future elementary and special education teachers. This program emphasizes dual enrollment and accelerated, hands-on learning experiences. FEA is ideal for high school students who aspire to become educators.

Academic Pathways and Partnerships: FEA maintains specialized transfer agreements with James Madison University and the University of Mary Washington. This allows students to seamlessly transition into a bachelor's degree program, achieving their teacher licensure within two years of post-high school. Funded by the College Partnership Laboratory School Fund, the FEA enables students to earn an associate degree without any financial burden.

Program Structure: The FEA program, a collaboration between Germanna Community College and high schools in Orange, Madison, Culpeper, and Rappahannock Counties, aligns college-level coursework with high school education. The program starts in the fall of the junior year and continues through the senior spring. Classes are held at the Daniel Technology Center in Culpeper during the first half of the day, with students returning to their base high school for the remainder of their classes.

Eligibility Criteria:

- Enrollment as a rising junior at a participating high school.
- Completion of Algebra II (or a higher-level math course) by the end of the sophomore year.
- A minimum cumulative GPA of 3.0 (unweighted), reflecting good academic standing.
- Achievement of at least 3 verified credits by the end of the sophomore year. Transfer students will be evaluated on a case-by-case basis.
- Consistently excellent school attendance.
- Good disciplinary record at the current high school.

Application Process:

1. **Counselor Consultation:** Students interested in FEA should meet with their high school counselor to assess eligibility and obtain the application packet.

2. **Information Session Attendance:** Prospective applicants must attend an Early College information session. Session schedules and further details can be found on the Early College [website](#).
3. **Application Submission:** Complete and submit the Early College Application by the deadline indicated on the Early College [website](#).
4. **Transcript Submission:** Germanna Community College will request high school transcripts as part of the application process to verify the fulfillment of eligibility criteria.

Each high school's Future Educators Academy students will be selected based on a lottery from all qualified applicants from that school up to the number of spots available that year. Students who are not selected will be placed on a waiting list. Once selected, students will be expected to attend the orientation meeting, register for classes, and attend all classes. The Future Educators Academy courses (subject to change) will be at Germanna Community College, Daniel Technology Center. The Future Educators Academy allows eligible high school students to earn an associate degree in education while completing the requirements for a Diploma. The result is a more productive senior year and a substantial reduction in college tuition. Apply through your school counselor.

FEA Contact:

For additional questions or information about Future Educators Academy, email Mary Beth Dodson, Future Educators Academy Coordinator, at mdodson@germanna.edu or David Londrey, Future Educators Academy Advisor, at dlondrey@germanna.edu.

Cosmetology Pathway

874510 COSMETOLOGY I

Grade 11 2 Credits

THIS COURSE IS PENDING APPROVAL FOR THE '26-'27 SCHOOL YEAR.

NOTE: If approved, students would travel off site to take this course; transportation would be provided. Students would spend half of their school day off MCHS' campus.

In this introductory course, students study hair, skin, and nails and their related care. Students are grounded in theory as they prepare to practice procedures in a clinical lab setting or classroom, using manikins for manipulative skill practice. The first-year course emphasizes personal safety, professionalism, and sanitation and disinfection of equipment and facilities. Students develop skills in shampooing and conditioning hair, as well as styling and cutting hair. They are introduced to chemical texture services and develop skills in manicure and pedicure procedures. Students must satisfy a minimum of 840 hours of instruction in a two-year coherent sequence of courses to be eligible to take the Board for Barbers and Cosmetology licensing examination. Career Strategies and Development skills are embedded throughout this program. There is significant emphasis placed on not only Workplace Readiness Skills, but also learning related to careers and industry. Students investigate career clusters and pathways, analyze career assessment results, and develop or revise plans related to their academic and career related goals. In addition, students create industry-relevant resumes, create a personal brand, and connect with local business and industry representatives for the purpose of practicing interview skills, which may lead to employment.

