



# **Students for Life**

Harper Creek High School  
Core Classes

2022-2023  
Course Selection Book

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# 2022-2023 Course Selection Book

## Harper Creek High School

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## Students and Families:

The Harper Creek High School Core Course Description Guide offers a comprehensive listing of our school's core course offerings which have been designed as a varied and challenging academic curriculum. Careful planning and selection of courses are important to the successful growth and achievement of academic goals throughout a student's high school career.

All students will need to successfully meet the requirements for graduation listed hereafter. It is important for students to develop a multi-year plan for their courses developed around, and consistent with, their Educational Development Plan (EDP). This plan is first developed in middle school and should be reviewed and revised each year prior to selecting courses.

Harper Creek High School's primary goal is to provide our students with the skills and competencies needed to be successful citizens and workers in a technological, multi-cultural and dynamic society. This goal can best be achieved through a collaborative partnership with students and families in rigorous pursuit of high levels of achievement. To do this, students must pass courses in which they are enrolled so that all course options are available to them in each of the following years. Families can support this need by monitoring that students are regularly attending all classes and completing assigned tasks. Successful passing of courses leads to more elective options, including Advanced Placement (AP) courses, advanced subject area courses, dual-enrollment, the Calhoun Area Career Center (CACC), the Battle Creek Area Mathematics and Science Center (BCAMSC), and more.

The elective courses that are taught each year are ultimately determined by how many students sign up to take them during the scheduling process. Due to staffing availability and class size limitations, it is essential that students select classes they intend to attend and complete. There should be no expectations that students can "try out" a class and expect to change it later.

Additionally, it is important for students and families to understand that a high school student cannot "drop" a class. Students are expected to be enrolled and attending a full schedule each semester of each year. If a student does not like a class or has lost the opportunity to earn credit in a class, it is the expectation that they are still required to attend and attempt their best effort.

The high school staff encourages thoughtful selection of courses that meets not only current interests, but prepares students for unknown opportunities and challenges in the future. While success in a rigorous high school curriculum cannot guarantee future success, it will most certainly enable opportunities beyond high school and help prepare our students for a future of their own choosing.

We look forward to the opportunity to partner with you in pursuit of your continued success, both individually and as a member of our learning community.

Dennis Anthony  
High School Principal

# Graduation Requirements

## Regular Diploma

Normally, a student will complete graduation requirements in four (4) years. In order to receive a diploma and graduate, a student will need to meet the school requirements for basic course work for their graduating class, and earn the total number of minimum credits. All seniors will be reclassified at the end of the first semester of their senior year.

A student enrolled in special education may be exempted from the State mandated-test. Such an exemption is made by the IEP Team. The student may still need to earn the required credits indicated by the IEP or in a personal curriculum. For more information about the different methods by which credits can be earned, refer to Policy 5460 in the Board Policy manual, a copy of which is accessible electronically at [www.harpercreek.net](http://www.harpercreek.net).

Additionally, students will qualify for a diploma when they:

- meet the requirements for graduation through credits earned at HCHS in combination with those earned through the Battle Creek Math and Science Center, CACC or early college, if enrolled in these programs.
- Are in attendance full time at HCHS or enrolled in one of its combined programs.
- Have successfully completed 20 hours of community service. A student may begin accruing hours at the completion of their Junior year (June), not any earlier.

## Subject Area

English	4 credits	2020 and after = 1 in last year
Social Studies	4 credits	+ 20 service hours
Science	3 credits	
Math	4 credits	1 in last year
Physical Ed/Health (2 yrs Marching Band)	1 credit	
Computers	1 credit	
Fine Arts, Performing Arts,	1 credit	
Vocational Education, Practical Arts		
World Language Experience	2 credits	
Electives	11 credits	Class of 2020
	13 credits	Class of 2021 and after
Total Credits to Graduate	31 class of 2020.	
	33 Class of 2021 and after	

Any exceptions to the above must be approved by the principal. All graduation requirements cited are the minimum that will be accepted for eligibility for graduation. It is anticipated that most students will exceed these minimums.

