Amherst Regional High School
Program of Studies
2024-2025



Amherst Regional High School
21 Mattoon Street
Amherst, MA 01002

Phone: (413) 362-1700
Fax: (413) 549-9704
Website: http://arhs.arps.org/

Table of Contents

Section Title	Page
Core Values and Beliefs	4
School-Wide Learning Expectations	4
ARHS Requirements for Graduation	5
ARHS Recommended Program of Study	6
College Admission Requirements	7
Course Registration and Schedule Changes	9
Academic Policies	10
Additional Learning Options	12
Support Services for Students	16
Guide to the Course Offerings	17

Core Programs

Section Title	Page
English	18
English Language Learners	25
Social Studies	30
Science	37
Mathematics	43
World Language	51

Elective Programs

Section Title	Page
Physical Education, Health, Family Consumer	61
Art	64
Performing Arts	71
Computer, Technology, Engineering	77
Special Education and Intervention	85

Core Values and Beliefs

1. The high school administration, faculty, and staff believe in promoting high achievement for all students.

- We develop and implement a developmentally appropriate, challenging, and diverse curriculum, based on national and state standards.
- We emphasize high expectations for all students.
- We maintain inclusive and varied educational environments that promote success for students with diverse challenges and learning styles.

2. The high school administration, faculty and staff believe in working from research-based best practices that promote student achievement.

- We collaborate with colleagues to regularly develop curriculum and assessment, incorporate known best practices to support effective instruction and classroom innovations, and to ensure high professional standards in our work;
- We create effective ways of gathering and analyzing data from student performance and use it to monitor individual student progress and inform instruction within and across departments;
- We build partnerships with academic institutions and community organizations that enrich students and staff and add value to our school system.

3. The high school administration, faculty and staff believe that an education in diversity and social justice is essential for all members of our community. We believe that these values help us to recognize our civic responsibilities and the potential we share to make a positive difference in and beyond the school.

- We develop curricula that educate students about the historical injustices suffered by people because of their identity.
- We create a learning environment where students can grow personally, acknowledge their identities, and express differences while nurturing acceptance and respect for self and others.
- We provide professional development opportunities for faculty and staff in anti-racism and social justice education.
- We celebrate the diversity within our community and affirm the bond we share as human beings.

School-Wide Learning Expectations

At ARHS, students must be able to think critically and work both collaboratively and independently to construct knowledge. These core skills are integrated throughout our school's Learning Expectations. ARHS students:

- write effectively in a variety of formats
- speak knowledgeably, clearly, and persuasively as a means of communication
- read and listen for understanding
- use quantitative and analytical reasoning skills to build understanding and solve problems
- apply information literacy concepts and skills to use information resources critically and ethically
- express themselves creatively in a variety of media
- are informed, culturally aware and responsible local, national, and global citizens
- demonstrate an understanding of historical and institutional injustice
- demonstrate self-advocacy, self-respect, and respect for others

ARHS Requirements for Graduation

Course Credit Information

Most students take five academic subjects (four for students not taking a world language). Most full semester courses in grades 9-12 earn 4 credits and most one quarter courses earn 2 credits. There are a few courses which are the full year and therefore worth 8 credits. The equivalent of a four-credit subject may be two separate classes within the same department. Only credits earned during grades 9-12 count toward graduation. To graduate, the class of 2024 must earn a total of 84 credits. Starting with the class of 2025, students will need to earn a total of 96 credits (the increase due to a new schedule with opportunities to earn more credits each year). Among these credits, students need to earn the following in each department:

English	16 credits (including at least one literature class in both 11th and 12th grade)
Social Studies	12 credits (4 of which must meet the U.S. History requirement)
Mathematics	8 credits
Science	8 credits in laboratory courses
Physical Education	2 credits (taken in 10th grade)
Health Education	2 credits (taken in 9th grade)

Massachusetts Comprehensive Assessment System (MCAS)

In order to earn a high school diploma, students must either earn a score in the proficient or higher range on the high school MCAS ELA and Mathematics tests, or if between a passing and a proficient level on these tests *and* fulfill the requirements of an Educational Proficiency Plan (EPP). Also, students must earn a passing score on one of the high school MCAS Science and Technology/Engineering (STE) tests: Biology, Chemistry, Introductory Physics, or Technology/Engineering during their high school career. Take out - (*For the classes of 2023, the competency determination in STE will be awarded upon demonstration that the student earned credit for a course in the relevant subject matter and demonstrated competency in one of the four tested disciplines: biology, chemistry, physics, technology/engineering.) Students who are successful in the regular curriculum for ninth and tenth grades are generally well prepared to complete the MCAS tests. Students have the right to participate in MCAS tests and retests. Retests in ELA and Mathematics are offered in November and March, and students may participate in STE tests in February (Biology only) and June each year. Individuals may continue to participate in ELA and Mathematics retests and STE tests after leaving high school. For more information about the MCAS tests, sample test questions, testing dates and school and district score information, please see the Massachusetts Department of Elementary and Secondary Education website at: http://www.doe.mass.edu/mcas/.

Many ARHS students become eligible for the John and Abigail Adams Scholarship and the Stanley Z. Koplik Certificate of Mastery Award by virtue of their MCAS scores. Both provide tuition discounts at Massachusetts state universities and UMass campuses. For more information, visit:
http://www.doe.mass.edu/scholarships/mastery/default.html

Participation in the Graduation Ceremony

To participate in the graduation ceremony a student must complete all of the requirements for graduation by the last scheduled day of classes for seniors (usually one week prior to the graduation ceremony). Students who need to complete work beyond this date may graduate by the end of the school year or through participation in summer school but will not be eligible to participate in the graduation ceremony. Students who have met all of the credit and enrollment requirements but have not passed all of the required MCAS tests may participate in the graduation ceremony but will receive a certificate of attainment rather than a diploma.

ARHS Recommended Program of Study

Each year some families ask for advice as to the "correct" sequence of courses or the "best" program of study for students to follow. Advice about specific courses will vary according to the interests and achievement level of students, but our experience shows that most students should select the following for the **block** schedule:

- 4 blocks of English (**required**)
- 1 quarter of health (**required** in the ninth grade)
- 1 quarter of physical education (**required** in the tenth grade)
- 4 blocks of social studies (**3 are required**)
- 4 blocks of mathematics (**2 are required for ARHS, though most 4-year colleges require math every year**)
- 4 blocks of laboratory science (**2 are required for ARHS, though most 4-year colleges require 3**)
- 3-4 blocks of one world language (**world language is not required for ARHS, but most colleges require 2 years of the same language *beyond* eighth grade**)
- Elective courses

School counselors will provide individual consultation based on a student's own program of study. For *most* students, a four-year program of study would look like this:

Subject	**9th Grade**	**10th Grade**	**11th Grade**	**12th Grade**
English	Writing and Literature*	Literature, Writing, and Public Speaking*	1 semester-long literature course	2 quarter-long literature courses OR 1 quarter-long literature course and 1 quarter-long writing course
Social Studies	Global History 1*	U.S. History*	Global History 2* or AP World history	2 Social Studies Electives
Mathematics	Consult with current math teacher to discuss	Consult with current math teacher to discuss options for	Consult with current math teacher to	Consult with current math teacher to discuss

	options for next sequential course	next sequential course	discuss options for next sequential course	options for next sequential course
Science	Ecology and Environmental Science*	Biology	Chemistry	Physics or Science Elective
World Language	Language Level 1 or 2	Language Level 2 or 3	Language Level 3 or 4	Language Level 4 or 5/AP
PE/Health	Health*	PE –Adventure Challenge*		
Electives	See specific listings under Physical Education, Family & Consumer Education, Art, Technology & Computer Education, Music, and Performing Arts.			

Specific course required at the designated grade level.

College Admissions Requirements

High school graduation requirements are different from four-year college admission requirements. The following table lists admission requirements for the Massachusetts State University System.

College Admission Requirements for the Massachusetts State University System:

English	4 courses
Mathematics	4 courses (Algebra I and 2 and Geometry or Trigonometry or comparable coursework) including mathematics during the senior year of HS. .
Sciences	3 courses with laboratory work (drawn from Natural Science and/or Physical Science and/or Technology/Engineering)
Social Sciences	2 courses (including 1 course in U.S. History)
Foreign Language	2 courses (in a single language, beyond the eighth grade)
Electives	2 courses (from the above subjects or from the Arts & Humanities or Computer Sciences)

For more information on college admissions requirements for Massachusetts state universities, please visit: http://www.mass.edu/shared/documents/admissions/admissionsstandards.pdf

For information on college athletics eligibility please visit the National Collegiate Athletic Association Eligibility Center or look at their Quick Reference Sheet (http://fs.ncaa.org/Docs/eligibility_center/Quick_Reference_Sheet.pdf).

Getting Ready for Post-Secondary Education

- Continue study in all five academic areas (English, Math, Science, Social Studies and World Languages) at the most appropriate and most challenging levels you can reasonably manage.
- Many four-year colleges require students to complete Algebra 2 to be considered for admissions. More competitive majors at 2 year community colleges also require the completion of Algebra 2 (such as Nursing, Accounting, Business, Vet Tec, among others).

- ARHS is transitioning from Naviance to SCOIR (a comprehensive guidance software program) in 2023. SCOIR is a tool for career and college research, information sharing about the college admissions process, communication with students and parents, preparation for the SAT or ACT, management of college and scholarship applications, and statistical reporting. Juniors and seniors and their parents currently have access to the program.
- Take appropriate tests at appropriate times: PSAT, SAT, SAT subject tests, ACT, TOEFL, ASVAB (military), etc. All juniors should take the PSAT in October of the junior year to practice for the SAT and for eligibility for the National Merit Scholarship Program. Most juniors should take the SAT and/or the ACT for the first time in the spring. One or both of these is usually repeated in the fall of the senior year. Students who will apply to very selective colleges should also take at least two SAT subject tests prior to December of the senior year. School counselors can help you develop a testing schedule that is best for you. Prepare as best you can for the tests but remember that many fine colleges are test-optional (meaning they are not required)
- Check your arps email regularly for emails from the College and Career Counselor! These emails contain a wealth of information about the application process, financial aid and scholarships, and college representative visits. Pay attention to school announcements, study the junior and senior college admission handbooks, and absorb materials posted online or distributed. Be sure to adhere to all deadlines.
- Develop computer and media literacy.
- Work at developing your critical reading and writing skills.
- Hone your critical thinking skills. Learn to present logical arguments to support your beliefs and opinions.
- Develop your research skills. Spend time in the library and learn how to use its resources.
- Know yourself. Analyze your strengths and weaknesses. Direct your efforts and involvements to maximize your strengths and to strengthen your weaknesses or learn to effectively compensate for them.
- Get involved (sports, extracurricular activities, work, community service, music, hobbies, etc.). Depth is what is important here, not quantity. Choose a few activities that are of real interest to you and pursue them—in depth and over time.
- Become a good time manager. Get organized. Make up daily/weekly schedules of appointments and assignments and follow them. Employers and colleges want to know what productive use you have made of your time in school and outside of it.
- Begin thinking about what you might want to get out of post-secondary education. Talk to graduates about their experiences—what they have learned, what they would have done differently in high school, etc.
- Talk to people working in fields in which you are interested. Find out what their education and training have been. Use our electives program to explore career areas. Explore an internship in your junior or senior year, if possible.

Course Registration and Schedule Changes

Overview of the Schedule

Amherst Regional High School operates on a 4 x 4 Block semester schedule. Students are scheduled for four periods each semester and the courses will meet every day for 75 minutes. Most two-credit courses will take one quarter to complete, and four-credit courses will take the full semester to complete, with a few exceptions. These exceptions are indicated within individual course descriptions.

Since 12th grade and 11th grade students receive priority for elective courses, the number of options for 10th and 9th grade students may be limited.

Course Registration

Families should choose courses carefully during the registration period. Students will receive their course schedule for the full year in August. Take out all shaded: They will also receive a Course Change Request form at that time. Students and families will be asked to carefully review their course schedule for both semesters and use the Course Change Request form if there is a need for any change. Course Change Request forms should be returned to the student's school counselor as early as possible. All schedule changes are done in person only (versus email). Counselors will be available for 1-1 student meetings to discuss course change requests on the day students pick up their schedules and the first three days of school, all day. No appointments necessary since these days are reserved for this purpose. Students asking to make changes to academics courses must come with a note from a parent/guardian giving permission for the change.

Adding and Dropping Classes: All course changes for <u>both semesters</u> must be made by the end of the first four days of school. Students must review their schedules for the full year carefully and make sure all requests are made during this timeframe. This said, understanding there may be circumstances that necessitate changes to be made later in the year, requests will be considered within the first 3 days of each new quarter. Students need to be in the appropriate classes by the start of the 5th day at the start of the year and the start of the 4th day in all other quarters. Due to missed class time, students cannot add a new class after these timeframes.

Priority will be given to:

- Students missing major academics
- Students with a placement error (for example, Spanish 1 versus Spanish 2)
- Students with unbalanced schedules (for example, 4 academics in one term, 1 in another)
- Students who have failed courses and/or completed summer school

Requests that will be considered but cannot be guaranteed:

- Students who did not get their first-choice electives (including English and Social Studies electives)

Schedule changes will <u>not</u> be made for the following reasons:

- Students seeking a specific teacher, period, or term for a particular class
- Students seeking revision to an already balanced and complete schedule

After the Add/Drop period, only teacher-initiated, course-level changes will be honored.

Senior Course Changes:

Seniors must make sure that their schedules for both semesters are accurate when they are received in late August. **Errors or other special requests for changes must be made before the end of the Add/Drop period at**

the beginning of the school year *for both semesters.* Once transcripts have been submitted to colleges, no schedule changes will be approved.

Academic Policies

Grade Promotion

Due to the recent schedule and credit requirement changes, in order for students to be on track for graduation they should earn an average of 32 credits a year. Grade level changes happen at the completion of the school year, not at the end of each semester.

Instructional Grouping

Heterogeneously grouped courses are open to all students and may include students who have a wide range of abilities and interests. Departments also offer courses that are designated as Honors or Advanced Placement. Heterogeneously grouped courses, as well as those designated as Honors or Advanced Placement, are all college preparatory courses.

Courses designated as Honors are characterized by an accelerated pace, an intensive examination of content, or both. Honors courses will demand substantial independent work, extensive use of supplementary materials, and sophisticated analysis and synthesis of ideas and information. A separate honors course is so noted in the course title. In some courses, the honors designation is an option within a heterogeneously grouped classroom. When an honors option is available within a classroom, it is noted within a given course description. Courses designated as Advanced Placement are courses that offer the highest level of challenge we offer and follow the college-level AP curricula endorsed by the College Entrance Examination Board. Students should consider their long-term goals, overall course load, out of school time commitments, and level of motivation when determining the correct level course for themselves.

Grade Point Averages

Un-weighted grade point averages are computed for all Amherst Regional High School students. Grade point averages are computed each semester, based on courses that have been completed to date. All graded courses taken at Amherst Regional High School are included in these computations with the following exceptions: Alternative Learning Programs and special education academic support classes. Courses that extend over two terms are not counted in the GPA until they have been completed. Courses taken outside of ARHS (including college and university courses) are not included in a student's GPA. When reporting to colleges, the High School reports a student's individual GPA. Amherst Regional High School does not provide individual rank in class ratings. The grades included in a grade point average are based on a 4.0 scale as follows:

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
4.0	4.0	3.7	3.3	3.0	2.7	2.3	2.0	1.7	1.3	1.0	0.7	0.0

Homework

Homework is considered an integral part of the educational process in our school. Academic success requires that ARHS students are organized, disciplined and active participants in all classes. Students must come to school every day on time and prepared to learn. Completing all assigned work inside and outside the classroom ensures academic preparation that leads to academic success. Homework may be assigned by teachers for different purposes, some of which include the following:

- To encourage responsibility, self-discipline and independence
- To expand the curriculum
- To increase academic achievement

The type of homework assigned depends on its purpose, as stated above. Homework assignments may involve:

- Preparation
- Practice
- Application
- Extension
- Creativity

Teacher Responsibility for Homework:

- Teachers must be clear and specific with all students about what is required for homework, including due dates, assessment criteria for completed work, and relevance to course work.
- Teachers should assign homework that is relevant, that reinforces and/or expands classroom work.
- Teachers should give students feedback on homework in a timely fashion and keep them informed regularly of their performance and the status of their work.
- Teachers need to keep parents/guardians informed of students' class performance; therefore, they must report to them a pattern of not completing homework. This can be done through phone calls or e-mail sent home after the student has failed to turn in multiple assignments.
- Teachers must inform students of missed work/homework upon their arrival back in class after an absence and inform them when the work is due.

Student Responsibility for Homework:

- Students must complete homework within the time limit assigned by the teacher.
- Students must try to provide the best quality of work possible.
- Students must alert their parents/guardians and/or teachers the moment they confront any difficulties in the process of completing homework.
- In the event of an absence, students are responsible for getting the work they might have missed upon their return to school. For each day of absence, students have two days to make up and/or make the necessary arrangements to complete missed homework.
- Students must come to school with Chromebooks fully charged each day.