Certification: [Workplace Readiness Skills](#)

CTSO: Skills USA

874610 COSMETOLOGY II

Grade 12

2 Credits

THIS COURSE IS PENDING APPROVAL FOR THE '26-'27 SCHOOL YEAR.

NOTE: If approved, students would travel off site to take this course; transportation would be provided. Students would spend half of their school day off MCHS' campus.

PREREQUISITE: Cosmetology I

In this continuing course, students build on their theoretical foundation of general sciences and practices in cosmetology to increase proficiency in hair cutting and styling on live models, with attention to professionalism, client consultation, safety, and infection control. Students are trained in safe chemical processes related to permanent waves, relaxers, lightening, and coloring hair. In addition, students learn to care for skin, hands, and feet, developing experience in providing facials, manicures, pedicures, and nail enhancements. Students will be introduced to a business management unit with a focus on managing the salon. Students must satisfy a minimum of 840 hours of instruction in a two-year coherent sequence of courses to be eligible to take the Board for Barbers and Cosmetology licensing examination. Career Strategies and Development skills are embedded throughout this program. There is significant emphasis placed on not only Workplace Readiness Skills, but also learning related to careers and industry. Students investigate career clusters and pathways, analyze career assessment results, and develop or revise plans related to their academic and career related goals. In addition, students create industry-relevant resumes, create a personal brand, and connect with local business and industry representatives for the purpose of practicing interview skills, which may lead to employment.

Certification: State Board of Cosmetology License

CTSO: Skills USA

Middle School Course Offerings

19903 FAMILY CONSUMER SCIENCES I

Grades 6

Family and Consumer Sciences Exploratory I students will prepare to be life ready as they manage individual, family, career, and civic roles and responsibilities. Students explore human development, relationships, personal environments, nutrition and wellness, textile skills, personal financial skills, career opportunities, and leadership skills. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

Certification: None

CTSO: FCCLA

19258 CAREER INVESTIGATIONS

Grades 7

This course will help students identify and demonstrate the workplace skills that employers desire in their future employees. Students analyze their personal assets; explore career clusters, career pathways, or occupations; and draft an Academic and Career Plan based on their academic and career interests.

Certification: None

INFORMATION TECHNOLOGY

Information Support & Services Pathway

6612 COMPUTER INFORMATION SYSTEMS

Grades 9-12 1 Credit

Students apply problem-solving skills to real-life situations through word processing, spreadsheets, databases, multimedia presentations, and integrated software activities. Students work individually and in groups to explore computer concepts, operating systems, networks, telecommunications, emerging technologies, and career opportunities related to the information technology field.

Certification: Microsoft Office Suite Certifications: [Powerpoint](#)

CTSO: FBLA

6613 ADVANCED COMPUTER INFORMATION SYSTEMS

Grades 10-12 1 Credit

PREREQUISITE: Computer Information Systems

Students apply problem-solving skills to real-life situations through advanced integrated software applications, including printed, electronic, and web publications. Students work individually and in groups to explore advanced computer maintenance activities, website development, programming, networking, emerging technology, and employability skills. Students enhance computer information technology skills using advanced integrated applications to create documents, publications, and websites including complex graphs, customized reports, and multimedia presentations. In addition to implementing programming and executing network activities, students will also practice the maintenance, management, and troubleshooting of systems; legal and ethical issues are explored; preparation is given for industry certifications; and employability skills are developed.

Certification: Microsoft Office Suite Certifications: [Word](#) and [Excel](#)

CTSO: FBLA

6631 DESIGN, MULTIMEDIA AND WEB TECHNOLOGIES

Grades 10-12 1 Credit

PREREQUISITE: Computer Information Systems

Students apply creativity and technology to create visual design, multimedia projects, and web projects, using industry-standard software. Work-based learning experiences allow students to apply layout and design techniques in real-world situations. Students create portfolios that include a résumé, certifications earned, and a variety of projects produced in the course.