# Certificate of Achievement

## Certificate of Achievement

Any student who has an IEP at the completion of his or her 12th grade year may receive a Certificate of Achievement in lieu of a diploma for successfully attending Harper Creek High School. While the criteria for earning the Certificate of Achievement are determined by the IEP, in consultation with teachers and parents, the following guidelines will apply:

English Language Arts	2-4 credits
Mathematics	2-4 credits
Science	2-3 credits
Social Studies	2-3 credits
Health & Physical Education	1 credit
Visual, Performing or Applied Arts	1 credit
World Language	0 credits
“On-line Learning Experience”	1 credit
Career Prep/Employability	1 credit

# Grading Procedure/GPA

## Grades

Harper Creek High School has a standard grading procedure, as well as additional notations that may indicate work in progress or incomplete work. The purpose of a grade is to indicate the extent to which the student has acquired the necessary learning. In general, students are assigned grades based upon test results, homework, projects, and classroom participation. Each teacher may place a different emphasis on these areas in determining a grade and will so inform the students at the beginning of the course work. If a student is not sure how his/her grade will be determined, s/he should ask the teacher.

The school uses the following grading system:

A	Outstanding	90%-100%
B	Above Average	80%-89%
C	Average	70%-79%
D	Below Average	60%-69%
E	Failing	0%-59%
I	Incomplete	

Advanced Placement courses\* are given the following additional weight provided students complete an AP course and AP exam. Students who complete Battle Creek Math & Science Center courses listed below, will also receive an extra grade point.

A = 5.0

B = 4.0

C = 3.0

D = 2.0

E = 0

**\*This does not include AP support classes.**

Battle Creek Math & Science Center courses approved for 5.0 scale are:

- Analytical Chemistry
- Biotechnology 1 and 2
- Organic Chemistry
- Multivariate Calculus

## Grade Point Average

To calculate a grade point average (GPA), assign a weighted point value to each course grade and divide by the total number of credits. For partial-credit courses use the fractional value of the grade. For example, a half credit course with an earned grade of C would be  $.5 \times 2=1$ . Then add this to the other grades earned for total points earned. This total is then divided by the total credits earned for the GPA. This can be done by grading period, semester, year, or for a series of school years.





# HARPER CREEK COMMUNITY SCHOOLS

To make your course selections for the next school year, select from the list of courses for which you qualify and those that align with your career pathway. Every student must be enrolled in five classes each semester. When making selections, pay attention to prerequisites and be sure to select enough classes to fill your school day for five blocks each semester. Most courses fill one block so you would choose ten classes to fill your schedule. Starting with the class of 2020, all students must have an English credit during their senior year. Classes at the Calhoun Area Career Center and the Battle Creek Area Math and Science Center are equivalent to four blocks per school year. Begin by selecting your required courses and then fill in your electives.

## 9th Grade

English: English I

Math: Algebra I

Science: Physical Science

Soc Studies: American History/Geography

P.E.: Physical Education/Health OR Swim/Health

Elective: \_\_\_\_\_

Elective: \_\_\_\_\_

Elective: \_\_\_\_\_

Modified Block (40 Minute): \_\_\_\_\_

Modified Block (40 Minute): \_\_\_\_\_

## 10th Grade

English: English II

Math: Geometry

Science: General Biology

Soc Studies: Civics/Econ

Elective: \_\_\_\_\_

Elective: \_\_\_\_\_

Elective: \_\_\_\_\_

Elective: \_\_\_\_\_

Modified Block (40 Minute): \_\_\_\_\_

Modified Block (40 Minute): \_\_\_\_\_

## 11th Grade

English: English III /Lit & Comp I

Math: Algebra II

Science: Physics or Chemistry or Material Chemistry

Social Studies: World History/Geography

Elective: \_\_\_\_\_

Elective: \_\_\_\_\_

Elective: \_\_\_\_\_

Elective: \_\_\_\_\_

Modified Block (40 Minute): \_\_\_\_\_

Modified Block (40 Minute): \_\_\_\_\_

## 12th Grade

English: English IV/Lit & Comp II

Math: Senior Math

Soc Studies: Senior Social Studies

Elective: \_\_\_\_\_

Elective: \_\_\_\_\_

Elective: \_\_\_\_\_

Elective: \_\_\_\_\_

Modified Block (40 Minute): \_\_\_\_\_

Modified Block (40 Minute): \_\_\_\_\_

## What are the Six Career Paths?

## Might this Career Path be for you?

### Arts and Communication:



Careers in this path are related to humanities and performing, visual, literacy and media arts. These include architecture, graphic, interior, and fashion design, writing, film, fine arts, journalism, languages, media, advertising, and public relations.

Are you a creative thinker? Are you imaginative, innovative and original? Do you like to communicate ideas? Do you like making crafts, drawing, playing a musical instrument, taking photos or writing stories? This may be the career path for you!