Parent/Guardian Responsibility for Homework:

- Parents/guardians must provide a home environment that is conducive to effective homework/study time.
- Parents/guardians should monitor homework completion and promote a positive attitude at home regarding the importance of homework for academic progress.
- Parents/guardians should regularly check the PowerSchool Parent/Student portal to keep informed of student progress and performance.

Final Examinations

All courses of study will include some type of experience designed to evaluate student achievement of the overall curricular goals. Examination periods will be scheduled at the end of each semester to facilitate the scheduling of such experiences. It should be noted that **exams will not be given before the regularly scheduled exam period.** If students have to leave school before the exam period begins, they must make arrangements with teachers to take their exams when they return.

Progress Reports and Home/School Communication

Progress reports for all courses are available online in the Student/Parent Portal halfway through each semester and again at the end of each semester. Teachers can contact parents/guardians via email or a phone call if a student's performance warrants comment. Students and parents can also check grades and assignment completion using the PowerSchool portal by visiting http://powerschool.arps.org/. A username and password may be obtained from the Main office.

Parent/Guardian Concerns

If a parent/guardian has a concern about a particular class, the parent/guardian should first contact the teacher involved. Many problems can be resolved in this manner, but if the problem persists, the subject area department head can be contacted. If the parent/guardian continues to have a concern regarding his/her child's schedule or course curriculum, the parent should contact the child's school counselor (or liaison for students with IEPs)**.** After consulting with the teachers, department head, and school counselor, a parent/guardian may wish to contact the Assistant Principal or the Principal with questions or concerns. Contact information for all staff is available on the high school website.

National Honor Society

Students interested in becoming members of the National Honor Society during their junior or senior year should begin preparing as early as the ninth-grade year. Scholarship, leadership, service, and character are criteria for consideration of eligibility. Juniors and seniors with a cumulative average in all subjects of B+ (3.3) are eligible to apply for membership in the National Honor Society. All high school courses, even if taken at a school other than ARHS, are included in the calculation. Students who have met the eligibility requirements are notified via email and invited to submit an application. Once interested students complete the eligibility questionnaire, parents/guardians and faculty members are given the opportunity to provide written statements in support of the students' applications. An appointed faculty council then reviews all pertinent information to determine whether each eligible student meets the criteria for membership.

Additional Learning Options

Sabbatical Leaves

Procedures for withdrawal and re-enrollment for sabbatical leave are available in the Registrar's Office. Families planning a sabbatical leave should meet with their child's school counselor and then the Registrar. Families returning from sabbatical leave should schedule an appointment with the Registrar and then their child's school counselor.

Early Graduation

Considering the rich and varied course offerings, most students will find areas of interest and challenge in the curriculum for four years. However, in keeping with our philosophy that permits students to progress as rapidly as they are able, students who complete graduation requirements are permitted to leave school prior to the normal period of four years in grades 9-12. Times of termination are at the end of a semester.

It is important to note that most competitive colleges and universities do not view early graduation as a plus in the admissions review, unless the student has exhausted the high school curriculum (e.g. completed the lab science sequence through physics, math through calculus, language through Advanced Placement, etc.). Most colleges and universities put more weight on the quality of a student's academic program than on other factors in the admissions process. Unless there is a specific purpose for leaving high school early, with plans for constructive use of time, most students would gain more by remaining in school, taking courses that they had not previously fit into their programs, or studying in greater depth subjects in which they have a strong interest.

Students interested in early graduation must follow the process outlined below during the junior year to be considered for early graduation during the senior year:

1. Meet with parent/guardian and school counselor to review graduation status, college/career and future plans.
2. Independently investigate college/career interests and the implications of early graduation.
3. Write a letter to the Guidance Department Head. Describe your reasons for requesting early graduation. Explain how you will use the time between the completion of high school classes and the June graduation ceremony. Include evidence that arrangements for this time have already been made, or are well developed. Describe your future plans and the implications of early graduation. A parent/guardian must co-sign a letter.
4. Meet with the Guidance Department Head and a parent/guardian to discuss the plan.

If the plan is approved, you will need to meet with your counselor to adjust your course requests by June of your junior year. You will also need to remember to discuss your plan for early graduation in your junior year college counseling meeting. Students electing to graduate early may not participate in extracurricular activities after their last day of full-time enrollment in the high school.

College Courses

Seniors are able to take courses at local colleges to extend their learning beyond the high school offerings if those college courses do not conflict with high school courses or responsibilities and the student is in good academic standing at ARHS. With the approval of the Counseling Department Head, the Assistant Principal and the approval of the college or university, students may be allowed to enroll in one or more courses prior to graduation from high school. Students and parents/guardians are responsible for transportation and all expenses associated with the college course.

Students should note that they cannot earn both high school and college credit for a single college course, unless they are dually enrolled (see below). Credits earned on the college level cannot be used to satisfy high school graduation requirements. Application forms for Amherst College, the University of Massachusetts and Hampshire College are available digitally with school counselors during the online course registration and must

be chosen prior to the end of course registration. A Google Form will be emailed to your school email. Complete this form before the last day of course verification (Wednesday, April 24).

Dual Enrollment Program

Students have the opportunity to enroll part-time or full-time at local community colleges (GCC, HCC or STCC) and may use those credits to fulfill ARHS graduation requirements. Some of the requirements of dual enrollment include:

- Being capable of taking the initiative to create one's own educational program and to fulfill graduation requirements without regular supervision. It is important to note that professors at the community colleges are not allowed to communicate directly with parents and guardians after initial registration and therefore only communicate directly with the student.
- Being able to communicate with professors regularly and keeping up with assignments without regular reminders (students need to keep track of deadlines carefully).
- Having the interest and academic readiness to do work at the college level (including the successful completion of the required placement tests)
- It is recommended that students complete at least 9th and 10th grade, including the ARHS graduation requirements of eight English credits, eight science credits, eight math credits, US History and MCAS testing. Each college will have its own additional requirements for application.
- Having the maturity to function independently in a college environment and maintain positive working relationships with adults.
- Students and families are financially responsible for all tuition and fees and will need to provide their own transportation.

Students interested in pursuing dual enrollment must meet with their parents/guardian and school counselor and submit an application, in the spring preceding the year in which they want to enroll.

Work Study

The Work Study Program is a cooperative effort between the high school and employers in the community, in which junior or senior students combine school work with part-time, paid employment and receive credits toward graduation. With parent/guardian approval, a student may apply for Work Study, taking a minimum of four classes per semester and spending the remainder of the school day as an employee in business or industry.

Students interested in this option should contact their school counselor. Students enrolled in Work Study are required to document at least 6 hours of work per week during school hours. These work hours must start before the end of the school hours and before the plus block (3:00), Monday to Friday. Students are required to submit time cards, signed by their supervisors, every 4 weeks. This course is offered Pass/Fail, and students can earn up to 2 credits per scheduled Work Study period per quarter. If a student requests Work Study but does not have 7 hours of employment during school hours, s/he will be placed in an open elective course.

Alternative Learning Program (ALP)

The Alternative Learning Program (ALP) allows students to earn high school credits for experiences that supplement the standard high school curriculum and is designed to replace other electives in the student's schedule. In order to be approved for an ALP, students (most often juniors and seniors) must demonstrate readiness for independent work and develop a plan of study that is not available to them in the regular ARHS

high school curriculum. For example, students may choose to develop a course of study utilizing the knowledge and expertise of members of the community, take a course at one of the Five Colleges, complete a comprehensive community service project, complete an internship, or work with a faculty advisor or mentor to complete independent research or a project in an area of study to facilitate deeper learning than can be accomplished through the regular ARHS curriculum. Under the Alternative Learning Program, there are seven categories in which students can design an ALP for high school credit:

ALP Category	Type of Grade Assignment	Credits Per Quarter	Included in GPA
ALP: Library Community Service	Pass/Fail	1	No
ALP: Teacher Assistant	Pass/Fail	1	No
ALP: Independent Study	Pass/Fail	1	No
ALP: Internship	Pass/Fail	1	No
ALP: Future Pathways: College & Career	Pass/Fail	1	No

To assist students in working out a viable ALP contract, the following procedures have been established:

1. Students must obtain an ALP form from their school counselor.
2. When designing an ALP and completing the ALP form, the student will need to attach a description which communicates clearly how they will be productive during the time spent pursuing the ALP.
3. The student must review their proposal with their supervising teacher or counselor for initial approval **prior** to completing the ALP form for administrative review.
4. Students should have alternate courses in their schedules should an ALP not be approved. Once the ALP is approved, the alternate course will be dropped from the student's schedule.
5. Any changes or modifications in the ALP activity must be approved by the faculty member (typically a teacher and/or counselor) supervising the ALP contracts.
6. A student who wishes to design more than one ALP in a semester must have special permission from the guidance department head. The administration reserves the right to limit the total number of ALP credits and the type of ALP credit earned toward an ARHS diploma.
7. *Internships also require an internship contract and monthly time cards. Students should meet with their school counselor to obtain these and review the process.

ALP: Future Pathways: College & Career (11-12 grade students)

Embark on a transformative journey with our high school ALP, 'Future Pathways: College & Career.' A Quarter long ALP tailored for seniors in the fall and juniors in the spring, this ALP delves into crucial aspects of future planning: college admissions, the personal statement, test-prep, career exploration, field work, resume writing, and essential life skills. Through sessions led by the ARHS College and Career Advisor, Deidre Cuffee-Gray, students navigate self-assessment, decision-making, and strategic planning. The ALP is focused on ensuring students emerge well-prepared for the challenges and opportunities that lie ahead for their futures in both college and career.

ALPS students must have attendance that is in good standing and agree to a firm commitment of this class experience.

Support Services for Students

Special Education Programs

The Special Education Department provides a comprehensive program of services for students with special needs. Options range from prescriptive specialized academic support to substantially separate programs. The process for determining eligibility for Special Education services is outlined in the general laws of Massachusetts, Chapter 71B. Eligibility is based on the following: (1) evidence of one or more disabilities, (2) student is not making effective progress in school and that lack of progress is a result of the student's disability and the student requires specially designed instruction in order to make effective progress in school or requires related services in order to access the general curriculum. If the student is found eligible for services, an Individualized Educational Program (IEP) will be developed by a special education team; the program includes student-centered goals, which are delivered in a variety of models. The following are examples of models used for delivering programs and services:

1. in-class support / consultation;
2. academic support and instruction in regular education settings, often known as inclusion programs;
3. academic support for regular education subjects within special education settings;
4. direct instruction in skill areas within special education settings; and
5. academic instruction in specific content areas.

Guide to the Course Offerings

On the pages that follow, you'll find detailed information about the courses offered in our academic and elective departments. For each department we include the following:

- Department Overview
- ARHS Graduation Requirement
- Admission Requirement for Massachusetts State University System
- Information about course levels or grouping
- Recommended 4-Year Course Sequence
- Course Descriptions, including any necessary prerequisites

Prerequisites

The purpose of a prerequisite is to ensure that a student has the necessary skills, content knowledge, conceptual understanding, and experience to be successful in a given course. Some prerequisites simply require *completion* of a previous course (i.e. completing level 1 before starting level 2) while others may also include a minimum grade (i.e. earning a minimum of a C- in level 1 before starting level 2).

Students with extenuating circumstances may obtain permission to waive a prerequisite if they have comparable experience and can demonstrate adequate preparation for a given course. To obtain permission, students should consult with their school counselor and then meet with the appropriate department head. Contact information for all department heads is listed on the ARHS website.

English

Ninth and Tenth Grade English

Students begin the high school English program with intensive practice in the fundamentals of writing and with rich exposure to a variety of literary forms: poetry, drama, fiction, and nonfiction. Students also hone the art of public speaking. Those who wish to engage in advanced, intensive study in English may do so through the honors project option, which includes a guided independent study that reflects the content of each specific course. Students receive detailed information describing the honors project at the beginning of each course. All students must successfully complete English 9 and English 10 before enrolling in eleventh and twelfth grade elective. courses. Students who do not earn credit in these courses may repeat the course. Please read the detailed course descriptions in the section below.

Eleventh Grade English

In eleventh grade, students will take one **semester-long** English course. All courses offer a deep-dive into important works of American literature and students will be immersed in anti-racist/anti-oppression reading and writing that builds upon our ninth and tenth-grade foundation courses. Since students can only choose ONE semester of eleventh grade English, they should carefully select their preferred course.

11th Grade Semester English Electives for 2024-2025 (choose 1)
African American Literature American Literature & Nature* American Literature and Society* Contemporary Literature* LGBTQ Literature *starred courses are only offered in junior year (Bible & Related Literature rotates with American Literature & Nature; Bible & Related Literature will be offered next in ‘25-‘26

Twelfth Grade English

Twelfth grade students may elect **two quarter-long English electives**, each nine weeks in length. Students must choose at least one literature elective. For their second course, they may choose a second literature elective or a writing elective. Please see the course descriptions below to guide you in making the best choice. All upper-level electives challenge students to examine texts through close reading using multiple lenses of literary criticism and all engage students in varied and challenging writing assignments.

Twelfth Grade English Literature Quarter Electives for 2024-2025
(choose 2--either two lit OR one lit and one writing)

LITERATURE

African American Literature
Ancient and Medieval Literature
British Literature
Disability Justice Literature
LGBTQ Literature

WRITING

Creative Writing
Journalistic Writing

Students cannot select a senior version of a course they previously took in junior year (African American Literature in 11th and then again in 12th, for example).

(Renaissance & Modern Literature and Philosophy rotates with Ancient & Medieval Literature; Ren Mod will offered next in '25-'26)

11/12 English Honors Credit

Students seeking challenge beyond the already rigorous college prep curriculum may earn honors credit in any **English literature course** in eleventh or twelfth grade by enrolling in the honors section, where they will complete independent readings (novels, non-fiction, poetry, and short story), annotating additional texts, meet with other honors students to discuss texts, and complete timed analytical in-class essays or analytical essays outside of class.

11/12 English AP Credit

To earn AP credit, students must complete **TWO literature classes at the honors level--one semester-long course in their junior year and one quarter-long literature course in their senior year, and all assignments within these courses to complete the AP Portfolio,** meeting College Board Advanced Placement standards. Each semester or quarter-long course requires reading an independent text; annotating the work(s); discussing it with other honors students; and writing lengthy essays outside of class and completing in-class, analytical essay responses. These essay prompts are similar to open-ended questions from the national AP Literature and Composition test but adjusted to encompass the themes, symbols, and meanings of the AP literature options in ARHS courses.

Course Descriptions:

Writing and Literature (0023) (English 9)
Credits: 4
Prerequisite: None. Students may select the honors option after experiencing several weeks of class.
In this introductory writing and literature course, students read a variety of genres including an epic, modern drama, a memoir, a graphic novel, and narrative non-fiction. All are selected to acquaint them with examples of great literature from ancient to modern and contemporary times. The texts include most of the following: Lorraine Hansberry's *A Raisin in the Sun,* Marjane Satrapis's *Persepolis,* Dashka Slater's *The 57 Bus*, Shakespeare's *Macbeth*, Elie Wiesel's *Night,* and Kurt Vonnegut's *Slaughterhouse Five*. These works serve as models for students' own compositions; students experiment with a variety of personal, analytical, and imaginative pieces. Fundamentals of grammar and usage, paragraph and essay development, voice and style, and the responsible use of outside sources for research assignments are introduced and reinforced.

Literature, Writing, and Public Speaking (0025) (English 10)
Credits: 4
Prerequisite: English 9. Students may select the honors option after experiencing several weeks of class.
In Literature, Writing, and Public Speaking, required for all tenth graders, students will study literature as social criticism, focusing on texts written by Black, Asian, Latinx, Indigenous, LGBTQ, and disabled writers. Their study will be framed by essential social justice questions about culture and belonging, power and voice, identity, and oppression and liberation. Students will read Zora Neale Hurston's *Their Eyes Were Watching God,* August Wilson's *Fences,* Rebekah Taussig's *Sitting Pretty: The View From My Ordinary Resilient Disabled Body;* and contemporary living poets. Honors choices include Celeste Ng's *Everything I Never Told You,* Jimmy Santiago Baca's *A Place To Stand,* Jacob Tobia's *Sissy,* and J.D. Salinger's *Catcher in the Rye.* All students will learn to deconstruct complex literary themes, symbolism, and figurative language; craft analytical, creative, and reflective papers for a writing portfolio; and participate in class discussion with their peers. Students will master the art of public speaking, learning to write and speak with passion, in order to perform lively persuasive, emotional, and informative speeches.

ELEVENTH GRADE LITERATURE COURSE OPTIONS

These courses are semester-long. Students may take ONE.