Certification: [Adobe Certified Professional Examinations](#)

CTSO: FBLA

Programming Pathway

664010 PROGRAMMING

Grades 10-12 1 Credit

Prerequisite: Computer Information Systems or IT Fundamentals

Students in the Programming course explore programming concepts, use algorithmic procedures, implement programming procedures with one or more standard languages, and master programming fundamentals. Coding is used throughout the course. Graphical user interfaces may be used as students design and develop interactive multimedia applications, including game programs. In addition, students employ hypertext markup language (HTML) or JavaScript to create web pages. Students develop their employability skills through a variety of activities.

Certification: [Entry Level Python Programmer](#)

CTSO: FBLA

664110^{HW} PROGRAMMING ADVANCED

Grades 11-12 **1 Credit**

PREREQUISITE: Programming

Building on their foundation of programming skills, Advanced Programming students use object-oriented programming to develop database applications, and interactive multimedia applications including game applications, mobile applications, and web applications. Students continue to develop their employability skills as they research pathways for continuing education and careers in the information technology industry and engage in various career-building activities.

Certification: [Associate in Python Programmer](#)

CTSO: FBLA

Middle School STEM Course Offerings

21051 INTRO TO TECHNOLOGY & ENGINEERING

Grade 6

Students combine resources and techniques to create systems, attaining comprehension of how technological systems work. Students will explore, design, analyze, and evaluate technological systems. By simulating systems and assessing their impacts, students gain insight into how to approach the problems and opportunities of a technological world. Students will also explore technology-oriented careers.

Certification: None

CTSO: TSA

21001 TECHNOLOGICAL SYSTEMS

Grade 7

Students use the engineering design process to guide them through various hands-on activities and projects, utilizing safe use of tools, materials, and techniques to solve problems. Students explore their relationship to technology and engineering, and how technology affects the world around them, as well as careers in the fields of technology and engineering.

Certification: None

CTSO: TSA

21099 INVENTIONS & INNOVATIONS

Grade 8

Students apply the engineering design process to plan, build, and communicate inventions or innovations that address contemporary technological problems facing them, their community, and the world. This hands-on course allows students to apply creativity and innovation that emphasizes working in teams and safely using technological and engineering tools and equipment.

Certification: None

CTSO: TSA

PUBLIC SAFETY

70510 FIREFIGHTING I

Grades 11-12 2 Credits

THIS COURSE IS PENDING APPROVAL FOR THE '26-'27 SCHOOL YEAR.

NOTE: If approved, students would travel off site to take this course; transportation would be provided. Students would spend half of their school day off MCHS' campus.

PREREQUISITE: Course must be taken concurrently with Firefighting II. Must be 16 or older by the start of school, other requirements as set forth by the Virginia Department of Fire Programs. Fire Science I requires discipline and attention to academic and professional standards to successfully fight live fires, address hazardous-materials (HAZMAT) incidents, and conduct search-and-rescue operations. Students will become familiar with the procedures, equipment, and technologies used by fire departments. This course challenges students academically, mentally, and physically and meets the standards of National Fire Protection Association (NFPA) 1001-2013 leading to the opportunity to obtain a Firefighter I certification. Career Strategies and Development skills are embedded throughout this program. There is significant emphasis placed on not only Workplace Readiness Skills, but also learning related to careers and industry. Students investigate career clusters and pathways, analyze career assessment results, and develop or revise plans related to their academic and career related goals. In addition, students create industry-relevant resumes, create a personal brand, and connect with local business and industry representatives for the purpose of practicing interview skills, which may lead to employment.

Certification: Firefighter I, CPR, First Aid, Introduction to Hazardous Materials, Hazardous Material Operations, FEMA 100, 200, 700, 800, 907, and IS-5, OSHA 10, Stress First Aid Awareness, and Workplace Readiness Certification. Highway safety is covered during incidents for first responders and introduction to technical rescue.