### Business, Management, Marketing and Technology:



Careers in this path are related to the business environment. These include entrepreneurship, sales, Marketing, computer/information systems, finance, accounting, personnel, economics, and management.

Do you enjoy being a leader, organizing people, planning activities, and talking? Do you like to work with numbers or ideas? Do you enjoy carrying through with an idea and seeing the end product? Do you like things neat and orderly? Would you enjoy balancing a checkbook, following the stock market, holding an office in a club, or surfing the Internet? This may be the career path for you!

### Engineering/Manufacturing and Industrial Technology:



Careers in this path are related to technologies necessary to design, develop, install, and maintain physical systems. These include engineering, manufacturing, construction, service and related technologies.

Are you mechanically inclined and practical? Do you like reading diagrams and blueprints, and drawing building structures? Are you curious about how things work? Would you enjoy painting a house, repairing cars, wiring electrical circuits, or woodworking? This may be the career path for you!

### Health Sciences:



Careers in this path are related to the promotion of health and treatments of disease. These include research, prevention, treatment and related health technologies.

Do you like to care for people or animals who are sick or help them stay well? Are you interested in diseases and in how the body works? Do you enjoy reading about science and medicine? Would it be fun to learn first aid or volunteer at a hospital or veterinary clinic? This may be the career path for you!

### Human Services:



Careers in this path are related to economic, political, and social systems. These include education, government, law and law enforcement, leisure, and recreation, military, religion, child care, social services, and personal services.

Are you friendly, open, understanding, and cooperative? Do you like to work with people to solve problems? Is it important to you to do something that makes things better for other people? Do you like to help friends with family problems? Do you like reading, storytelling, traveling, or tutoring young children? This may be the career path for you!

### Natural Resources and Agriscience:



Careers in this path are related to agriculture, environment and natural resources. These include agricultural sciences, earth sciences, environmental sciences, fisheries, forestry, horticulture and wildlife.

Are you a nature lover? Are you practical; curious about the physical world; interested in plants and animals? Do you enjoy hunting or fishing? Do you like to garden or mow the lawn? Are you interested in the environment? This may be the career path for you!

Career Categories	Courses in School	Sample Careers
<p><b><u>Arts and Communication:</u></b></p> <p>Advertising                  Public Relations  Creative Writing              Film Production  Foreign Languages          Journalism  Radio and TV Broadcasting</p>	<p>Journalism                      Language Arts  Photography                  Communications  Art                                  Marketing  Music</p>	<p>Public Relations Executive  Dancer  Film Producer  Fashion Designer  Journalist  Radio and TV Broadcaster</p>
<p><b><u>Business, Management, Marketing and Technology:</u></b></p> <p>Accounting                  Office Admin.  Entrepreneurship          Economics  Management                Marketing  Sales                            Finance  Computer Support</p>	<p>Math  Language Arts  Computer science  General Business  Marketing  Accounting</p>	<p>Loan Officer                      Economist  Legal Secretary                Hotel Manager  Office Manager                 Salesperson  Computer Programmer  Travel Agent</p>
<p><b><u>Engineering/Manufacturing and Industrial Technology:</u></b></p> <p>Architecture                Precision Production  Construction                Drafting  Manufacturing Technology  Mechanics and Repair  Engineering</p>	<p>Physical Science                Robotics  Physics                            Engineering  Math  Engineering Design  Architectural Design</p>	<p>Architect                         Plumber  Electrician                       Geographer  Air Traffic Controller         Auto Mechanic  Chemical Engineer             Draftsman  Surveyor</p>
<p><b><u>Health Sciences:</u></b></p> <p>Dentistry  Medicine  Nursing  Nutrition and Fitness  Therapy and Rehabilitation</p>	<p>Language Arts                  Math  Science                            Physics  Chemistry                        Nutrition  Anatomy and Physiology</p>	<p>Dentist                            Dental Hygienist  Doctor                              Nurse  Respiratory Therapist  Physical Therapist</p>
<p><b><u>Human Services:</u></b></p> <p>Education  Child and Family Services  Law and Legal Studies  Law Enforcement  Cosmetologist</p>	<p>History  Language Arts  Psychology  Culinary Arts  Parenting</p>	<p>Chef                                Teacher  Lawyer                              Police Detective  Social Worker  Firefighter  Cosmetologist</p>
<p><b><u>Natural Resources and Agriscience:</u></b></p> <p>Agriculture                  Horticulture  Forestry                        Earth Sciences  Life Sciences                 Environmental Science  Animal Health Care         Wildlife Management</p>	<p>Math  Environmental Science  Chemistry</p>	<p>Farmer                              Conservation Agent  Oceanographer                 Chemist  Landscape                        Physicist  Marine Biologist               Forester</p>