African-American Literature 11 (010a)
African-American Literature/Honors 11 (010b)
Credits: 4
Prerequisite: English 10
In African-American Literature students study major texts written by Black authors and then work with a community of writers and activists to analyze literature and film. The primary texts include Yaa Gyasi's *Homegoing*, Toni Morrison's *Beloved,* Richard Wright's *Native Son*, *Malcolm X,* as told to Alex Haley, Bryan Stevenson's *Just Mercy,* and Octavia Butler's *Kindred*. The major texts are supplemented with close analysis of Ava DuVernay's documentary *13th,* Spike Lee's feature film *Malcolm X,* and poetry, short stories, and essays, providing a rich cultural and historical context for literary analysis. Throughout the course, students will address systemic and institutional racism; slavery, colonialism, and mass incarceration; and literary resistance, activism, and radicalism. In addition to reading and thinking about racial justice, students will become part of a connected community of writers, actively engaged in the world of literary analysis.

American Literature and Nature (012a)
American Literature & Nature/Honors (012b)
Credits: 4
Prerequisite: English 10
Through a variety of voices, genres, and media, this class will explore the tension between the myth of the "American Dream" as it exists alongside the "American Reality" via Leslie Marmon Silko's *Ceremony,* Frederick Douglass's *Narrative of the Life of Frederick Douglass,* Mark Twain's *The Adventures of Huckleberry Finn,* and selections from Emerson and Thoreau*,* as well as an assortment of poetry, articles, and film. Students will not only learn about nature as a symbol in literature, but they will also keep a nature journal where they will deepen their own connection to and understanding of the natural world.

American Literature and Society 11 (015a)
American Literature and Society/Honors 11 (015b)
Credits: 4
Prerequisite: English 10
Journalist and educator Nikole Hannah-Jones has called the U.S. "a nation founded on both an ideal and a lie." This course invites students to engage with the hope *and* harm embedded at the core of the American experiment through writers including, but not limited to, Toni Morrison, Hanif Abdurraqib, F. Scott Fitzgerald, and Robin Wall Kimmerer. Students will also help explore and share new works, across multiple mediums, that decenter the United States in favor of the Americas, enabling us to better explore indigeneity, migration, colonization, and reflect the U.S. as one version of a colonial project rather than a universally accepted goal. Students should expect extensive reading, writing (both narrative and analytical), and significant opportunities to practice meaningful discussion.

Contemporary Literature 11 (0252a)
Contemporary Literature/Honors 11 (0252b)
Credits: 4
Prerequisite: English 10
Contemporary Literature covers novels, short stories, and poems written by authors of a variety of races, ethnicities, backgrounds, and classes; each text we study was published within the last 20 years. Through their study of literature, students will critically question and discuss complexities regarding immigration, dislocation, discrimination, intergenerational trauma, family dynamics, personal freedom, social responsibility, and the resilience of the human spirit. Main texts include *Station 11*, by Emily St. John Mandel, *The Namesake* by Jhumpa Lahiri, *Citizen Illegal* by Jose Oliverez, *Salvage the Bones* by Jesmyn Ward, *The Leavers* by Lisa Ko, and *There, There* by Tommy Orange. Honors texts vary year to year.

LGBTQ Literature 11 (020a)
LGBTQ Literature/Honors 11 (020b)
Credits: 4
Prerequisite: English 10
The resilience, resistance, and revolution in the queer community is inspiring. The LGBTQ Literature class is divided into five major sections, moving in chronological order from the mid-1900s to the present day. Primary texts were written by LGBTQ authors during eras of legal and social oppression; conformity and self-loathing; anger and activism; and finally, pride and acceptance. The course focuses on renowned modern and contemporary American literature, including James Baldwin's *Giovanni's Room*, Rita Mae Brown's *Rubyfruit Jungle* or Isabel Miller's *Patience and Sarah*, Gabby Rivera's *Juliet Takes a Breath,* and Amy Ellis Nutt's *Becoming Nicole* or Kai Cheng Thom's *Fierce*

Femmes and Notorious Liars. The honors text is Ocean Vuong's *On Earth We're Briefly Gorgeous.* Each unit includes a combination of critical essays, poetry, short stories, and film, providing a rich cultural and historical context for literary analysis.

TWELFTH GRADE QUARTER-LONG LITERATURE COURSE OPTIONS

Students should choose at least one literature elective. The other elective choice can be another literature elective OR a writing elective (in section following this one). Students cannot select a senior version of a course they previously took in junior year (African American Literature in 11th and then again in 12th, for example).

African-American Literature 12 (0363)
African-American Literature/Honors 12 (0363b)
Credits: 2
Prerequisite: English 11. Open to grade 12.
In African-American Literature students study major texts written by Black authors and then work with a community of writers and activists to analyze literature and film. The primary texts are: Yaa Gyasi's *Homegoing*, Toni Morrison's *Beloved,* Richard Wright's *Native Son*, *Malcolm X,* as told to Alex Haley, Bryan Stevenson's *Just Mercy,* and Octavia Butler's *Kindred*. The major texts are supplemented with close analysis of Ava DuVernay's documentary *13th,* Spike Lee's feature film *Malcolm X,* poetry, short stories, and essays, providing a rich cultural and historical context for literary analysis. Throughout the course, students will address systemic and institutional racism; slavery, colonialism, and mass incarceration; and literary resistance, activism, and radicalism. In addition to reading and thinking about racial justice, students will become part of a connected community of writers, actively engaged in the world of literary analysis.

Ancient and Medieval Literature & Philosophy (013a)
Ancient and Medieval Literature & Philosophy / Honors (013b)
Credits: 2
Prerequisite: English 11. Open to grade 12
This quarter-long course samples some of the landmark-texts that define the still-evolving cultures of East and West, from the ancient cradles of civilization in Mesopotamia, India, China, and Greece to the almost-modern medieval worlds of Europe, the Middle East, and Japan. Readings include epics, drama, poetry, prose, and religious writings. The course texts include the *Epic of Gilgamesh*, the *Ramayana*, *Tao Te Ching*, the *Bacchae*, Plato's *Symposium*, Murasaki Shikibu's *The Tale of Genji*, Dante Alighieri's *The Inferno,* and *Sir Gawain and the Green Knight*. Study and discussion will address both the texts and the historical periods that inspired them. By contrasting parallel readings from different cultural backgrounds, students will examine the values that are universal and the beliefs that distinguish the intellectual world.

British Literature 12 (0342a)
British Literature/Honors 12 (0342b)
Credits: 2
Prerequisite: English 11. Open to grade 12
This quarter-long course includes selections of British Literature from its beginnings in the Middle Ages to the present, with a strong emphasis on the expanded literary diversity of the twentieth century. British Literature spans over a thousand years, from its beginnings in the early Middle Ages to the present; "surveying" this tradition would be an impossible task for a single quarter. Additionally, Britain's colonial history has had a dramatic effect on what can be considered "British Literature." This course will take into deep consideration the colonial history of British culture through literature. Students will read a variety of texts with supplemental material to provide historical and cultural context. Response assignments will explore the historical and cultural

aspects raised by the texts. Foundational course texts will include: *Beowulf* and *Frankenstein,* as well as the contemporary text *Exit West*. The honors project is an independent project that includes a choice from a selection of Booker Prize-winning texts and short-listed nominees.

Disability Justice Literature 12 (0364a)
Disability Justice Literature Honors/12 (0364b)
Credits: 2
Prerequisite: English 11. Open to grade 12
Though people with disabilities are the largest minority group in the world, and a sizable percentage of students have diagnosed and undiagnosed disabilities, literature by disabled writers and concepts of disability justice are rarely centered in public school curricula. This quarter-long course will introduce students to important disabled writers and activists; critical moments of disability history in the United States (including activism to pass ADA and 504 legislation and to end institutionalization); and the transformative work of the BIPOC and queer-led Disability Justice Collective over the last two decades. Students will explore social and cultural models of disability; visible and invisible disabilities; ableism and disability justice; and communities of care, especially among disabled people on the margins. Class readings are non-fiction focused (mostly memoirs, essays, and podcasts). They include *Year of the Tiger* and *Disability Visibility*, by Alice Wong; *The Secret Life Of A Black Aspie*, by Anand Prahlad; *The Pretty One,* by Keah Brown; *Deaf Utopia,* by Nyle DiMarco; and *Brilliant Imperfection*, by Eli Clare, as well as numerous films that explore the lives and experiences of disabled people.

LGBTQ Literature 12 (0211a)
LGBTQ Literature/Honors 12 (0211b)
Credits: 2
Prerequisite: English 11. Open to grade 12
The resilience, resistance, and revolution in the queer community is inspiring. The LGBTQ Literature class is divided into five major sections, moving in chronological order from the mid-1900s to the present day. Primary texts were written by LGBTQ authors during eras of legal and social oppression; conformity and self-loathing; anger and activism; and finally, pride and acceptance. The course focuses on renowned modern and contemporary American literature, including James Baldwin's *Giovanni's Room*, Rita Mae Brown's *Rubyfruit Jungle* or Isabel Miller's *Patience and Sarah*, Gabby Rivera's *Juliet Takes a Breath,* and Amy Ellis Nutt's *Becoming Nicole* or Kai Cheng Thom's *Fierce Femmes and Notorious Liars.* The honors text is Ocean Vuong's *On Earth We're Briefly Gorgeous.* Each unit includes a combination of critical essays, poetry, short stories, and film, providing a rich cultural and historical context for literary analysis.

TWELFTH GRADE QUARTER-LONG WRITING COURSE OPTIONS

Students may choose one writing course, along with a literature elective (above). They may also choose two literature electives.

Journalistic Writing 12 (035a)
Journalistic Writing/Honors 12 (035b)
Credits: 2
Prerequisite: English 11. Open to grade 12
Journalistic Writing is an English course dedicated to helping students to write with clarity and economy, improve organization, and tell compelling stories with accuracy, objectivity, and bravery. The course often utilizes a workshop format, and its main business is to produce high-quality written work that will likely see a real audience. Students have the opportunity to submit stories to *The Graphic,* the award-winning ARHS

school newspaper, which publishes approximately two times a semester (by an after-school staff). Students learn the fundamentals of reporting and interviewing and master news, profile, club, sports, editorial, feature, and investigative styles. They also read extensively in regional and national newspapers, analyze the reporting of current events, and discuss the role of the media in society. The Honors option is an independent, quarter-long reading and writing project; students will read lengthy non-fiction text(s) by Pulitzer-prize-winning journalists and will write an essay exploring themes in their work.

Creative Writing 12 (036a)
Creative Writing/Honors 12 (036b)
Credits: 2
Prerequisite: English 11. Open to grade 12
This course is designed for students who want to be part of a community of writers, actively engaged in the world of creative writing. Students will write in various genres and styles, including short stories, poetry, monologue/dialogue, and plays. After students generate new material, they will work in groups to learn how to revise deeply. As they are writing, all students will study mentor texts to develop a deeper understanding of the craft of writing. For the final project, students may choose to explore any genre of interest. Throughout the course, students are strongly encouraged to submit their work for publication to ARHS' literary journal, *The Minks*. The Honors option is an independent, quarter-long reading and writing project.

English Language Learning (ELL) Program

Department Overview:

The ELL Program is designed to meet the linguistic, academic and social needs of English Language Learners (ELLs) who attend Amherst Regional High School. The ELL Program creates a welcoming and challenging learning community where students acquire proficiency in both conversational and academic English, mastering academic content while developing the social skills necessary to thrive in a culturally diverse American high school. Students are enrolled in ELL courses taught by certified ELL teachers and receive English, Social Studies and general credit for these courses. Students are also enrolled in courses outside the ELL program. ELL courses are offered at the beginning, intermediate and advanced levels and are aligned with the Massachusetts state frameworks for English and Social Studies, with district curricula, and with state and national standards for English language instruction.

Identification and placement of students is made by the ELL staff, using the MODEL and ACCESS tests and native-language assessments as needed. These assessments are administered upon enrollment and annually in order to determine each student's English language proficiency level and English learning needs. Students who are not yet proficient in English are placed in ELL courses at the appropriate WIDA level and meet with a school counselor to choose courses in the general curriculum, with the expectation that they will graduate from Amherst Regional High School and pursue post-secondary education. ELLs are placed in non-ELL courses with teachers who are trained through the Massachusetts RETELL program to teach this content and subject-specific academic language to English Language Learners. Bilingual interpreters are assigned to clarify instruction in non-ELL classes (particularly math, science and health) for students at WIDA levels 1-3.

ELL Levels and Credits

There are five levels of ELL: (1) entering, (2) emerging, (3) developing, (4) expanding and (5) bridging. Students are assigned to one of these five levels. Students at levels 1 and 2 enroll in Literacy development: phonics (1 semester), English language conventions: reading and writing (1 semester), Ell communication (1 quarter) and ELL introduction to social studies (1 quarter). The curriculum in the beginning-level courses is often differentiated for entering and emerging students. Students at level 3 enroll in ELL Composition (1 semester), ELL Literature (1 semester) and ELL World History (1 semester). Students at level 4 enroll in ELL Composition & Literature (1 semester) and ELL US History (1 semester). Students at level 5 enroll in either ELL Career Communication, ELL Career Preparation, ELL Language of Film or ELL Global Issues, all offered for 1 quarter, with the career courses offering social studies credit. ELL students' progress from one level to the next as they acquire more proficiency in English. Progress is determined through the use of various assessments including a student's performance in class, annual proficiency assessments and the ACCESS test or other standardized assessments required by the Massachusetts Department of Education.

In addition, we offer a curriculum for students with limited or interrupted formal schooling (SLIFE). These courses meet at the same time as beginning-level literature and composition, and they are designed for students who have had inconsistent schooling or literacy instruction in their first language. Both include 2 credits per term. A student who completes these courses may then take beginning-level courses or intermediate-level courses, depending on their progress.

Most ELL English and social studies courses are two-credit courses that are taken for one or two semesters. The ELL Early U.S. History course is a four-credit course that is taken for two semesters. A student enrolled in ELL courses may receive a maximum of four English credits per year. Students receive social studies credit for the ELL social studies courses. Students receive general credit for additional ELL literature and composition courses. If ELL social studies courses are repeated, general credit is awarded.

ELL 11th or 12th grade students at level 5 who are highly motivated may take one semester of English 10: Literature, Writing, and Public Speaking.

Students receive ELL instruction until they are proficient in the areas of listening, speaking, reading, and writing in English, at which time they are exited from the ELL Program. The ELL department head monitors the academic progress of exited ELL students for four years. Upon exiting the ELL program, students transition into English classes by taking English 10: Literature, Writing, and Public Speaking. To transition into Social Studies classes, exiting 9th, 10th and 11th graders must enroll in US History. Entering 9th graders who have been exited from ELL will take English 9 and Global History 1.

Please note: course offerings are contingent upon enrollment. As numbers fluctuate, not all courses (outside of US history) are offered each academic year.

Honors Option

Students who wish to engage in more advanced study in ELL may wish to do so through the honors project program. Honors projects may be undertaken in ELL classes at level 4 only, with approval from and in consultation with the ELL teacher. Honors work requires analytical thinking, strong writing skills and the ability to synthesize information from multiple sources. Students who elect to do honors must be able to work independently and be self-motivated. Students who cannot maintain a B- or better average should not undertake honors projects.

Course Descriptions:

Level 1

Literacy Development; Phonics Level 1 (0701) - 1 semester (English credit)
English Language Conventions Level 1 (Reading and Writing) (0711) - 1 semester (English credit)
ELL Geography (0621) -1 semester (Social Studies credit-second semester)
ELL Communication level 1 (0601) -1 quarter (English credit-first quarter)

These courses in literacy development and English language conventions are designed to teach students to communicate information, ideas, and concepts necessary for academic success in the content area of English language arts and social studies. The course of study will be based on the student's academic needs. These courses will draw on students' background knowledge to help them access the culturally relevant content using collaborative learning, direct instruction, and other research-based techniques.

ELL Geography introduces and reinforces social studies concepts and skills. This background knowledge will prepare students for success in more language-heavy ELL social studies classes. Content includes physical geography, human and cultural geography, and regional studies. Skills include the ability to interpret and create globes, maps, charts, graphs and timelines, read and write expository text, interpret visual images, and

understand and use key academic vocabulary in context. Each unit will be connected to a reading about a current global issue, a world leader, or an aspect of culture related to that region of the world.

ELL Communication 1 is for students with little or no proficiency in spoken English. Through the use of oral presentations, role-plays and functional language activities, students develop listening and speaking skills in English. Students learn to communicate daily personal needs and converse in social situations on familiar topics. Students are introduced to the fundamentals of English grammar and pronunciation. Students must achieve proficiency at this level in order to transition from the course.

Level 2

ELL Literature level 2 (0603) - 1 semester (English credit)
ELL Composition level 2 (0604) - 1 semester (English credit)
ELL Introduction to Social Studies level 2 (0609)- 1 semester (Social Studies credit-second semester)
ELL Communication level 2 (0602) - 1 quarter (English credit-first quarter)

ELL Literature Levels 1-2 is a course for students with little or no proficiency in reading in English. Students develop literacy skills and master essential vocabulary and grammar through reading in a variety of genres. Students read narratives, short stories, fables, folktales, and an abridged novel. Students also read non-fiction. Students are expected to read the assigned texts with comprehension in order to transition from the course.