CTSO: SkillsUSA

870610 FIREFIGHTING II

Grades 11-12 1 Credit

THIS COURSE IS PENDING APPROVAL FOR THE '26-'27 SCHOOL YEAR.

NOTE: If approved, students would travel off site to take this course; transportation would be provided. Students would spend half of their school day off MCHS' campus.

PREREQUISITE: Course must be taken concurrently with Firefighting I. Must be 16 or older by the start of school, other requirements as set forth by the Virginia Department of Fire Programs. Fire Science II builds on the professional knowledge and skills gained in Firefighting I. Students respond to situations caused by simulated terrorism, accidents, and natural disasters by managing resources such as medevac helicopters, emergency medical personnel, technical rescue teams, and community-based organizations. Students will become familiar with the procedures, equipment, and technologies used by current fire departments. This course challenges students academically, mentally, and physically and meets the standards of National Fire Protection Association (NFPA) leading to the opportunity to obtain Firefighter II certification. Career Strategies and Development skills are embedded throughout this program. There is significant emphasis placed on not only Workplace Readiness Skills, but also learning related to careers and industry. Students investigate career clusters and pathways, analyze career assessment results, and develop or revise plans related to their academic and career related goals. In addition, students create industry-relevant resumes, create a personal brand, and connect with local business and industry representatives for the purpose of practicing interview skills, which may lead to employment.

Certification: Firefighter II, CPR, First Aid, Introduction to Hazardous Materials, Hazardous Material Operations, FEMA 100, 200, 700, 800, 907, and IS-5, OSHA 10, Stress First Aid Awareness, and Workplace Readiness Certification. Highway safety is covered during incidents for first responders and introduction to technical rescue.

CTSO: SkillsUSA

MCHS HIGH QUALITY WORK-BASED LEARNING

OFF-CAMPUS EXPERIENCES

INTERNSHIP

Grades 11-12

1 Credit

Internship is a HQWBL experience that places the student in a real workplace environment. This placement allows the student to develop and practice career-related knowledge and skills for a specific career field related to the student's career interests, abilities, and goals. Internships are connected to classroom learning and are accompanied by structured reflection activities. Student interns are guided by a formal, written training plan that defines specific academic and workplace skills to be mastered. A student must be enrolled in a CTE course that aligns with the career cluster of their internship during the same academic year.

Required Internship Hours: To receive a credit toward graduation for the internship, students should achieve a minimum of 280 hours for the school year. Many students will exceed 280 hours. Internships of fewer than 280 hours may be completed, but students will not receive credit beyond the credit earned for the related CTE course.

Internship experiences of 280 hours or more must be continuous throughout the school year even if the classroom instruction is a block class in a single semester. The students must be placed by the HQWBL coordinator/teacher/point-of-contact in jobs related to their career goals and adequate supervision must be provided, including workplace visits, employer evaluations, or regular communication with employers and students throughout the year. Students must adhere to the regulations and guidelines.

VDOE HIGH-QUALITY WORK-BASED LEARNING EXPERIENCES

All CTE courses will provide contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

Career & Technical Education HQWBL Opportunities

Clinical Experience	11th and 12th varied hours; Unpaid; Within the course credit. Students are placed in healthcare settings and observe patients to apply classroom instruction & gain a better understand of the professions.
Internship	11th and 12th varied hours; Paid and unpaid. The student plans, implements, operates, and assumes financial risks in a business that produces goods or delivers services.
Entrepreneurship	11th and 12th Paid and unpaid; Students are placed in a real workplace environment to develop and practice career related knowledge and skills
Registered Apprenticeship	Minimum 16 years old; Paid employer on-the-job training and related technical instruction which can be credited toward an adult RA program
School Based Enterprise	6th-12th Paid or unpaid. An ongoing, student-managed, entrepreneurial operation within the school settling which provides goods or services that meets the needs of the school's target markets
(SAE) Select Immersion Supervised Agricultural Experiences	9th-12th varied; Paid and unpaid; Builds upon the foundational supervised agriculture experience