# Testing Out Policy

## Testing Out

In accordance with Michigan State Law, Harper Creek Community Schools provides high school students with the opportunity to “test out” of Michigan Merit Curriculum required courses. Students who have demonstrated “Advanced” or “College Ready” designation on recognized MME assessments (see below) and then earn a qualifying score on a Harper Creek Community Schools Test-Out Assessment receive credit for the equivalent course. Credit earned through this route shall be designated on the student’s transcript solely as “T” – credit earned through testing out and shall not be included in a computation of grade point average nor counted toward the total required credits for graduation for any purpose. Likewise, students who attempt to test out of a course and do not earn a qualifying score will not receive credit for the course.

A score of 77% on the HCCS Test-Out Assessment is considered a passing grade. An unsuccessful attempt to test out of a course will not impact the student’s grade point average for any purpose and will not be noted on the student’s transcript. However, a student may not retake the test nor appeal the test results and will need to take the course in the traditional manner in order to receive credit for the course.

Students cannot take or enroll in a lower course sequence in the same CORE curriculum area as the course for which they “tested out”.

Testing Out applications are due to the Main Office by the first Wednesday of December for tests to be given the second week of December and the first Wednesday of May for tests to be given the second week of May.

Students who have been enrolled in a course shall also earn credit for a course in which they have demonstrated “Advanced” designation on recognized MME assessments (SAT, PSAT, MSTEP) and then earn a 77% score or higher on a final exam/assessment for the course. If the combined averages of the term grade and the exam/assessment grade do not exceed a passing grade of 60%, the student transcript will reflect the “E” grade and shall be used in computation for grade point average, however the credit earned shall be designated as a “T” – credit earned through testing out.

For purposes of all Test-Out options aforementioned, recognized MME assessments include the PSAT and SAT - the state assessments in English Language Arts and Math - and the MSTEP - the state assessments in Science and Social Studies. “Advanced” status shall be earned in the content specific to the course desiring to Test-Out of for Science or Social Studies on the MSTEP; or “College Ready” status on the Math PSAT/SAT for courses related to Math and Science; or “College Ready” status on the Evidenced-Based Reading and Writing for all other courses.

# Postsecondary– Dual Enrollment Options

## Postsecondary-Dual Enrollment Options

Any student in 9th, 10th, 11th, or 12th grade may enroll in a postsecondary (dual) enrollment program providing s/he meets the requirements established by law and by the District. Any interested student should contact his/her counselor to obtain the necessary information. Students are assisted in finding courses, completing applications, and looking up credit transfer information.

Harper Creek High School has included these required considerations to establish the following guidelines for students and for dual enrollment courses. These include, but are not limited to the following:

Principal approval.

The student is ready for a college experience.

Students are responsible for their own transportation.

Students are on track for attaining credits towards graduation as expected.

Student attendance records do not indicate a history of truancy (more than 10 days).

Students must have received a qualifying score on at least one of the following tests: MME, ACT, SAT, PSAT or Next Generation.

Additionally:

- Dual enrollment courses may not replace any courses required or offered by Harper Creek High School. An exception to this is if administration determines there is a scheduling conflict beyond the student's control.
- The dual enrollment course may not be in the subject area of physical education, theology, divinity, or religious education; hobby and recreational courses are prohibited as well.
- Students must take all state and district assessments during scheduled times. This includes, but is not limited to, the M-STEP, PSAT, SAT and final exams.
- If students have previously failed a dual enrolled course, the cost of the course must be paid back before you are eligible to take another.
- The HCHS schedule takes priority over dual enrolled courses. Should a dual enrolled course conflict with a HCHS schedule, it is the student's responsibility to adjust their dual enrolled courses. If students need assistance adjusting dual enrolled schedules, they must contact their college advisor. This also includes planning for post-secondary transferable credits.

There is an allotted amount that HC will pay for the dual enrolled course. Should your course exceed that amount, the student is responsible for the remaining balance. Students who fail to successfully complete their dual enrolled course, drop the class after the college deadline, or fail the class outright, will be responsible for the cost of all expenses related to the class. All students will be expected to return to Harper Creek any books or materials and supplies that the district paid for at the end of each class.