ELL Composition Levels 1-2 is a course for students with little or no proficiency in writing in English. Students learn to express their ideas in words, sentences and single paragraphs and progress to multi-paragraph compositions. Students use the writing process, edit their own writing, study basic English grammar, and build vocabulary through short readings and independent reading. Students learn basic keyboarding skills in this course. Students must achieve proficiency at this level in order to transition from the course.

ELL Introduction to Social Studies introduces and reinforces social studies concepts and skills. This background knowledge will prepare students for success in more advanced ELL social studies classes. Content includes physical geography, human and cultural geography, and regional studies. Skills include the ability to interpret and create globes, maps, charts, graphs and timelines, read and write expository text, interpret visual images, and understand and use key academic vocabulary in context. Each unit will be connected to a reading about a current global issue, a world leader, or an aspect of culture related to that region of the world.

ELL Communication level 2 will allow students the chance to practice listening and speaking in English in a variety of contexts, from short oral presentations to conversation partners to interviews with school and community members. This course may be taken while a student is enrolled in level 3 courses, depending on enrollment and teacher availability.

Level 3

ELL Literature Level 3 (0643) - 1 semester (English credit-first semester)
ELL Composition level 3 (0653) - 1 semester (English credit-first semester)
ELL World History level 3 (0633) - 1 semester (Social Studies credit-second semester)

ELL Literature 3 is a course in which students increase their English vocabulary, improve contextual reading skills, and develop reading strategies in English. Students read a variety of authentic and abridged literary texts: poetry, drama, short stories, mythology, novels, and nonfiction. Students learn to speak and write about

literature in English. Students also focus on improving pronunciation. Students must achieve proficiency at this level in order to transition from the course.

ELL Composition 3 is a course in which students continue to improve their writing in English through the writing process. Students learn to write clear, correct, well-organized sentences, paragraphs, and short essays for a variety of purposes and audiences. Students also study English grammar and usage. Students must achieve proficiency at this level in order to transition from this course.

ELL World History 3 is a content-based course designed to acquaint students with ancient and medieval world history as they increase their academic vocabulary, improve listening, reading and writing skills, and develop responsible research skills. Students must achieve proficiency at this level in order to transition to the next level.

Level 4

ELL Composition and Literature Level 4 (0684) - 1 semester (English credit-first semester)
ELL US History Level 4 (0614) - 1 semester (Social Studies credit-second semester)

ELL Composition and Literature is a course in which students continue to improve their reading and writing in English. Students use the writing process and become more independent at revising and editing. Paragraph and essay writing, including analytical essay writing as well as effective, responsible research skills and oral presentation skills are stressed. Students also study complex grammar points and literary devices and read short stories, poetry, novels, plays and nonfiction works. Students must achieve proficiency at this level in order to transition from the course.
Honors Option: Honors work is possible each term and requires completion of an ELL Honors Project.

ELL Early U. S. History is a content-based course in which students learn about the history and government of North America from pre-conquest Native American societies to the Civil War. Students continue to build English academic vocabulary, improve reading, listening, writing and speaking skills, and develop research and writing skills. This course meets the US History graduation requirement for seniors only. All other students are required to take a US history course offered by the social studies department after successful completion of this course. Honors Option: Honors work is possible and requires completion of an ELL Honors Project in both terms.

Level 5 (transitioning out of ELL services)-the goals at this level are to provide ELL students with interesting and challenging courses while still emphasizing language skills. Students will fulfill their ELL requirements by taking just one of these 4 courses (but may elect to take more)

ELL Career Communication (0606) - 1 quarter, 2 Social Studies credits; ideal for students age 16 and older
ELL Career Preparations (0607) - 1 quarter, 2 Social Studies credits; ideal for students age 16 and older
ELL Consumer Economics (0608) -1 quarter, 2 social studies credits
ELL Language of Film (0605) - 1 quarter, 2 social studies credits
ELL Language of Global Issues (0615) - 1 quarter, 2 general social studies credits; ideal for juniors and seniors
ELL Career Communication and ELL Career Preparation are both two-credit courses that are intended to prepare ELL students for the demands of the working and professional world. Emphasis will be placed on the oral English skills needed for job interviews, training and orientations and advocating for oneself in the workplace. These courses are designed with high school juniors and seniors in mind, or those students who are already eligible for work.

In ELL Consumer Economics, a 2-credit course, students will examine how human behavior and its motivation to meet one's own needs and wants drive the U.S. financial system. They will connect this information to understanding career options and decisions, while developing the English language needed to read, write and discuss these topics. Specifically, Consumer Economics highlights the economic realities of debt, credit, market freedoms and restrictions, and fraud. It will investigate factors that impact one's decision-making and guide students in analysis and implementation of practical strategies.

ELL Language of Film is a two-credit course designed to give students more in-depth appreciation of film through regular film screenings, discussions and presentations.

ELL Language of Global Issues is a two-credit course designed to give students an overview of the global issues facing our planet, from climate change to immigration/migration to BIPOC rights. Through a series of readings and documentaries, students will select an issue of importance and research it more in-depth before presenting the work to the class.

Social Studies

Department Overview:

Social studies courses are designed to develop a knowledge and understanding of world cultures and history and to introduce a variety of social science disciplines. Critical thinking, research, writing, organizational and study skills are taught and reinforced throughout the program. All courses integrate multicultural perspectives and activities into the curriculum and pedagogy. Active oral participation is expected in many courses. In order to select the most appropriate courses students should read course descriptions carefully and discuss their choices with their current social studies teacher and school counselor.

Offerings of elective courses will be determined by student interest and enrollment and the provision of a balanced social studies program. Elective courses in particular are subject to cancellation if there is insufficient enrollment or if other departmental needs in required or core courses warrant it.

ARHS Graduation Requirement:

To graduate from ARHS, students must earn 12 social studies credits, 4 of which must be in U.S. History (from Reconstruction to the Vietnam era).

Massachusetts State University Admissions Requirement:
Two year-long courses, including one in U. S. History.

Grouping:

All courses, excluding AP offerings, are taught at a college preparatory level and also have an optional honors option. These courses will be taught in heterogeneous groups, but students electing to complete the honors option will be expected to meet additional requirements explained in the course descriptions.

Failure of Required Social Studies Courses

If a student fails the required ninth or tenth grade courses, the course requirements must be fulfilled by the successful completion of one of the following options or by a combination of them:

1. Successful completion of an approved summer school program.
2. Independent ALP contract or test-outs;
3. Repetition of the course, or as much of it as necessary to correct the deficiency; and/or
4. Such other alternatives may be approved by the department head.

4-Year Sequence:

Most students will take Global History 1 or Global History 1/Honors in 9th grade; United States History or United States History/Honors in 10th grade; Global History 2, Global History 2/Honors, or AP World History in 11th grade; and two electives in 12th grade.

Grade 9	Grade 10	Grade 11
Global History 1 or Global History 1/Honors	Critical Issues in US History or Critical Issues in US History/Honors	Global History 2 or Global History 2/Honors or AP World History

Grade 12
American Society and Film Anthropology Constitutional Law Consumer Economics Economics The Holocaust Inequalities and Justice Students can choose to take any of the 12th grade electives for **HONORS** credit.

Course Descriptions:

Global History 1 (103B)
Global History 1/Honors (105B)
Credits: 4
Prerequisite: None
This semester-long course is designed to acquaint students with a variety of cultures across the globe from roughly the fifth to the seventeenth centuries. Students will work to enhance reading, writing, test taking, organization, and study skills. In addition, students will develop the skills of historical research and analytical writing using primary and secondary sources. Finally, they will both celebrate and critique in context the accomplishments, advancements in human culture, and resistance movements of people across the globe. Instructional materials and assessments will incorporate film, technology, the arts, and literature, and students will create projects individually and in groups that involve historical imagination and artistic products. The course exposes students to multiple cultures from across the globe, including the Americas, Africa, Asia, and Europe. Students will examine the histories and cultures through multiple perspectives, including, but not limited to, race, class, religion, and gender. Students should expect regular out-of-class assignments.

Honors Option: Global History I/Honors students will be expected to work at a greater level of independence and to master deeper content and analysis than in Global History I. The Honors Option requires above grade level reading and writing assignments, active class participation and the completion of independent reading and research components. Honors level tests, homework, essays, and cooperative projects will require the mastery of more authoritative sources and greater analytical depth of work with those sources than the College Preparatory equivalents.

Critical Issues in United States History (111A)
Critical Issues in United States History/Honors (111B)
Credits: 4
Prerequisite: Global History 1 or Global History 1/Honors or permission of department head
This semester-long course covers critical issues in US history by exploring multiple themes from the colonial era through the post-Cold War period. These themes include: Indigenous Sovereignty, Resistance, and Dispossession, the Evolution of American Capitalism, the African-American Experience, Progressive Democratization, Foreign Policy and Global Power, and The Post-Cold War Order. All units approach the study of US history through multiple perspectives, including, but not limited to, race, class, gender, and sexuality. As a result, stories traditionally overlooked by US history survey courses will take center stage. Understanding the past through this critical lens is central to this study of US history. The curriculum also emphasizes continuing development of social science inquiry skills including library research and analytical argument in both oral and written form. As a result, students will assume the role of the historian and complete a formal academic research paper on a topic of their choice. Reading assignments will consist of grade-level primary and secondary source materials. Test-taking, organizational skills, active listening skills, written and oral presentation skills, and collaborative problem solving will also be taught. NOTE: US History is a graduation requirement for all Massachusetts high school students.

Honors Option: US History/Honors students will be expected to work at a greater level of independence and to master deeper content and analysis than in US History. The Honors Option requires above grade level reading and writing assignments, active class participation and the completion of independent reading and research components. Honors level tests, homework, essays, and cooperative projects will require the mastery of more authoritative sources and greater analytical depth of work with those sources than the College Preparatory equivalents.

Global History 2 (117B)
Global History 2/Honors (119B)
Credits: 4
Prerequisite: United States History or United States History/Honors or permission of department head
This full semester course explores significant historical events and trends across the globe from the late-19th century through the present day. The course begins with a regional survey of the turn of the century with case studies in the Congo, Mexico, East Asia and the USSR. This will be followed by units on Cultural Change and Gender, WWII, Decolonization, the Cold War, and Globalization. Students will investigate how peoples of the world, including the Americas, Africa, Asia, and Europe, experienced formative global events, and how familiarity with these topics can help us to address contemporary problems. Special attention will be paid to examining this history through multiple perspectives and diverse sources. Instructional materials will incorporate primary and secondary sources, as well as film, arts, and literature. In addition, all students will participate in a Civic Action Project to research a current issue and explore their power to effect change as global citizens.

Honors Option: Global History 2/Honors students will be expected to work at a greater level of independence and to master deeper content and analysis than in Global History 2. The Honors Option requires above grade level reading and writing assignments, active class participation and the completion of independent reading and research components. Honors level tests, homework, essays, and cooperative projects will require the mastery of more authoritative sources and greater analytical depth of work with those sources than the College Preparatory equivalents.

World History/AP (161B)
Credits: 4
Prerequisite: United States History or United States History/Honors or permission of department head. This class is not open to students who have completed Global History 2 or Global History 2/Honors
AP World History is a semester-long college-level course that provides motivated students the opportunity to investigate the historical developments and processes that have influenced the evolution of and interactions among human societies over time. While examining these patterns of historical development and exchange from roughly 1200 to the present, students will confront issues of power, race, gender, religion, money, and humanitarian triumphs and tragedies. AP World History asks students to explore the globe using primary and secondary sources and many challenging scholarly works. As in Global History 2, students will pay special attention to examining the past through multiple perspectives and a diverse array of materials including art, film, media, essays, commentaries, and literature. The course revolves around the investigation of selected themes woven into key concepts covering four chronological periods of study. These themes serve as unifying threads to help students relate the uniqueness of each time period to the "bigger picture" of history. In addition to historical content, the course works to develop historical thinking skills, including analyzing historical sources and evidence, making historical connections, reasoning chronologically, and creating and supporting an historical argument. Assessments include occasional quizzes, tests, and writing that involves both analysis and historical imagination. The course culminates with the national AP World History examination, which will be administered in May. Students are not required, however, to take the AP test. If students are successful on the AP Exam, they could receive college credit at a college or university.

Senior Electives

American Society and Film (120)
American Society and Film/Honors (120a)
Credits: 2
Prerequisite: US History. Open to Grade 12.
As the nation's dream factory manufacturing fantasies and cultural myths, Hollywood has given Americans their most intensive—if highly distorted—picture of their country's past, from the styles of the rich and famous to the underside of American life. Film has been instrumental in shaping our deepest presuppositions about race, ethnicity, class, gender, and sexual conduct. This course will examine how classic films have treated American political, economic, and social life from post-WWII into the 1970s. Topics include: Cold War Politics and Popular Culture, Social Dynamics of the 1950s and early 1960s, African Americans and Hollywood, and the Vietnam Era. Students will also work on visual literacy skills by studying film as an art form. In addition to the selected Hollywood films, documentaries about the historical period as well as about film will be 'texts' for the course. [Note: several of the films include graphic violence and some of the Hollywood films are rated R.] There will be frequent homework assignments. Each historical period will be examined through primary source documents and scholarly articles as well as through films. A variety of assessments will be used to evaluate students' progress in addition to the readings, such as analytical essays, graded discussions, oral presentations, and quizzes. Students will be expected to view several films outside of class to supplement films shown in class. Active, well-prepared participation in class discussions and activities is essential to success in this course.

Honors Option: The Honors Option will require reading and writing skills above grade level. Students should expect to work independently, at a quicker pace, and in more depth. While many of the assignments are

identical to those for the CP option, students can expect some differentiation at times, such as longer readings or additional questions. Research and analytical skills are emphasized. There will be an independent honors project, with several choices, enabling students to design the project and delve into a topic of personal interest.

Anthropology (123a)
Anthropology/Honors (123b)
Credits: 2
Prerequisite: US History. Open to Grade 12.
This survey course explores a range of topics in cultural anthropology, focusing on variations among societies. Topics include: cultural theories, the construction of race and ethnicity, marriage and family systems, language and linguistic patterns, gender and status constructs, social and political organization, religion and ritual systems, environmental interaction, economic structures and cultural resilience and change. Students will practice observation skills and interview techniques and evaluate ethnographic articles and films to prepare for their own ethnographic research field study. Grade level readings will form the basis for a variety of class activities, including cross-cultural simulations, panel discussions, debates, and short research projects. Active class participation in both large and small groups is required.

Honors Option: The Honors Option will require a rigorous pace for independent completion of above grade level reading and writing assignments. An additional research project will be assigned out of class and will culminate in a presentation in class. Other writing assignments will emphasize analysis and synthesis.

Constitutional Law & The Bill of Rights (1261a)
Constitutional Law & The Bill of Rights/Honors (1261b)
Credits: 2
Prerequisite: US History. Open to Grade 12.
Should police be allowed to search a suspected terrorist's property without a warrant? Is affirmative action a form of racial discrimination? Should cross burning be protected as a legitimate form of free expression? Controversies surrounding freedom of expression, freedom of religion, discrimination and the rights of the accused are at the heart of this course about the operation, history and future of the US Supreme Court and the Bill of Rights. We will examine the origins of the Constitution, First Amendment freedoms of expression, criminal justice and the 14th Amendment guarantee of equal protection with consistent attention to systemic racism and current issues. Course work includes daily note taking from written and multimedia sources. Research and analytical skills will be developed in small group and individual investigations that involve the evaluation of historical and contemporary sources. Students will present and defend their positions on constitutional issues and precedents in classroom discussion, formal and informal written reflections, a research paper, and online platforms, and an appeals court hearing simulation.

Honors Option: The Honors Option requires above grade level reading and writing assignments, active class participation and the completion of substantial reading and research components. Honors level homework, essays, and research paper will require the mastery of more authoritative sources and greater analytical depth of work with those sources than the College Preparatory equivalents.

Consumer Economics (128)
Consumer Economics/Honors (128b)
Credits: 2
Prerequisite: US History or US History/Honors. Open to Grade 12

Students will examine how human behavior and its motivation to meet one's needs and wants drive the U.S. financial system. Specifically, Consumer Economics highlights the pressing economic realities of debt, credit, market freedoms and restrictions, and fraud. It will investigate factors that impact decision-making and guide students in analyzing and implementing practical strategies. Through critical thinking, this course seeks to review contemporary sources, including magazines, government publications, advertisements, and periodical databases, to better understand and dictate the behavior and habits necessary for the 21st Century consumer. While most reading assignments will require summary skills, some analytical and comparative skills will be necessary. Core assessments include classwork homework, essays, cooperative projects and a final research project focused on a current consumer controversy and possible solutions. All major writing assignments and projects underscore the ability to evaluate evidence, communicate an interpretation, and defend a position using appropriate evidence. Class participation and discussions are essential to succeed in this class.