Any student wishing to dual enroll must complete a Harper Creek High School Dual-Enrollment form prior to taking any courses. It should be understood that the final grade will be determined by the post-secondary institution. Additional grading and other information is available on the Harper Creek High School Dual-Enrollment form.

# Online/Blended Learning Program

## Online/Blended Learning Program

The Board of Education recognizes the need to provide alternative means by which students achieve the goals of the District.

An optional plan to meet the recognized educational needs of a student shall be approved by the Superintendent. The Superintendent shall prepare a plan of educational options for use in meeting special needs.

Such options may include, but not be limited to, tutorial programs, independent study, correspondence courses, educational travel, mentorship programs, summer school, early college entrance, internet, digital broadcasting, or satellite course work offered by the school or any regionally accredited college or Michigan Virtual High School (MiVHS).

Credit may be granted to the student upon complete evaluation of the program. The credit shall be placed on the student's transcript. The amount of credit counting toward graduation shall comply with the District graduation requirements.

The Superintendent shall establish administrative guidelines whereby each educational option is properly analyzed, planned, and implemented and complies with all applicable requirements of the State.

Harper Creek High School partners with Michigan Virtual High School to provide online-courses, offered in .5 credit and 1 credit lengths. Students interested in MiVHS classes should be self-motivated learners who are competent in computer/internet skills and able to manage their time well. MiVHS courses must be selected and scheduled the same time as other courses, and students are expected to maintain consistent communication and contact with their assigned HCHS staff member regarding their progress in the MiVHS coursework.

# Battle Creek Mathematics and Science Center

## [Battle Creek Area Mathematics and Science Center \(BCAMSC\)](#)

The Math/Science Center is located at 171 W. Michigan Avenue in Battle Creek. It provides programs (half-day schedule), to 9<sup>th</sup> and 10<sup>th</sup> grade students in the morning, and 11<sup>th</sup> and 12<sup>th</sup> students in the afternoon. Harper Creek High School students who are accepted may attend during each year of high school. Students who attend off-site classes need to abide by the off-site campus schedule and not Harper Creek's schedule except in cases as determined by Harper Creek administration, including state mandated testing. For more information, contact the Math and Science center directly at **269-965-9440**.

**Address: 171 Michigan Ave, Battle Creek, MI 49017**



# Calhoun Area Career Center (CACC)

## Calhoun Area Career Center (CACC)

The Calhoun Area Career Center is located at 475 E. Roosevelt in Battle Creek and is designed to be an extension of several area high schools. 11<sup>th</sup> and 12<sup>th</sup> grade students are eligible for the programs which predominantly follow a half-day morning schedule and may run for a semester, a year, or two years. The CACC staff will provide information and tours to students in the 2<sup>nd</sup> semester of 10<sup>th</sup> grade. Bus transportation is provided to and from the Harper Creek High School.

Information on scheduling, openings, hours, and application procedures can be obtained from the Guidance Office, or by contacting the CACC at **269-968-2271**.

**Address: 475 E Roosevelt Ave, Battle Creek, MI 49017**





# Academically Talented Youth Program

## ATYP—Academically Talented Youth Program WMU

Students who participate in the ATYP at WMU are eligible for high school credits. Each student received 1 credit per semester for ATYP. Credits for ATYP taken in middle school are applied after the first semester of the 9th grade year. See your counselor for more information.

# Mission Statement

*The mission of Harper Creek High School is to develop respectful, responsible and reasonable citizens who are life long learners.*

## **Program Selection and Parent Involvement**

The staff and administration of Harper Creek High School encourage parents to work with their student to develop a four-year plan for high school that will help the student attain his/her educational and career goals. The world that our students will enter is very different from the one we entered as high school graduates and we must strive to educate, empower and equip our students for a future that is dynamic and ever-changing. Although the traditional four-year college education is required for about a fifth of the jobs in the current labor market, labor statistics indicate that more than half of the available 21<sup>st</sup> century jobs will require training beyond high school. Our students must be prepared to succeed in post-secondary training. **Good planning in high school is an important aspect of that preparation.**

## **Standardized Tests**

The **PSAT/NMSQT** (Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test) is administered to 10<sup>th</sup> and 11<sup>th</sup> grade students each fall. 9<sup>th</sup> grade students also take the PSAT 8/9 for additional practice. The tests are given in October and again in April to monitor student growth and academic achievement. All students will conclude their Michigan Merit Examination in their 11<sup>th</sup> grade year by completing the SAT and the M-STEP.

The state-mandated **M-STEP** summative assessment, also taken in the spring of 11<sup>th</sup> grade, consists of English Language Arts, Mathematics, Science and Social Studies. This test is required for graduation.

The **NWEA** offers state-aligned, computerized adaptive tests, called Measure of Academic Progress (MAP). These tests accurately reflect the instructional level of each student and measure growth over time. NWEA offers MAP tests in the subjects of Mathematics, Reading, Language Arts and Science. The NWEA test is administered three times per school year, fall, winter and spring.

# Language Arts

## English I (required)

Students in this class will read and comprehend literature, stories, dramas, and poems as outlined in the common core curriculum. Students will write routinely for a range of tasks and audiences. Students will read a variety of complex texts which may include *Romeo and Juliet*, *The Odyssey*, and *To Kill a Mockingbird*.

**Prerequisite: None**

## English II (required)

This class includes a second year of emphasis on common core curriculum competencies. Students will develop reading strategies, writing skills, and speaking and listening competences. They will read a variety of complex texts which may include *The Crucible*, *A Raisin in the Sun*, *Of Mice and Men*, and *the Adventures of Huckleberry Finn*. Students will also work to prepare for the state assessment in language arts.

**Prerequisite: English I**

## English III

Students in this class will read a variety of complex texts which may include *Night*, *a Shakespearian play*, and *Lord of the Flies*. Students will continue to develop their reading strategies, writing skills, and speaking skills with a focus on real world application. Students will also work to prepare for the state assessment in language arts.

**Prerequisites: English II**

## English IV

Students in this class will read a variety of complex texts which may include *The Great Gatsby*, *Animal Farm*, and *The Things They Carried*. Students will continue to develop their reading strategies, writing strategies, and speaking skills with a focus on real world application.

**Prerequisite: English III**

## Literature and Composition I

Students in this class will read a variety of complex texts which may include *Night*, *Beowulf*, *Canterbury Tales*, *MacBeth*, and *Frankenstein*. Students will continue to study literature and work to develop their critical analysis skills to prepare for college classes.

**Prerequisite: English III**

## Literature and Composition II

Students in this class will focus upon the study of a diversity of literature to effect acquisition of thinking skills and writing effectiveness. These skills and this effectiveness enable students to gain greater control of the world in which they live. Specific thinking skills addressed are those of classifying, analyzing, and synthesis. Texts may include *Their Eyes Were Watching God*, *Things Fall Apart*, *1984*, and *the Great Gatsby*. Note that short stories, poems, and informational texts will be woven into the units and will vary. In addition, supplemental texts may be incorporated for enrichment purposes. Students should be prepared for a college-preparatory schedule of reading and writing in this class. Students should expect to be independent readers of text.

**Prerequisite: Completion of Literature and Comp I with teacher approval**

## AP Literature and Composition

Students in this class will do critical reading, writing, and analysis of both classical and contemporary literature. Through the close reading of select texts, students will deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students will consider a work's structure, style, AP vocabulary and themes; students will incorporate these essential ingredients in their own writing. Students who successfully complete this course will be prepared and expected to take the AP Literature and Composition Exam.

**Prerequisites: Completion of Literature and Composition I & II, or with instructor approval. Students must have achieved mastery on the summer reading projects.**

# Math

## Algebra I

Algebra I provides a formal development of the algebraic skills and concepts necessary for students to succeed in advanced courses. In particular, the instructional program in this course provides for the use of algebraic skills in a wide range of problem-solving situations. The concept of function is emphasized throughout the course. Topics include: (1) operations with real numbers, (2) linear equations and inequalities, (3) relations and functions, (4) polynomials, (5) algebraic fractions, and (6) nonlinear equations.

**Prerequisite: None**

## Geometry

Geometry students examine the properties of two- and three-dimensional objects. Proof and logic, as well as investigative strategies in drawing conclusions, are stressed. Properties and relationships of geometric objects include the study of: (1) points, lines, angles and planes; (2) polygons, with a special focus on quadrilaterals, triangles, right triangles; (3) Trigonometry; and (4) Logic, reasoning and proofs. Use of graphing calculators and computer drawing programs are encouraged.