Honors Option: The Honors Option requires above-grade level reading and writing assignments, active class participation, and the completion of substantial independent reading and research components. Honors-level work will center on homework, essays, cooperative projects, and a documented research paper that will require the mastery of more authoritative sources and greater analytical depth of work with those sources than the College Preparatory equivalents.

Economics (135a)
Economics/Honors (135b)
Credits: 2
Prerequisite: US History. Open to Grade 12.
Economics is a course that explores fundamental social and political issues such as the best ways to develop wealth and spread prosperity. We will survey contemporary theories about socialism, capitalism and markets. We will also identify and analyze ways our economic systems have created and extended racial inequalities, embraced poverty and contributed to social injustice. We will look to economics for solutions and levers of reform and repair. We will focus on the critical evaluation of economic evidence - how do "experts" gather data about intangible concepts like inflation, debt and underemployment? Can we trust their conclusions about how to manage the global economy and our own future? Assignments require grade level reading and writing skills. Students are evaluated on class participation, understanding of economic vocabulary and concepts and the ability to apply economic concepts in a wide range of formal and informal platforms. Core assessments include quizzes, tests, note taking, informal reflections, formal essays, and cooperative projects.

Honors Option: The Honors Option requires above grade level reading and writing assignments, active class participation and the completion of substantial independent reading and research components. Honors level homework, essays, cooperative projects and the documented research paper will require the mastery of more authoritative sources and greater analytical depth of work with those sources than the College Preparatory equivalents.

The Holocaust (145a)
The Holocaust Honors (145b)
Credits: 2
Prerequisite: US History. Open to Grade 12.
The annihilation of six million European Jews, carried out by the German state under Adolf Hitler during World War II, has resisted understanding. The questions persist: how could it have happened; how was it possible for a highly civilized modern state to carry out the systematic murder of a whole people for no reason other than that they were Jews; and how was it possible for the world to stand by without halting this destruction?

This course attempts to answer these questions as it explores the causes, nature, and consequences of one of the greatest tragedies in world history. Assignments require grade-level reading and writing skills. Assessment for all students combines quizzes, tests, projects, and papers with an evaluation of contributions to class discussions and activities.

Honors Option: The Honors Option will require above-grade-level reading and writing skills and students should expect to work independently at a faster pace and in greater depth. Analytical skills are also emphasized. In addition, students selecting the Honors Option will read and complete a project on Wladyslaw Szpilman's Holocaust memoir, *The Pianist.*

Inequalities and Justice (1281)
Inequalities and Justice/Honors (1281a)
Credits: 2
Prerequisite: US History. Open to Grade 12.
The course will examine how society assigns, shapes, reinforce, and enforces adherence to the definition, understanding, and experiences of race, gender, and class in America. Central to analyzing these identities, students will investigate inequalities in institutions like finance, housing, education, and the criminal justice system. Through readings, economic and historical analyses, research and writing, films, discussions, and simulations, students will learn how identities, often by design, are unequal, and the results can often be an injustice.

Honors Option: The Honors Option requires above-grade-level reading and writing assignments, active class participation, and the completion of substantial independent reading and research components. Honors-level work requires classwork, homework, essays, and cooperative projects. Also, a quarter-long, documented research paper will require the mastery of more authoritative sources and greater analytical depth of work with those sources than the College Preparatory equivalents.

Science

Department Overview:

A science education should provide students with ways to address major challenges facing society today. Our sequence of courses engage students with fundamental questions about the world and how scientists have investigated and found answers to some of those questions. Science courses are designed to develop knowledge and understanding of scientific practices and skills through the content area. Critical thinking, problem solving, data representation and analysis, and basic laboratory skills are explicitly taught, reinforced, and refined through active engagement in science practices. The core courses in the Science Department are Ecology & Environmental Science, Biology, Chemistry, and Physics. The department also offers several interest-based elective offerings for students who want to engage in more science course work. Students may choose between College Prep, Honors, or Advanced Placement courses based on their interests and skill level.

ARHS Graduation Requirements:

In order to graduate from ARHS, students are required to earn a minimum of eight (8) credits (two full-semester courses) in laboratory science. In addition, Massachusetts requires that all students pass a Science or Technology MCAS exam in order to earn a high school diploma. Students will take a science MCAS exam at the end of their tenth-grade year in Biology. We recommend that all students take 4 years of laboratory science.

Most students will take a science MCAS exam at the end of their tenth-grade year in Biology. However, students may opt to take the Physics or Engineering & Technology MCAS if they have sufficient preparation in those areas.

Massachusetts State University Admissions Requirement:

Three years of laboratory science are required for admission to the state universities in Massachusetts and to the University of Massachusetts campuses.

Grouping:

In science, students may choose between College Prep, Honors, or Advanced Placement courses based on their interests and skill level. The decision to take a college prep course one year does not limit access to honors or AP classes the following year. If students feel that a course is a good fit but do not meet the prerequisite requirement, consult with a guidance counselor and the Science department head. Honors and AP courses typically involve significant independent work and a faster pace than college prep courses. However, all of our courses will prepare students for future study at the college level.

Math Recommendations

Science courses draw, in part, upon a student's mathematics background. Some science courses require advanced numeracy and mathematical skills in order to understand concepts. We have intentionally and carefully selected math prerequisites for science courses to help ensure students can be successful in understanding quantitative content in courses. Please be aware of the mathematics prerequisites when choosing courses. Students who lack the specific prerequisite for a science course, but have comparable mathematics experience (such as transferring from another school or district) should consult with a school counselor and the science department head for review of materials and approval to enroll in that course.

4-year sequence:

All ninth graders are required to take Ecology & Environmental Science *or* Ecology/Honors & Environmental Science/Honors. All 10th grade students are required to take Biology, Biology / Honors, or AP Biology. Students can take a college preparatory course one year and an honor course the next (or vice versa). Listed below is the sequence of courses offered. Students are recommended to take Chemistry and Physics as juniors or seniors but may also choose to take electives in addition to these core courses. (Remember to consider mathematics prerequisites when planning a sequence.)

Science Offerings:

<table>
<tr><th>9th Grade</th><th>10th Grade</th><th>11th Grade</th><th>12th Grade</th></tr>
<tr><td rowspan="2">Ecology & Environmental Science
or
Ecology & Environmental Science/Honors</td><td rowspan="2">Biology
Biology/Honors
Biology/AP

(All students take Biology MCAS)</td><td>Chemistry in the Community,
Chemistry,
Chemistry/Honors</td><td>Physics,
Physics/Honors,
Physics/AP</td></tr>
<tr><td colspan="2">These courses are available for students in 11th or 12th grade who wish to take them <u>either</u> as their sole science class <u>or</u> as an additional science elective

Anatomy & Physiology
Anatomy & Physiology/Honors
Environmental Science/AP
Environmental Studies
Advanced Chemistry/Honors</td></tr>
</table>

Core Course Offerings:

Ecology/Environmental Science (2081a)
Credits: 4

Ecology is the study of how living things interact with their physical and biological environments. The study of ecology will comprise the first half of this semester-long course. Environmental science, the focus of the second half of the course, focuses on how humans influence the physical, chemical, and biological function of ecosystems. In this college preparatory course, students will learn how populations and communities vary in size and diversity, how energy is fixed biologically and transferred through food webs, how major elements cycle, and how minerals and rocks become sources of nutrients to plants. In environmental science, Students will investigate how agriculture and land-use changes affect water and soils, study global atmospheric change, and alternative energy resources. Labs in all units require mathematical analysis, performed with appropriate guidance and support. Laboratory write-ups will comprise a major portion of the grade. Other assessments will include tests, homework, and projects. This course covers the Ecology learning standards required for the Biology MCAS test. Successful completion of Ecology is required to continue to 10th grade Biology.

Ecology/Environmental Science/Honors (2081b)
Credits: 4
Prerequisite: Successful completion of Algebra 8, or concurrent enrollment in Algebra 1/Honors with 8th grade science teacher recommendation. *Please note that students who select this course and are concurrently enrolled in Algebra 1/Honors will likely require additional support with quantitative portions of the course during Flex blocks and through independent study.*
Ecology/Environmental Science Honors includes a greater depth of mathematical and physical analysis than does college preparatory Ecology/Environmental Science. The first half of the semester will focus on Ecology, the study of how living things interact with their physical and biological environments. Environmental science, the second half of the semester, builds upon the key concepts in ecology to study how humans influence the physical, chemical, and biological function of ecosystems. In this course, students will learn how populations and communities vary in size and diversity, how energy is fixed biologically and transferred through food webs, how major elements cycle, and how minerals and rocks become sources of nutrients to plants. In Environmental Science, students will investigate how agriculture and land-use changes affect water and soils, global atmospheric change, and future sources of energy and the physics that underlie them. A more rigorous mathematical approach is used in labs to answer open-ended questions. A substantial part of the grade will be based on laboratory write-ups; other assessments will include tests, homework, and research projects. As part of the coursework, students will be expected to complete regular reading assignments from a textbook for advanced readers. The course requires a strong work ethic to be successful. This course covers the Ecology Learning Standards required for the Biology MCAS test. Successful completion of Ecology is required to continue to Biology.

Biology (222B)
Credits: 4
Prerequisite: Ecology or Ecology/Honors
Biology is a comprehensive college preparatory course. Topics covered include cell structure and function, biochemistry, evolution and classification, modern and classical genetics, and selected topics in anatomy and physiology, with an emphasis on humans. Class format will consist of lectures, discussions, investigative hands-on laboratory exercises, and individual and small group activities. Assessments include homework assignments, quizzes, tests, lab reports, demonstration of microscopy skills, and projects. This course covers the molecular and organismal learning standards required for the Biology MCAS test.

Biology/Honors (224B)
Credits: 4
Prerequisite: Ecology or Ecology/Honors
Biology/Honors covers the topics covered in Biology at an accelerated pace, as well as additional topics, including a more in-depth study of biochemistry and molecular biology and analysis of biological data. This rigorous course requires a high level of commitment, maturity, and responsibility to be successful. Students will be required to do substantial independent readings above grade-level. Assessments include daily homework assignments, quizzes, tests, lab reports, demonstration of a variety of laboratory skills, and projects. This course covers the molecular and organismal learning standards required for the Biology MCAS test.

Biology/AP (228D)
Credits: 8
Prerequisite: Completion of Ecology/Honors with minimum grade of A-

This is a college level course that requires a significant amount of independent work and follows a curriculum established by the College Board. Students will study biology from molecules to biomes, with an emphasis on inquiry and the process of science. A substantial independent summer assignment is **required** and will count towards the first semester grade. The textbook is at an introductory college biology reading and content level. Emphasis will be on detailed understanding of processes and interpretation of data sets. Mathematical analysis, including experimental statistics will be undertaken throughout. Students will perform independent research projects that include developing original questions and methods, performing research tasks independently, analyzing data using appropriate statistics, writing formal research reports, and presenting research results. This class will prepare students for the College Board AP Biology test. Because of the depth and breadth of information required, this is a 2-semester course.

Chemistry in the Community (2301)
Credits: 4
Prerequisite: Completion of or concurrent enrollment in Integrated Math 1 or Algebra 1
The goals of Chemistry in the Community are to help students realize the role chemistry plays in their daily lives and examine chemistry's impact on our society and environment. The course consists of a variety of student activities and emphasizes the major concepts, vocabulary, skills, and laboratory techniques expected in an introductory Chemistry course. Major topics include materials science, water chemistry and treatment, atmospheric chemistry, nuclear power, petroleum, and alternative energy. The course content is taught mainly through laboratory experiments and investigations. Other assessments will include tests and quizzes, projects, writing assignments, and problem-solving exercises. Note: This course is primarily designed for students who are not planning to major in science in college.

Chemistry (234B)
Credits: 4
Prerequisite: Completion of or concurrent enrollment in Algebra 2
This course is designed to provide an overview of the fundamental principles of Chemistry. Topics include measurement, atomic structure, bonding, the periodic table, chemical reactions, stoichiometry, solutions, and acids & bases. Chemistry is a mathematical discipline and requires students to perform unit conversions and solve algebraic equations on a regular basis. In addition, students will conduct weekly laboratory experiments and will use models to demonstrate key chemistry concepts. Assessment in this course is based on tests and quizzes, laboratory reports, and nightly homework assignments.

Chemistry/Honors (236B)
Credits: 4
Prerequisite: Completion of or concurrent enrollment in Algebra 2/Honors
Chemistry/Honors is a mathematically rigorous course. It is designed to provide in-depth knowledge of the fundamental principles of Chemistry. Topics include measurement, atomic structure and modern atomic theory, bonding, the periodic table, chemical reactions, stoichiometry, gasses, solutions, and acids & bases. Students must be able to interpret algebraic equations, solve multi-step problems, and effectively analyze data. Assessment is based on tests and quizzes, lab reports, and problem sets. Significant out-of-class reading, independent work, and study time is expected.

Physics (244B)
Credits: 4
Prerequisite: Completion of or concurrent enrollment in Algebra 2

This course provides a broad overview of physics topics with an emphasis on conceptual development and applications of science. Topics include motion in one and two dimensions, forces and Newton's laws, work and energy, linear momentum, rotational motion, gravitation, electrostatics, electric circuits, electromagnetism, and waves (sound, light, and color). Less emphasis is placed on mathematical modeling than in the other physics offerings. Students will read, write, perform investigative activities, and solve problems using mathematical and conceptual reasoning. This course is recommended for all college-bound students.

Physics/Honors (246B)
Credits: 4
Prerequisite: Completion of or concurrent enrollment in Introduction to Pre-Calculus or Pre-Calculus/Honors
This course builds a strong conceptual framework of physics principles and provides an in-depth mathematical treatment of classical mechanics in preparation for further study after high school. Topics include motion in one and two dimensions, forces and Newton's laws, work and energy, systems of particles and linear momentum, rotational motion and angular momentum, gravitation, electrostatics, electromagnetism, and waves (sound, light, and color). Students will apply mathematical skills, including trigonometry and quadratic equations and systems of equations, to solve problems that model the physical world.

Physics: Mechanics C/AP (2491 and 2493)
Credits: 6
Prerequisite: Completion of or concurrent enrollment in AP Calculus (AB or BC)
AP Physics-C Mechanics is a full-year lab science course, offering a rigorous, calculus-based overview of classical mechanics. The curriculum follows the guidelines set by the College Board and prepares students to take the College Board's AP test: Mechanics C, in May. Topics include motion in one and two dimensions, projectiles, forces and Newton's laws, work and energy, systems of particles and linear momentum, rotational motion and angular momentum, oscillations, and gravitation. Students will be expected to do a large amount of independent work, including regular reading assignments and problem-solving assignments. There will also be several written lab reports each semester. Students will be required to complete a major summer reading assignment. This course is a calculus-based extension of Honors Physics; therefore, the course moves at a much faster pace and is a 3-quarter course.

Science Electives

Advanced Chemistry/Honors (2361)
Credits: 4
Prerequisite: Completion of Chemistry or Chemistry/Honors
Advanced Chemistry/Honors builds upon the knowledge and skills developed in Chemistry or Chemistry/Honors. Topics include thermodynamics, reaction rates, equilibrium, buffers, organic chemistry, liquids and solids, solubility, and electrochemistry. In addition, students will design and carry out experiments using a variety of laboratory techniques. Advanced Chemistry/Honors is a mathematically rigorous course. Students must be fluent in algebra, familiar with logarithms, and be comfortable solving multi-step problems. Assessment is based on tests and quizzes, lab reports, and problem sets. Significant out-of-class reading, independent work, and study time is expected.

Anatomy and Physiology CP (226A)/Honors (226B)
Credits: 4
Prerequisite: Completion of Biology, Biology/Honors or Biology/AP

This course has a strong focus on laboratory procedures and skill development related to understanding comparative anatomy and physiology. We will study all the major taxa of animal life. Significant emphasis is placed on developing skills needed to take basic measurements of organisms in order to understand how these measurements indicate maintenance of homeostasis. This course will provide a strong knowledge of skills and content for students interested in the medical, health, veterinary, and zoology-based fields. We will provide a review of cell biology and biochemistry and then will begin an in-depth study of the anatomy and physiology of major body systems including the musculoskeletal, digestive, nervous, immune, cardiovascular and respiratory systems across taxa. Students will be required to work independently outside of class reading, reviewing, and studying course material. Assessments will consist of tests to demonstrate content knowledge, laboratory practical exams to demonstrate skill acquisition, and reports to communicate laboratory findings. Honors students can expect additional work to expand on topics covered in class, mainly completed out of class. This is a laboratory course that requires animal tissue dissection.