**Prerequisite: Completion of Algebra I with 60% or better**

## Algebra II

This course emphasizes the development of facility with algebraic forms, linear and quadratic expressions, powers and roots, and functions based on these concepts. Logarithmic, trigonometric, polynomial, and other special functions are also studied. Geometric ideas are used throughout the course. Measurement relationships are analyzed from an algebraic viewpoint. Transformations are employed to analyze graphs. Notions of a mathematical system found in geometry (postulates, theorems, etc.) are utilized. Many connections with calculators are made in this course.

**Completion of Geometry with 60% or better**

## Math for Seniors

This course was designed to meet the State of Michigan requirements for a senior math class. Students will learn various concepts in personal finance, as well as other topics in probability and discrete mathematics. This course will contain practical applications of mathematics.

**Prerequisites: Completion of Algebra I, Geometry and Algebra II; Must be a senior to enroll in this course.**

## Pre-Calculus

Pre-Calculus topics emphasize the background theory a student must know to be successful in many calculus courses, including analysis of functions, notions of limit, and analytic geometry. Discrete mathematics topics include formal logic, properties of natural numbers, mathematical induction, sequences, combinatorics, and graph theory. There is also manipulative algebra, handling manipulations that have been de-emphasized in the previous years, and careful development of mathematical reasoning and proof.

**Prerequisite: Completion of Algebra II with 60% or better**

# Math

## Statistics

Students in this course will develop their statistical reasoning as they look at real world data. Students will make use of technology as they apply the statistical techniques to the analysis of data. The Advanced Placement course outline for Statistics will be followed and students will be encouraged to take the A.P. exam. Topics covered include: interpreting and observing patterns in data, planning a study based on data collection and analysis, producing models using probability theory and simulations, and using statistical inference to guide the selection of appropriate models. Students will be required to use a graphic calculator outside the classroom.

**Prerequisites: Successful completion of Pre-Calculus with 70% or better**

## Calculus I

This course is the study of calculus with emphasis on the following areas: Functions and Graphs, Limits and Continuity, Differential and Integral Calculus. The Advanced Placement Calculus AB outline will be followed. Students will be encouraged to take the Advanced Placement Exam. It is suggested that students take both Calculus I and A.P. Calculus to best enhance their chances of scoring well on the Advanced Placement Exam.

**Prerequisite: Successful completion of Pre-Calculus**

## A.P. Calculus

This course is a continuation of the topics taught in calculus. It is for students who intend to continue their study of mathematics, and for those who will use calculus in other fields of study. This course covers topics including limits, continuity, the definition of derivative, applications of derivatives, rates of change, properties of graphs, The Fundamental Theorem of Calculus, definite and indefinite integration, slope fields, methods of integration, and applications of derivatives. Instruction and practice on these topics help students develop a solid understanding of functions, graphs, limits, differentiation, and integration. Students anchor their understanding with examples demonstrating the relationship between calculus and the world around them through questions in context. Throughout the course students are required to use multiple approaches to the understanding of calculus concepts. Students must be able to express solutions in numerical, graphical, analytical, and written forms. Students who successfully complete this course will be prepared and expected to take the AP Exam.

**Prerequisite: Completion of Calculus with a 'C' or better.**

<http://apcentral.collegeboard.com/apc/public/repository/ap-calculus-course-description.pdf>

# Science

## General Physical Science (required)

This course provides an introductory study of the nature of matter and energy and the processes of physical and chemical change as matter and energy interact. Students will develop investigative skills as they explore topics in chemistry and physics based on the State Core Curriculum.

**9, 10, 11, 12 Prerequisite: None**

## General Biology (required)

This course fulfills one credit in biological science. Introductory material in genetics, evolution, cell theory, ecology, and biochemistry are covered. Students will engage in laboratory work which stresses understanding of content coverage. This course is aligned with NGSS.

**9, 10 Prerequisite: None**

## General Chemistry (may be used as 3rd required science credit or senior year math related credit if taking Physics or Material Chemistry as science credit)

This class enables students to learn chemistry through experimentation and observation. Concepts, principles, and theories are organized so that students will learn to use them intelligently. Key concepts are introduced at an elementary level and then treated in greater depth. Atomic structure, bonding, the periodic table, ionization energy levels, quantum mechanics, molecular structure, and chemical reactions will be covered. Environmental issues and consumer chemistry will also be covered in this course.

**Prerequisites: Successful completion of Physical Science, Biology, and Algebra I**

## Materials Chemistry (may be used as 3rd required science credit or senior year math related credit if taking Chemistry of Physics as science credit)

This is a science and technology course introducing the concepts and applications of the chemistry of solids materials. Students will learn about the fundamental chemistry of metals, polymers, ceramics and composites through a series of project based units.