Environmental Studies (251a)
Credits: 2
Prerequisite: Completion of Biology, Biology/Honors or Biology/AP
Environmental Studies is a quarter-long multidisciplinary course that brings together principles from both the physical and social sciences to address environmental challenges. The class combines content from ecology and environmental science, as well as economics, ethics, and social justice. Environmental Science content includes: Human population growth, resource consumption, global warming, world forest preservation, and energy. Multidisciplinary content includes: Women's reproductive rights, the influence of markets on conservation, the tragedy of the commons, multilateral environmental agreements, and the impact of environmental degradation on the Global Majority. Students work in groups to explore these challenges and present workable solutions, taking into consideration the technological and sociological aspects of each. Other assessments will include tests and labs.

Environmental Science/AP (255B)
Credits: 4
Prerequisite: Completion of Biology, Biology/Honors or Biology/AP
Advanced Placement Environmental Science is a four-credit laboratory class that is the equivalent of a one-semester, introductory college course. This course provides students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Due to the quantitative analysis required in the course, students should be comfortable using algebra and performing calculations. Students are expected to complete significant individual work building an on-going portfolio of work, and will participate in both short- and long-term science investigations. Fieldwork focuses on our local environment. Summer work will be required. The curriculum will prepare students to take the College Board AP Environmental Science exam, given in May.

Mathematics

Department Overview:

A mathematics education should provide students with the necessary mathematics and problem-solving skills to model and apply mathematics to the real world and to a variety of disciplines. The mathematics department has high expectations for achievement for every student. The goal of the department is to enable all students to reach high standards and full potential in a supportive, academically focused environment. We seek to engage students in meaningful math that stimulates curiosity and enjoyment while balancing conceptual understanding, procedural fluency, and application of mathematics. The math program is designed to present math as a cohesive whole while emphasizing problem solving, reasoning, and modeling. Throughout our curriculum we strive to incorporate the eight mathematical Practice Standards outlined in the Massachusetts Frameworks:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the arguments of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Daily homework is an integral part of the learning process. Assessment may include homework, notebook checks, class work, quizzes, tests, portfolios, projects or essays. In addition, students should be prepared to express their understanding of mathematical concepts and to describe in writing how they arrived at solutions. All students are expected to come to class daily with a scientific calculator. The Math Department offers a calculator loan program for students on free or reduced-price lunch plans. Students should see their teachers for more information.

Accelerating in Mathematics

The purpose of accelerating in mathematics is to be able to take one of the two AP math courses offered at Amherst Regional High School and we recognize that some students may wish to accelerate their math program in order to achieve this. This option is demanding and should only be attempted by those students who are truly fascinated by mathematics, are highly independent, and who have a deep commitment to hard work. Students may only accelerate in their 9th or 10th grade year by taking Geometry H and Algebra 2H in the same year. This is the only acceleration offered. There is **no** summer acceleration in math.

Doubling in math is based on seats available in the sections of the course, after all other students have been assigned. 9th grade students requesting a double in math with Geometry H and Algebra 2H will only be allowed to double in math if there are seats available in the Algebra 2H sections. If there are more requests than seats available, students will be ranked and awarded the double based on the following criteria: standardized local assessments, statewide (MCAS) testing, and Algebra 1 assessments.

Amherst college has continued to support our math students by allowing 20 students to take Multivariable Calculus at Amherst College. Students requesting to take Multivariable Calculus at Amherst college, must meet the following criteria: A in BC Calculus and a 4 or 5 on the AP Exam. If more than 20 students that meet the criteria request this, students will be chosen through a lottery.

Prerequisites for Mathematics Courses:
In an effort to ensure that students have the necessary background and readiness skills to be successful, most courses in mathematics have both course and grade prerequisites. It is important for students to be aware of these requirements so that they select the appropriate courses to match their interests and prior mathematical preparation. Because mathematics is so sequential in nature, most courses require that students earn a final grade of C- or better to continue on to the next course in the sequence. Students should also consider their current teacher's recommendation for the next course. Students who earn a grade of a D during the regular year course have two options to prepare for the next course. The first option is to register for an appropriate summer school course at ARHS. Students must earn a C- or better in the summer school course to move into the next course. These students will earn two general credits during summer school. Students not meeting these standards are expected to repeat the course during the next academic year. The second option is to take the math elective before or concurrently with the next math course. All grade prerequisites must be satisfied prior to beginning the next course in the sequence or the elective must be taken. Students who earn a failing grade must repeat the course during the next academic year.

ARHS Graduation Requirement:
Eight (8) credits in mathematics are required for graduation. These can be earned only after the student has completed the eighth grade. We recommend that every student complete the study of Algebra 1 and Geometry during their four years in order to prepare for the mathematics MCAS test. Students must pass MCAS mathematics in order to be eligible to earn a diploma in the state of Massachusetts. Additionally, students who do not score in the categories of “Meeting Expectations” or “Exceeding Expectations” on the mathematics MCAS will have an Educational Proficiency Plan implemented. These students must enroll in and pass the equivalent of a full year’s math course in each of their eleventh and twelfth grade years for a total of 8 credits in order to earn a diploma. Students who plan to further their education should also plan to complete at least through Algebra 2H or Introduction to Pre-calculus and earn grades of C- or better, to be prepared for the SAT or ACT.

Massachusetts State University Admissions Requirement:
For students entering Massachusetts state universities and UMass campuses, four years of math are required including Algebra 1, Geometry and Algebra 2. Students **must** be enrolled in a math course in their senior year.

Grouping:
Honors classes are designed for students who enjoy mathematics and are motivated to develop their mathematical thinking. Students should expect the work in an Honors course to have a high level of abstraction and sophistication. The work will not be just harder problems; rather, it will be work at a different cognitive level. The teacher will help students to learn at this level and will consider it a major task of the course to provide students with extensive opportunities to improve their abilities in this area.

Ninth grade students who are interested in moving from Math 8 into Geometry Honors must take the Math Elective 2H concurrently. All other students must have their current teacher recommend them as well as with their parent/guardian approval. Students who move from college prep to honors will need to spend additional time and effort in order to bridge the gap of skills and content acquisition. Students will need to take the Math Elective 2H if moving to Geometry H. The Math Elective 2H is designed for students to learn the missed Algebra 1 concepts. The department head or a designated math teacher will help students by carefully outlining expectations and offering guidance.

Course Sequences:
These are representative of the path most students follow but do not represent every pathway possible. The Math Electives 2H is for students transitioning into the honors sequence or struggling in the honors sequence and the Math Elective is meant for students that need extra support.

Sequences for Rising 9th Graders and Rising 10th graders:

Students taking Integrated Math 1 in 9th Grade:

9th grade	*10th grade*	*11th grade*	*12th grade*
Integrated Math 1	Algebra 1 CP	Geometry CP (Math elective required if prerequisite not met)	Algebra 2CP (Math elective required if prerequisite not met)

Students taking Algebra 1 in 9th Grade: Students must take the Math Elective 2H if transitioning to honors from Math 8.

9th grade	*10th grade*	*11th grade*	*12th grade*
Algebra 1	Geometry CP (Math elective required if prerequisite not met)	Algebra 2 CP (Math elective required if prerequisite not met)	Introduction to Precalculus Introduction to Statistics AP Statistics

9th grade	*10th grade*	*11th grade*	*12th grade*
Algebra 1	Geometry H	Algebra 2 H	Precalculus Honors Introduction to Statistics AP Statistics

Students taking Geometry Honors in 9th Grade:

9th grade	*10th grade*	*11th grade*	*12th grade*
Geometry H	Algebra 2 H	Precalculus Honors	Introduction to Statistics AP Statistics AP Calculus **AB** AP Calculus **BC**

Course Descriptions:

Concepts in Algebra (8211)
Credits: 4
Prerequisite: Teacher recommendation or permission of department head
This course is designed for 11th and 12th grade students that need more time to build upon and extend their foundation on the Algebra 1 and Geometry standards. It is appropriate for students needing review in fundamental skills as well as the content in algebra and geometry. Students review operations on positive and negative numbers, order of operations, proportional reasoning (fractions, decimals, percents and ratios), scientific notation, and operations on exponents while also exploring and practicing key algebra and geometry concepts such as graphing linear equations and systems of linear equations, slope, solving one and two step equations, area/perimeter/volume of a variety of shapes, angle relationships, Pythagorean theorem, and circles *Possible Next Courses: Geometry CP or Algebra 2 CP*

Integrated Math 1: Algebra, Geometry, Probability and Statistics (351C and 361)
Credits: 6 (¾ of the year)
Prerequisite: Teacher recommendation
This course is for students who need to develop a stronger background and greater confidence in mathematics, and stronger abstract reasoning abilities before attempting Algebra 1. Units examine and connect topics in Algebra, Geometry, and Probability and Statistics. Students will also investigate a number of long-term non-routine problems. Students will represent a linear function with tables, rules, graphs and contexts. Students will create one representation from another. Algebra topics include the ideas of variables, expressions, linear equations and their graphs. Geometry topics include similarity, and right triangle trigonometry. Students work on a variety of problems involving chance occurrences in the Probability and Statistics unit. Students will solve contextual word problems using multiple strategies. *Possible Next Courses: Concepts in Algebra, Algebra 1*

Math Elective 2 (364)
Credits: 2 (1 quarter class)
Prerequisite: Teacher recommendation or permission of department head
Students are required to take this course if they received a D in either Algebra 1 or Geometry and did not attend summer school. The results of standardized local assessments, statewide (MCAS) testing, and teacher recommendation are used as a basis for placing students in this course. This course is designed to target key areas outlined in the Massachusetts State Frameworks to give students the support necessary to be successful in Geometry or Algebra 2 through extra time on concepts, revisiting prior concepts, and pre-teaching. This course is taken before or concurrently with Geometry or before Algebra 2.

Algebra 1 (312)
Credits: 6 (¾ of the year)
Prerequisite: A minimum grade of C- in Math 8, Integrated Math 1 or permission of department head
This course will focus on teaching students to model real-world situations through the development of fundamental algebraic concepts necessary for further study of mathematics. Students are expected to be competent in operations with fractions, decimals, and positive and negative numbers. Students will investigate different types of expressions, equations, and inequalities. Students will represent linear functions, exponential functions and quadratic functions with a graph, table, rule and context. Students will create one representation from another. Students will solve contextual word problems and non-routine problems using multiple strategies. Some other areas of study include systems of equations and expressions involving

exponents. Students will learn to graph a variety of functions and systems of equations on the coordinate plane including the use of graphing calculators and computer software. *Possible Next Courses: Geometry or Geometry Honors*

Algebra 1 Honors Option (3121)
Students should expect the additional work to have a high level of abstraction and sophistication. The work will not be just harder problems; rather, it will be work at a different cognitive level. Students will be assessed at this higher level of abstraction. *Possible Next Courses: Geometry or Geometry Honors*

Math Elective 2H (365)
Credits: 2 (1 quarter class)
Prerequisite: Teacher recommendation or permission of department head
This course is designed to give students the foundation necessary for success in Geometry H. Math 8 students must take this before entering Geometry H. This course focuses on the remaining Concepts in Algebra 1 not taught in Math 8. It should also be considered for Algebra 8 students that need more time with the concepts developed in eighth grade. This course will focus on key areas such as graphical and algebraic reasoning to solve a variety of optimization problems, quadratic and exponential functions. This course is taken before the Geometry or Geometry Honors.

Math Competency Portfolio (2601)
Credits: 8
Prerequisite: Teacher recommendation or permission of department head
This yearlong course is open to 10th and 11th graders who have a history of not passing the Math MCAS or who have never taken the Math MCAS in grades K-8. Students compile a portfolio of work to demonstrate that they possess the knowledge and skills normally tested on the Math MCAS. There are 60 MA standards that students must show competency on. As a result, the portfolio may take more than one year to complete. Students engaged in compiling a portfolio also still have to sit for the regular MCAS test. A student whose competency portfolio demonstrates a sufficient level of achievement may be awarded a Competency Determination, which makes a student eligible for graduation. **Massachusetts requires that all students submitting MCAS Competency portfolios have attendance rates of at least 95% during the school year prior to and during the year of portfolio submission.**

Geometry CP (316B)
Credits: 4
Prerequisite: A minimum grade of C- in Algebra 1 or permission of department head
Geometry is a language intensive course in which students will investigate relationships and formulate and test hypotheses. Students are required to interpret what they read, develop a working knowledge of new vocabulary. and write observations, conjectures and logical supporting arguments. In this course, students will build an understanding of similarity based on dilations and proportional reasoning. Students will investigate geometry theorems about triangles, parallel lines, and circles, and prove them by writing deductive proofs and coordinate proofs. Some additional concepts students will investigate are transformations, congruence, similarity, right triangle trigonometry, volume and surface area of three-dimensional figures and coordinate geometry. Students will also compute and interpret probabilities of compound events and conditional probabilities. Geometric relationships will be investigated through the use of geometric constructions, physical models, and computer simulations. *Possible Next Courses: Algebra 2H or Algebra 2*

Geometry Honors (318B)
Credits: 4
Prerequisite: A minimum grade of C- in Algebra 8, Algebra 8 and Math Elective 2H, or taking Math Elective 2H concurrently or permission of department head
Students should expect the work in this course to have a high level of abstraction and sophistication. Geometry is a language intensive course. The focus of this course is to develop deductive reasoning skills that allow students to construct logical mathematical arguments, and to improve each student's ability to visualize and understand abstract concepts. Students are required to interpret what they read, to learn and use new vocabulary, and to write observations, conjectures and supporting arguments. Students will develop the concept of formal proof. Some of the topics students will study include similarity, transformations, congruence, volume and surface area of three-dimensional figures, coordinate geometry, circles, right triangle trigonometry, the Law of Sines and the Law of Cosines. Geometric relationships will be investigated through the use of geometric constructions, physical models, and computer simulations. *Possible Next Courses: Algebra 2H or Algebra 2*

Algebra 2 CP (322B)
Credits: 4
Prerequisite: A minimum of grade of C- in Geometry or Geometry/Honors or permission of department head
This course takes an in-depth look at functions, including direct and inverse variations, linear, quadratic, higher degree polynomials, and rational functions. Students explore these functions graphically, numerically, and analytically and enhance their ability to work with the symbols of algebra in solving practical, real-world problems. Students will also use systems of equations and inequalities to solve problems. *Possible Next Courses: Introduction to Precalculus, Introduction to Statistics 1 & 2 or AP Statistics*

Algebra 2 Honors (324B)
Credits: 4
Prerequisite: A minimum of grade of C- in Geometry Honors or by permission of department head
This course is a continuation and intensification of algebraic topics begun in previous courses. Students will expand their understanding of functions to include polynomial, exponential, and logarithmic functions. Students will continue representing functions with a graph, table, rule and context. Students will create one representation from another. Students will solve contextual word problems and non-routine problems using multiple strategies. It is intended for students who have a strong commitment to the study of mathematics. Major topics include sequences and series, polynomials, exponential functions, logarithms, trigonometric functions, transformations of parent graphs, systems of inequalities, solving nonlinear systems of equations, and their applications. Students will rigorously explore the course content by using graphical, numerical, and analytical methods.
Possible Next Courses: Pre-Calculus Honors, Introduction to Statistics 1 & 2, or AP Statistics

Introduction to Precalculus (335B)
Credits: 4
Prerequisite: A minimum of grade of C- in Algebra 2 CP or by permission of department head
This course continues the exploration of many topics introduced in Algebra 2 and then students will study some of the concepts from Pre-calculus. Topics of study include inverses and logarithms, solving systems of equations and inequalities, graphing in three-dimensions, trigonometric functions, and polynomial and rational functions. Students will rigorously explore the course content by using graphical, numerical, and analytical methods. *Possible Next Courses: Pre-Calculus Honors, Introduction to Statistics 1 & 2, or AP Statistics*

Pre-Calculus Honors (337B)
Credits: 6 (¾ of the year)
Prerequisite: A minimum of grade of C- in Algebra 2 Honors or by permission of department head
This course is designed for students with a strong interest in the STEM fields. The course is composed of selected topics needed for entry into a Calculus course. Students will develop their understanding of general function concepts such as function operations, composition and inverses, and transformations. Building on their knowledge of function behavior, students will investigate the graphical characteristics of rational and polynomial functions. They will expand their knowledge of trigonometric functions, focused on function graphs, equation solving, identities, and modeling. Students will learn how to express complex numbers in rectangular and polar forms and will investigate the graphs. Some of the other topics included are exponential and logarithmic functions, vectors, sequences, limits, conics and parametric functions, and matrices. *Possible Next Courses: AB Calculus, BC Calculus, or Introduction to Statistics 1 & 2 or AP Statistics*

Introduction to Statistics 1 (357a)
Introduction to Statistics 1 Honors (357b)
Credits: 2
Prerequisite: A minimum grade of C- in Algebra 2 CP or Honors or permission of department head. This course is appropriate to take at any point after Algebra 2.
Did you ever wonder what you can really know from a set of data or statistics about, say, medical testing or global warming? This course begins with an in-depth study of variability, in particular categorizing and quantifying different sources of variability in a data set. Topics include: Measurement variation, natural variation, production variation, sample variation, data and probability distributions, and measures of central tendency. These concepts are then applied to the analysis of bivariate data sets: correlation, residuals and least-squares lines, and linear model fitting. Emphasis is placed on assessing the predictive value of the models. This course challenges students to analyze real data of current events and confront the assumptions, power and limits of statistical analysis. The course makes use of statistical analysis software. Students analyze data, prepare reports and make presentations of their findings throughout the course. *Possible Next Course: Introduction to Statistics 2*

Introduction to Statistics 2 (358a)
Introduction to Statistics 2 Honors (358b)
Credits: 2
Prerequisite: A minimum grade of C- in Introduction to Statistics 1 or permission of department head
The topics in this course will build upon the concepts in Introduction to Statistics 1. This course will focus on developing a deeper understanding of sample variation and the question of what can be inferred about a population from a sample. Inferences about proportions and means are explored through polling theory, investigation of racial and gender profiling, and scientific measurement. Related topics include sampling protocols and bias, Central Limit Theorem, confidence levels and intervals and margin of error. The course extends these ideas and techniques to comparison of groups and populations based on samples to theoretical models using Chi Squared statistics. This course continues to challenge students to analyze real data and confront the assumptions, power and limits of statistical analysis. The course makes extensive use of statistical analysis software. Students analyze data, prepare reports and make presentations of their findings throughout the course. *Possible Next Course: Introduction to Precalculus*

Statistics/AP (381A)
Credits: 4
Prerequisite: A minimum grade of C- in Algebra 2 Honors, a B+ in Algebra 2 CP or permission of department

head.