**Prerequisites: Successful completion of Physical Science, Biology, and Algebra I**

## Physics (may be used for the 3rd required science credit or senior math related credit if taking Chemistry or Material Chemistry as science credit)

Highly recommended for all high school students, physics covers basic concepts such as the nature of motion, forces, energy, matter, heat, sound, and light. Although some mathematics will be used, the course emphasis' the conceptual understanding of physics.

**Prerequisites: General Physical Science and Successful Completion of Algebra I and Geometry**

## AP Biology

AP Biology is a comprehensive survey of general biology that includes biochemistry, cellular biology, molecular genetics and heredity, biotechnology, diversity, structure and function of organisms, and ecology, and evolution. The two main goals of AP Biology are to help students develop a conceptual framework for modern biology and an appreciation of science as a process. This course will run 1 block per day all year. Students who successfully complete this course would be prepared and encouraged to take the AP Exam.

**Prerequisites: Completion of General Biology with a 'B' or better; successful completion of Algebra I, Geometry, General Chemistry or be taking General Chemistry concurrently with the 1<sup>st</sup> semester of AP Biology.**

## AP Chemistry

AP Chemistry is a two semester, two credit course that includes the following topics taught in a first year college introductory chemistry course: atomic structure and periodicity, chemical bonding, stoichiometry, gas and solution chemistry, kinetics, equilibrium, and thermodynamics. Students who successfully complete this course are recommended to take the AP Exam. For more information, go to [http://www.collegeboard.com/student/testing/ap/sub\\_chem.html?chem](http://www.collegeboard.com/student/testing/ap/sub_chem.html?chem)

**Prerequisites: Students must have completed General Chemistry with a minimum grade of "B" OR with a grade of "C" AND the recommendation of their General Chemistry teacher. Students must have successfully completed Algebra II**

# Social Studies

## American History and Geography

This course is required for all freshmen, beginning with the class of 2012. It is designed to prepare students to understand more fully the historical, political, and economic development of the United States from Second Industrial Revolution to the present, so that students will be able to fully participate in our democratic society.

**Prerequisite: None (Required course for all freshmen)**

## Civics and Economics

Civics and Economics is a required course involving the study of what makes a democratic society function, and what allows an individual to function as a consumer, producer, and responsible citizen. Students will acquire civic and economic knowledge and skills that will foster a commitment to the fundamental values and principles essential to the continuation of a constitutional democracy.

**Prerequisite: Completion of American History & Geography**

## World History and Geography

World History and Geography is a required course which takes a global and comparative approach to studying the world and its past. Instruction will focus on allowing students to develop a greater understanding of the development of worldwide events, processes, and interactions among the people, cultures, societies, and environment around the world.

**Prerequisite: Completion of American History and Civics/Econ**

## Senior Social Studies

This course is required for graduation. There is a 20 hour community service or senior thesis component that must be completed in the semester that students are enrolled in this class. This course is a study of the structure, activities, and problems of American society. Emphasis is placed upon the political and economic systems, elections, interest groups, public policy, mass media, personal economics, and current events.

**Prerequisite: Completion of other required social studies courses)**

## AP U.S. History

The AP U.S. History course focuses on developing students' understanding of American history from approximately 1491 to the present. The course has students investigate the content of U.S. history for significant events, individuals, developments, and processes in nine historical periods, and develop and use the same thinking skills and methods (analyzing primary and secondary sources, making historical comparisons, chronological reasoning, and argumentation) employed by historians when they study the past. The course also provides seven themes (American and national identity; migration and settlement; politics and power; work, exchange, and technology; America in the world; geography and the environment; and culture and society) that students explore throughout the course in order to make connections among historical developments in different times and places.

**Prerequisites: Civics and American History with a grade of B or better and/or teacher recommendation**

## AP United States Government and Politics

United States Government and Politics will give students an analytical perspective on government and politics in the United States. This course includes both the study of general concepts used to interpret U.S. government and politics and the analysis of specific examples. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. government and politics. Students should become acquainted with the variety of theoretical perspectives and explanations for various behaviors and outcomes. Topics will include constitutional underpinnings of United States government; political beliefs and behaviors; political parties, interest groups, and mass media; institutions of national government; and public policy. Students who successfully complete this course will be prepared and expected to take the AP Exam.

**Prerequisite: Civics and American History or teacher recommendation**