This course is appropriate to take at any point in a student's high school math sequence after Algebra 2.

AP Statistics prepares students to take the College Board Advanced Placement Exam. Statistics is a rigorous, entry-level course that introduces students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Statistics is a branch of mathematics with a unique vocabulary which students will be required to learn and understand in order to be successful. Students will be expected to read and interpret a variety of situations in order to use their analysis tools. All assessments are taken from past AP Exams where students will need to interpret a novel situation and apply their analysis tools correctly. Students will need to make conclusions and justify their conclusions using their statistical analysis tools. Students should expect assessment questions and use of all analysis tools to be cumulative throughout the course. Students will explore data, plan and conduct studies, explore random phenomena using probability and simulations and study statistical inference. Based on a syllabus set by the College Board, topics include: Univariate data analysis, Bivariate data analysis including correlation, residuals, least-square lines, and linear model fitting, sampling protocols and bias, Central Limit Theorem, confidence levels and intervals and margin of error. Emphasis is placed on assessing the predictive power of the models. The course makes extensive use of graphing calculators and statistical analysis software. Students analyze data, prepare reports and make presentations of their findings throughout the course. *Possible Next Course: Introduction to Precalculus, Precalculus Honors, AB Calculus or BC Calculus (successfully completed the pre-requisites)*

Calculus AB/AP (341C)

Credits: 6 (¾ of the year)

Prerequisite: A minimum grade of B Precalculus Honors or permission of department head

A model rocket is launched straight upward at a velocity of 40 feet per second. How fast is it traveling 3.5 seconds later? What is the sum of infinitely many infinitely small quantities? Calculus investigates these ideas. Calculus AB prepares students to take the AB level of the College Board Advanced Placement Exam. Based on a syllabus set by the College Board, this course contains topics taught in first-semester college calculus courses as well as some of the topics taught in the second semester. Students who are successful in this course will be prepared to take a second-semester college calculus course. Students who elect this course need a strong background in algebra, geometry and trigonometry. The ability to think abstractly is very important. Graphing calculators are used in class and on homework. It is expected that students have access to a graphing calculator outside of class. *Possible Next Courses: Introduction to Statistics 1 & 2, AP Statistics, semester 2 of BC Calculus*

Calculus BC/AP (342A)

Credits: 8

Prerequisite: A minimum grade of B+ in Pre-Calculus Honors or permission of department head

The BC level calculus course is an extension of the AB level course (see description above). Therefore, this yearlong course will move at a much faster pace. It prepares students to take the BC level College Board Advanced Placement Exam. BC calculus is an intensive course equivalent to most first-year college calculus courses. Students who are successful in this course will be prepared to take a multivariable calculus course (usually the third semester of a college calculus sequence). Because the AP exams are given in May, this extended syllabus (set by The College Board) must be completed by the end of April. Students who elect this course need a strong background in the additional topics of polar and parametric equations and their graphs, logarithms, and finite and infinite series. It is expected that students have access to a graphing calculator outside of class. *Possible Next Courses: Introduction to Statistics 1 & 2, AP Statistics, College Class*

World Languages

Department Overview:

Amherst Regional High School offers world language courses in Chinese, French, Latin, and Spanish. Our program is designed to accommodate both students with prior experiences in world language courses as well as those who wish to begin language study at the high school level. Students taking beginning level courses will master basic skills in speaking, listening, reading, and writing. In addition, students will use these skills to explore cultural topics essential to understanding the context of the target language, and in a broader sense, the elements common to world cultures. Students in intermediate and advanced courses will have a more extensive study of structures, vocabulary, and literature with an increasing emphasis on more complex language use. Students are encouraged to follow the sequence of courses through Level 5/Advanced Placement. Amherst College and the University of Massachusetts provide additional opportunities for upper level courses in world languages for high school students, although special considerations for scheduling must be met. Beginning level language courses are designed for non-native speakers of the target language. Heritage speakers of Chinese, French, and Spanish need to take a placement test to help us find the most appropriate course for their language ability. Since the majority of our students begin language study at the Middle School, level 1 courses will only be offered at the high school level if there is sufficient enrollment. When selecting a level 1 language, students should indicate a second-choice preference.

Accelerated Study

In exceptional cases, some students may qualify to test out of a level of our World Language program. **Interested students must come up with a written proposal for study, and then they must conference with their language teacher (or World Language department head if not currently enrolled in the language). This proposal must be approved by both the teacher and the department head by May 3, 2024.** Successful proposals in the past have involved some combination of travel and intensive language experience in the target culture, coursework, and regular and rigorous work with a tutor over the summer. In addition, students must take the appropriate placement test by the end of August to determine if they have successfully prepared to move to their desired course level.

Students Transferring to the District

The Registrar's Office will inform the World Language Department Head of the names of students who are either new or returning to the school system and wish to continue in a classical or modern world language course. A written and oral examination will be administered and used in conjunction with the transcript from the previous school to determine the appropriate placement level. Students will need to take the placement test before registering for classes. Since this testing procedure is solely for placement purposes, no credits are awarded.

Language Exchange Programs

The World Language Department will periodically offer travel or exchange trips. See classroom teachers for specific information.

ARHS Graduation Requirement:

None, but see the next section.

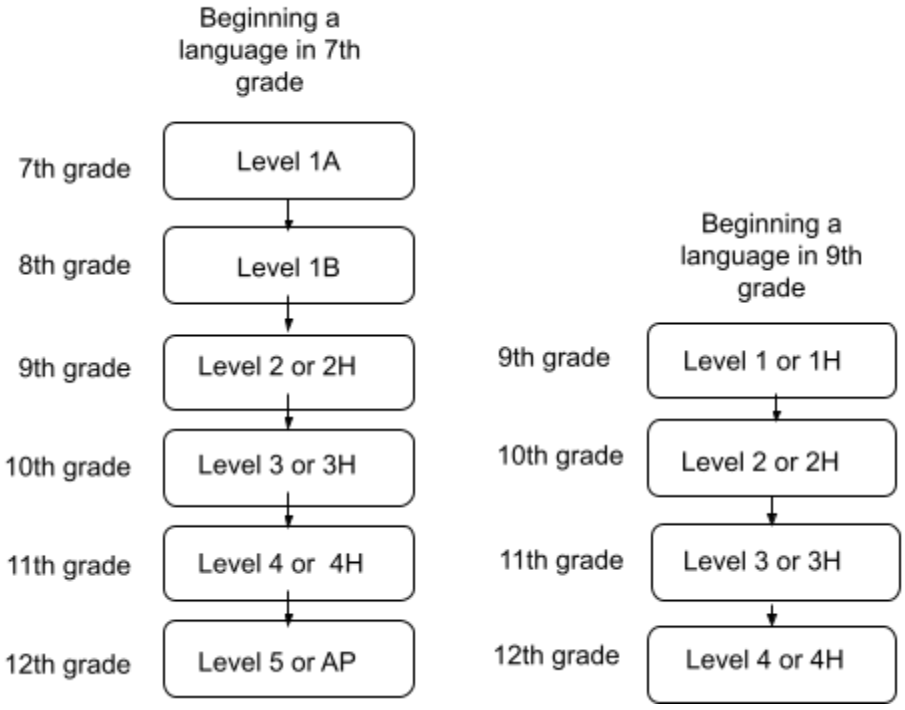
Massachusetts State University Admissions Requirement:

All Massachusetts colleges and universities require that a student complete at least two courses in the same classical or modern world language in high school. Competitive or selective schools often require completion of Level 3, 4, or AP. Students should check with the colleges that interest them in order to determine their entrance requirements in world languages.

Grouping:

The world language department offers courses at both the honors and college prep level. In most cases, courses are grouped with honors and CP combined in the same class (i.e. students in French 1 and French 1/H are grouped together). Students choosing to work at the honors level can expect more extensive homework and out-of-class assignments and will have assessments that require greater linguistic competency. Students who wish to continue their study of language at the honors level must earn at least a grade of B- in the previous honors level class. Students who receive an A or A- and wish to move from college prep to honors the following year are encouraged to talk to their teacher to see if they are ready to make the jump. Also, due to the cumulative nature of world language study, it is recommended that students who do not maintain a C- average at the CP level consult with the current teacher before advancing to the next level.

Course Sequences



Course Descriptions:

Chinese 1 (401)
Chinese 1/H (401B)
Credits: 4
Prerequisite: None.
This course meets the needs of high school students, 9-12, beginning the study of Chinese. Emphasis is on developing oral proficiency and listening comprehension. Reading and writing skills will be addressed in introductory activities to reinforce oral and listening skills. Students will learn a certain amount of Chinese characters. Cultural aspects of the language will be introduced on an on-going basis. Homework is to be expected daily.

Honors Option: Students will learn more characters; special assignments lead to developing speaking and writing skills. Daily homework and special projects are to be expected.

Chinese 2 (402aB)
Credits: 4
Prerequisite: Chinese 1B
Using the same teaching method as in Chinese 1 Honors, material will be presented that builds on the knowledge gained in the first level course. All four language skills of listening, speaking, reading and writing will be further developed. More sophisticated skills, such as sentence patterns and word order unique to the Chinese language, will be introduced. There will be more emphasis on reading and writing than there was in Chinese 1. As in Chinese 1, cultural aspects of the language will be an integral part of the course. Daily homework is required.

Chinese 2/Honors (402bB)
Credits: 4
Prerequisite: B- in Chinese 1B or permission of the department head
A continuation of Chinese 1 Honors, this course is designed for the needs of students who perform exceptionally well. Special assignments lead to developing active speaking and writing skills. Daily homework and special projects are to be expected.

Chinese 3 (403aB)
Credits: 4
Prerequisite: Chinese 2 or Chinese 2/Honors
This course is a continuation of Chinese 2, with studies in more advanced language structure. Students will be required to engage in oral communications in complex situations within the proper cultural context and background. More writing and character learning will be emphasized, leading to skills in writing compositions in Chinese. Daily homework is required.

Chinese 3/Honors (403bB)
Credits: 4
Prerequisite: B- in Chinese 2/Honors or permission of the department head
For students who possess an advanced understanding of language structure and have superior listening and speaking skills. All skills are expanded through class conversation, discussion of contemporary culture and special writing activities.

Chinese 4 (405aB)
Credits: 4
Prerequisite: Chinese 3 or Chinese 3/Honors
This course is a continuation of Chinese 3. All areas of learning in Chinese 3 will be expanded and strengthened. After successful completion of this course, students can be expected to reach the level of skills equivalent to a second-year university course in Chinese. Daily homework will be required.

Chinese 4/Honors (405bB)
Credits: 4
Prerequisite: B- in Chinese 3/Honors or permission of the department head
In addition to the above, independent study on selected material from current newspapers and/or magazines, literary articles, essays, etc. from China and Taiwan will be required. Students will be expected to write term-paper projects and compositions in Chinese. Daily homework will be required.

Chinese 5 (406aB)
Credits: 4
Prerequisite: Chinese 4 or Chinese 4/Honors
Prerequisite: B- in Chinese 4/Honors or permission of the department head
These courses are a continuation of Chinese 4 with studies in more advanced language structure. Both Level 5 and Advanced Placement options require a high degree of competency in listening, speaking, reading, writing and recording. Students are trained equally in these five skills in order to be fully prepared for the national examination in the spring. This course provides practice in oral communications in complex situations within the proper cultural context and background. Authentic material will be emphasized. Reading and writing will encompass different genres and will be done all in Chinese characters. Daily homework will be required. This course is conducted entirely in Chinese.

Chinese/AP (407B)
Credits: 4
Prerequisite: B- in Chinese 4/Honors or permission of the department head
These courses are a continuation of Chinese 4 with studies in more advanced language structure. Both Level 5 and Advanced Placement options require a high degree of competency in listening, speaking, reading, writing and recording. Students are trained equally in these five skills in order to be fully prepared for the national examination in the spring. This course provides practice in oral communications in complex situations within the proper cultural context and background. Authentic material will be emphasized. Reading and writing will encompass different genres and will be done all in Chinese characters. Daily homework will be required. This course is conducted entirely in Chinese.

Adv Chinese Culture and Literature Honors 1 (408aB)
Adv Chinese Culture and Literature Honors 2 (408aC)
Adv Chinese Culture and Literature Honors 3 (408aD)
Credits: 4
Prerequisite: Completion of Chinese AP or permission of the Instructor
Chinese Culture and Literature is a very advanced course intended to be taken after the AP Chinese level. It teaches language at the same level of complexity as an upper-level college course. This course focuses on literacy development and continued development of speaking, listening, reading and writing skills. Students

will study classic, popular, and realist literature from China. Culture is taught through the reading and discussion of literary works and also discussion of students' life experiences. This course is designed for students who are fluent in Chinese and is conducted entirely in Chinese. Daily homework is required. This course may be taken three times. Students' transcripts will list 1, 2, and 3 to signify how many times the course has been taken, although the content of the class is equally difficult each year with content rotating to make sure each student is always learning something new..

French 1 (421B)
French 1/Honors (420B)
Credits: 4
Prerequisite: None
This course meets the needs of high school students, 9-12, beginning the study of French. Emphasis is on developing oral proficiency and listening comprehension. Reading and writing skills will be addressed in introductory activities to reinforce oral and listening skills. Cultural aspects of the language will be introduced on an ongoing basis. Homework is to be expected daily.

French 2 (425B)
Credits: 4
Prerequisite: French 1B or French 1/Honors
A continuation of beginning level French, this course is designed to increase basic communication skills, as well as reading and writing skills. Cultures of French-speaking people are further explored. Daily homework is to be expected. This course is taught mainly in French.

French 2/Honors (426B)
Credits: 4
Prerequisite: B- in French 1B or French 1/Honors or permission of the department head
This course follows completion of French 1B in the Middle School, or 1 Honors in the High School, and is designed for the needs of students who perform exceptionally well. Speaking, reading, listening comprehension and writing skills are expanded. Special assignments lead toward developing creative speaking and writing skills. Daily homework and special projects are to be expected. This course is taught mainly in French.

French 3 (427B)
Credits: 4
Prerequisite: French 2 or French 2/Honors
All four language skills are further expanded, with increasing development of reading and writing skills. Review and expansion of language structure is emphasized. Special readings, films and recorded cultural materials supplement core materials. Daily homework is required. This course is taught mainly in French.

French 3/Honors (428B)
Credits: 4
Prerequisite: B- in French 2/Honors or permission of the department head
All four skills will continue to be developed with an increased emphasis on vocabulary expansion and understanding of more advanced language structures. All language skills are expanded through increasing class conversation, discussion about cultural topics, short readings, and special writing activities. Daily homework and special projects are required. This course is taught in French.

French 4 (429B)
Credits: 4
Prerequisite: French 3 or French 3/Honors
Skills required in previous level courses are expanded. Vocabulary and structures learned in levels 1-3 are reviewed and further developed. Cultural readings, films, songs and selections from French literature supplement the core text. Daily homework and special projects are required. This course is taught in French.

French 4/Honors (430B)
Credits: 4
Prerequisite: B- in French 3/Honors or permission of the department head
Skills acquired in previous honors level courses are expanded, with increasing emphasis on reading (from newspaper articles to literature), writing and discussion. Essential grammar is reviewed and expanded; literary past tenses are introduced. Several important authors from the nineteenth to the twenty first centuries are studied (Rimbaud, Maurois, de Beaumont, Camus...), as well as the work of various cinematographers (Jean-Pierre Jeunet, Dany Boon, Guillaume Canet). Daily homework and special projects are required. Students will continue to develop skills which are typically tested in the national Advanced Placement Exam given at the end of the study sequence in French. This course is taught entirely in French.

French 5 (431B)
Credits: 4
Prerequisite: French 4 or French 4/Honors
This course is designed for students who have successfully completed French 4 or who have the recommendation of the department head. The course focuses on refining conversational skills and reviewing essential grammar points, as well as exploring advanced grammar and complex sentence structure. Contemporary francophone culture is highlighted. Key authors from the nineteenth, twentieth, and twenty first centuries are studied (Maupassant, Barbery, Pavloff, Schmitt, Camus...), as are the works of several contemporary francophone cinematographers (Olivier Dahan, Michel Hazanavicius, Marjane Satrapi...) Units on sociopolitical aspects of French and francophone history from the twentieth century to the present are examined. The role of France and francophone countries in contemporary international relations provides another facet of this course. This course is taught entirely in French.

French/AP (432B)
Credits: 4
Prerequisite: B- in French 4/Honors or permission of the department head
In addition to following the French 5 course outlined above, this Advanced Placement course requires a high degree of competency in listening, speaking, reading, writing and recording. The students are trained equally in these five skills in order to be fully prepared for the national examination in the spring. It provides practice in contemporary usage through selected readings in culture and civilization and the development of writing and speaking abilities in extemporaneous contexts. The 6 AP themes will be covered on a regular basis. This course is taught entirely in French.

Latin 1 (463aB)
Latin 1/Honors (463bB)
Credits: 4
Prerequisite: None
This course is designed for students in grades 9-12 who wish to begin the study of Latin and learn about the world of the ancient Romans. We study basic vocabulary and grammar as we learn about the life of a Roman

family in 1st century Italy. Regular review of derivatives and language structures increases the student's knowledge and understanding of English. Homework will include vocabulary study and language exercises. Class work will include various sorts of fun games, oral vocabulary practice, oral reading of Latin, translation, analysis of grammatical structures, creative projects, acting out of stories, and creating self-help grammar guides. Both individual and group work is emphasized.

Honors Option: Students electing the Latin I/Honors option will be expected to have a more complete ability to explain the grammar and syntax of the Latin we read. They will complete more in-depth work on homework and assessments and occasionally engage in projects involving additional reading and composition outside of the classroom.

Latin 2 (464aB)
Credits: 4
Prerequisite: Latin 1B or Latin 1, Latin 1/Honors
This course is a continuation of Latin 1 or Latin 1B. Through readings of Roman mythological stories in Latin prose and poetry, this course develops more advanced skills in the translation and analysis of written Latin. The relationship of Latin to English grammar and vocabulary is stressed. Short examples of Latin literature are introduced. Homework and class work will include oral vocabulary practice, translation, analysis of grammatical structures, acting out of stories, and creating of self-help grammar guides; both individual and group work is emphasized. Students will have the opportunity to demonstrate their reading comprehension through a variety of media. This and subsequent Latin courses use the tiered reading method, asking students to read a simplified version of a story before the regular text. This method makes reading more approachable, and the repetition of vocabulary and structures leads to longer-term retention.

Latin 2/Honors (464bB)
Credits: 4
Prerequisite: B- in Latin 1B or Latin 1/Honors or permission of the department head
Students electing the Latin 2/Honors option will be required to complete additional translation assignments. They will be responsible for a more complete explanation of grammar and syntax of Latin sentences.

Latin 3 (465aB)
Credits: 4
Prerequisite: Latin 2 or Latin 2/Honors
This course is for students who have completed Latin 2. Students will build vocabulary and increase their knowledge of syntax within the framework of reading specific authors. After we wrap up the myths we started in Latin 2, the author we read is Petronius, who introduces students to various facets of life in the early Roman Empire through an amusic, satirical story. Reading homework is a regular feature of the class. Quizzes will be given on vocabulary, translation, syntactical analysis, and political background. Oral reading of Latin will become increasingly important. Students will demonstrate their comprehension of the authors read through translations, essays on assigned topics, as well as projects and group activities. This course uses the tiered reading method, asking students to read a simplified version of a story before the regular text. This method makes reading more approachable, and the repetition of vocabulary and structures leads to longer-term retention.

Latin 3/Honors (465bB)
Credits: 4
Prerequisite: B- in Latin 2/Honors or permission of the department head

Students electing the Latin 3 honors option will be expected to undertake a deeper analysis of the relationship between the structure of the language and the author's literary purpose. A high level of grammar and syntax mastery is expected. Students will be required to complete additional translation assignments.

Latin 4 (466B)
Credits: 4
Prerequisite: Latin 3 or Latin 3/Honors
This course is for students who have completed Latin 3 and wish to continue the study of Latin literature with advanced Latin readings, drawn from such authors as Catullus, Ovid, and Horace. Quizzes and tests will require translation, scansion, and literary analysis. Oral reading and the memorization of brief Latin passages help develop an appreciation for the literary qualities of the prose and poetry. Daily written translation, vocabulary practice and/or grammar review are required for homework. This course uses the tiered reading method, asking students to read a simplified version of the poetry before the regular text. This method makes reading more approachable, and the repetition of vocabulary and structures leads to longer-term retention.

Latin 4/Honors (466bB)
Credits: 4
Prerequisite: B- in Latin 3/Honors or permission of the department head
This is a course for students who have completed Latin 3, and wish to pursue their Latin studies by extensive, close reading of such authors as Catullus, Ovid, and Horace. Students taking the course at Honors level need to have a strong base in grammar and syntax on which they will build a sophisticated understanding of the authors we read. Oral reading and the memorization of brief Latin passages help develop an appreciation for the literary qualities of the prose and poetry. Quizzes and tests will require translation, scansion, thorough explanation of grammar and syntax, and sophisticated literary analysis. Daily written translation, along with vocabulary building and grammar review are required for homework. Students at the honors level need a strong grounding in Latin grammar and vocabulary. Students will be required to complete additional translation assignments.

Latin 5 (467B)
Credits: 4
Prerequisite: Latin 4 or Latin 4/Honors
This course is for students who have completed Latin 4 and wish to continue the study of Latin literature with Caesar and Vergil. This course will be taught in conjunction with the AP Latin course. Quizzes and tests will require translation, scansion, and literary analysis. Daily written translation, vocabulary practice, and/or grammar review are required for homework. This course uses the tiered reading method, asking students to read a simplified version of a story before the regular text. This method makes reading more approachable, and the repetition of vocabulary and structures leads to longer-term retention.

Latin/AP (468B)
Credits: 4
Prerequisite: B- in Latin 4/Honors or permission of the department head
This course is for students who have completed Latin 4 and wish to prepare for the AP exam in Latin by extensive, close reading of Caesar's De Bello Gallico and Vergil's Aeneid. This course will be taught in conjunction with Latin 5. Class discussion will focus on translation, scansion, comprehensive review of grammar and syntax along with a review of those structures peculiar to poetry, analysis of the literary quality

of the epic in general and of Vergil's Latin in particular, and exploration of the political and social context of each work. Students taking the course at the AP level need to have a strong base in grammar and syntax on which they will build a sophisticated understanding of Vergil's and Caesar's texts. Oral reading and the memorization of brief Latin passages help develop an appreciation for the literary quality of the poetry. Quizzes and tests will require translation, scansion, thorough explanation of grammar and syntax, and sophisticated literary analysis based on class discussion and outside reading. The typical homework assignment will be to prepare a translation and grammatical analysis of a passage of Latin. Students will also read selections of both works in English. Students choosing the AP course need a strong grounding in Latin grammar and vocabulary and must be willing and able to commit significant time and effort to the work required by the AP curriculum.

Spanish 1 (480B)
Spanish 1/Honors (481B)
Credits: 4
Prerequisite: None
This course meets the needs of high school students, 9-12, beginning the study of basic Spanish. Emphasis is on developing oral proficiency and listening comprehension. Reading and writing skills will be addressed in introductory activities to reinforce oral and listening skills. Cultural aspects of the language will be introduced on an ongoing basis. Homework is to be expected daily. Topics to be covered include: Greetings, likes and dislikes, describing people and things, talking about school, family and food, and the present tense.

Spanish 2 (488B)
Credits: 4
Prerequisite: Spanish 1, Spanish 1B or Spanish 1/Honors
A continuation of developing all four language skills, with emphasis on oral communication, reviewing the present tense, introducing reflexive verbs, imperative mood and the preterite tense. Cultural aspects include foods and meals of Spanish-speaking peoples, shopping, sports, music, transportation and holidays. Daily homework is required.

Spanish 2/Honors (489B)
Credits: 4
Prerequisite: B- in Spanish 1B or Spanish 1/Honors or permission of the department head
This course follows completion of Spanish 1B in the Middle School or 1/1 Honors in the High School. The four language skills are developed with emphasis on aural/oral communication, centered on a review of the present tense, reflexive verbs and an introduction to the preterite tense, the imperative mood. Extensive vocabulary supplements are used in the application of new vocabulary in writing. Cultural supplements include the study of education, shopping, giving directions, sports, music, art and holidays in Spanish speaking countries. Daily homework is required.

Spanish 3 (490B)
Credits: 4
Prerequisite: Spanish 2 or Spanish 2/Honors
This course is a continuation of Spanish 2, with increased emphasis on verb tenses, on reading and on speaking. After a comprehensive review of Spanish 1 and 2, we cover school and after-school related vocabulary. The present tense is used throughout the course. The preterit tense is taught and practiced regularly in speaking, writing and reading. The last unit of the course is reading a comprehensible novel about

the life and work of Frida Kahlo. The course ends by familiarizing students with the imperfect tense. Daily homework is required.

Spanish 3/Honors (491B)
Credits: 4
Prerequisite: B- in Spanish 2/Honors or permission of the department head
This course is a continuation of Spanish 2 Honors, conducted entirely in Spanish. The present and past tenses are strengthened through oral and written use. After a comprehensive review of Spanish 1 and 2, we cover house/ dwelling vocabulary, as well as school, and after-school related vocabulary. Students talk about activities they did ('I' form), ask their partners about what they did ('tu' form), and then write and/ or speak about what their partners did ('el/ ella' form). It is also practiced in readings. The last unit of the course is reading a comprehensible novel about the life and work of Frida Kahlo. The course ends by familiarizing students with the imperfect tense. Daily homework is required.

Spanish 4 (493B)
Credits: 4
Prerequisite: Spanish 3 or Spanish 3/Honors
Grammatical structures and verb tenses presented in previous courses are reviewed. New grammatical structures are introduced. Cultural supplements include Latin America and Spain. During the second semester, cultural readers, and short stories are introduced. Daily homework is required. Class is conducted primarily in Spanish.

Spanish 4/Honors (494B)
Credits: 4
Prerequisite: B- in Spanish 3/Honors or permission of the department head
This course explores the culture and literature of the Spanish-speaking world. Verb tenses, other advanced points of grammar, vocabulary and idiomatic expressions are reviewed and studied. Oral and written expressions in Spanish are developed through discussion and narration of events and short essays. Class is conducted entirely in Spanish. Daily homework is required.

Spanish 5 (496B)
Credits: 4
Prerequisite: Spanish 4 or Spanish 4/Honors
For students who have successfully completed Spanish 4, this course provides a continued study of more advanced points of grammar, as well as continued development of vocabulary. Students are expected to work with readings and to write as well as demonstrate an increased ability to express themselves orally with the language. Spanish 5 is conducted entirely in Spanish.

Spanish/AP (497B)
Credits: 4
Prerequisite: B- in Spanish 4/Honors or permission of the department head
This Advanced Placement course requires a high degree of competency in listening, speaking, reading, and writing. The students are trained equally in these four skills in order to be fully prepared for the AP Exam in the spring. The course treats grammatical points as meriting attention and review because they are common structures that must be mastered. It provides practice in contemporary usage through selected readings in

culture and civilization and the development of writing and speaking abilities in extemporaneous contexts. This course is conducted entirely in Spanish.

Physical, Health, and Family & Consumer Education

Department Overview:

The discipline of Physical Education addresses cognitive, social, and physical development. The physical education program is designed to help students understand and value the benefits of regular physical activity; evaluate their level of fitness; design and maintain personal fitness programs; develop motor skills sufficient to enjoy participation; and respect differences among people in physical activity settings. To enable teachers to meet the many needs and interests of students, a variety of activities are offered. In addition, all courses incorporate conditioning activities that will lead to the development of good cardiorespiratory fitness, muscular endurance, strength and flexibility.

Health Education provides a foundation in public health and medical knowledge and inquiry into how individuals and societies acquire and/or change their health-related knowledge, attitudes and behaviors. Within the range of health content areas, students learn much more than factual information. They develop skills in finding and evaluating information and resources; making decisions and setting goals; and acting in ways that promote their own health and the health of others. Health Education (732) is required of all ninth-grade students. Students who arrive at ARHS after completing the ninth grade in another district are not required to take Health Education.

Courses in Family and Consumer Education prepare students for their transition to the adult world of work and family life. They empower students to address change and deal with the challenges of balancing work, family, commitment to community and self. All courses help students to apply academic and practical skills to learning experiences that lead to tangible results. They are concerned with the strength and vitality of families and the role of individuals in the workplace and as consumers of goods and services. This discipline teaches knowledge and life management skills related to human growth and development, parenting, child development, nutrition, consumer awareness, careers and employment, use of technology, textiles and clothing, and resource and environmental management.

ARHS Graduation Requirement:

- 2 credits Health Education (grade 9)
- 2 credits Physical Education 10 (grade 10)

Course Descriptions:

Health Education 9 (732)
Credits: 2
Prerequisite: None
Health Education is a quarter long course required of all ninth graders. Students will receive factual information and confront attitudes regarding responsibility to one's wellness, gender identity, drug and alcohol use, human sexuality, STIs (sexually transmitted infections), and building healthy relationships. This course will provide students with the opportunity to discuss these issues and others of concern to them, to obtain accurate information through classroom and library research, and to develop strategies for maintaining a healthy lifestyle.

Physical Education 10 (701)
Credits: 2
Prerequisite: None
This course is required of all 10th graders and includes a significant focus on Adventure Challenge. Adventure Challenge is a curriculum designed to build intellectual, emotional, physical and personal qualities. Activities are designed to build trust, communication, decision making and reflection as well as physical skills. The curriculum builds from team building challenges to the culmination of climbing and belaying. Safety and cooperation are emphasized as students are challenged to build their skills. In addition to Adventure Challenge there are units on personal fitness, individual/lifetime activities and team sports as part of this one semester course.

PE: Foundations of Personal Fitness (7106)
Credits: 2
Prerequisite: None. This course may be taken more than once for credit.
This is an entry level course to introduce students to personal fitness and provide them the necessary experience and knowledge to advance into our *Strength and Conditioning* course in future quarters/years. *Foundations* will take place in both a classroom and weight room setting. Students will have opportunities in the weight room to bridge their knowledge with physical activity. Through these activities, students will build a foundation of knowledge and gain basic practical skills designed to help them better understand how to develop their physical well-being in high school and beyond.

PE: Strength and Conditioning (7103)
Credits: 2
Prerequisite: Successful completion of PE: Foundations of Personal Fitness
Students will evaluate their individual fitness, design and implement a personal exercise program. Using daily dynamic warm-ups and alternating days of resistance training and cardiovascular exercises, students will track and document their overall fitness over the 9-week course. Instruction will include a full orientation to the weight room, as well as attention to the benefits of physical activity, exercise safety, principles of weight training, health related fitness, exercise and good health, weight control, nutrition and stress management.

PE: Invasion Games (7104)
Credits: 2
Prerequisite: None. This course may be taken more than once for credit.
This option offers a variety of traditional and non-traditional team sports such as basketball, flag football, rugby, soccer, ultimate, hockey and other invasion (offense invades defense) games. Activities presented will vary according to the time of year. Students will learn basic skills and strategies of critical thinking.

PE: Recreational Games (7105)
Credits: 2
Prerequisite: None. This course may be taken more than once for credit.
This elective course introduces students to a wide variety of team and individual sports, lifetime activities and wellness. Activities may include: basketball, badminton, pickleball, soccer, flag football, wiffleball, ultimate frisbee, capture the flag, volleyball and yard games. Activities will be selected based on the expertise of the instructor and interest of the students. This class requires active participation. Students will learn to use heart rate monitor technology and will develop a fitness profile analyzing their own aerobic fitness, flexibility, muscular strength and endurance, and caloric intake/expenditure.

PE: Net, Wall, and Target Games (7107)
Credits: 2
Prerequisite: None. This course may be taken more than once for credit.
This elective PE offering is designed to introduce students to the many net, wall and target games we have available to learn here at ARHS. Regardless of experience with net, wall and target games, this course is designed to meet the needs of all of our diverse learners and introduce students to new and wonderful ways to move their body across the lifetime. This elective course allows students room to explore existing games while offering opportunities to create and invent new ones in both casual and more competitive settings.

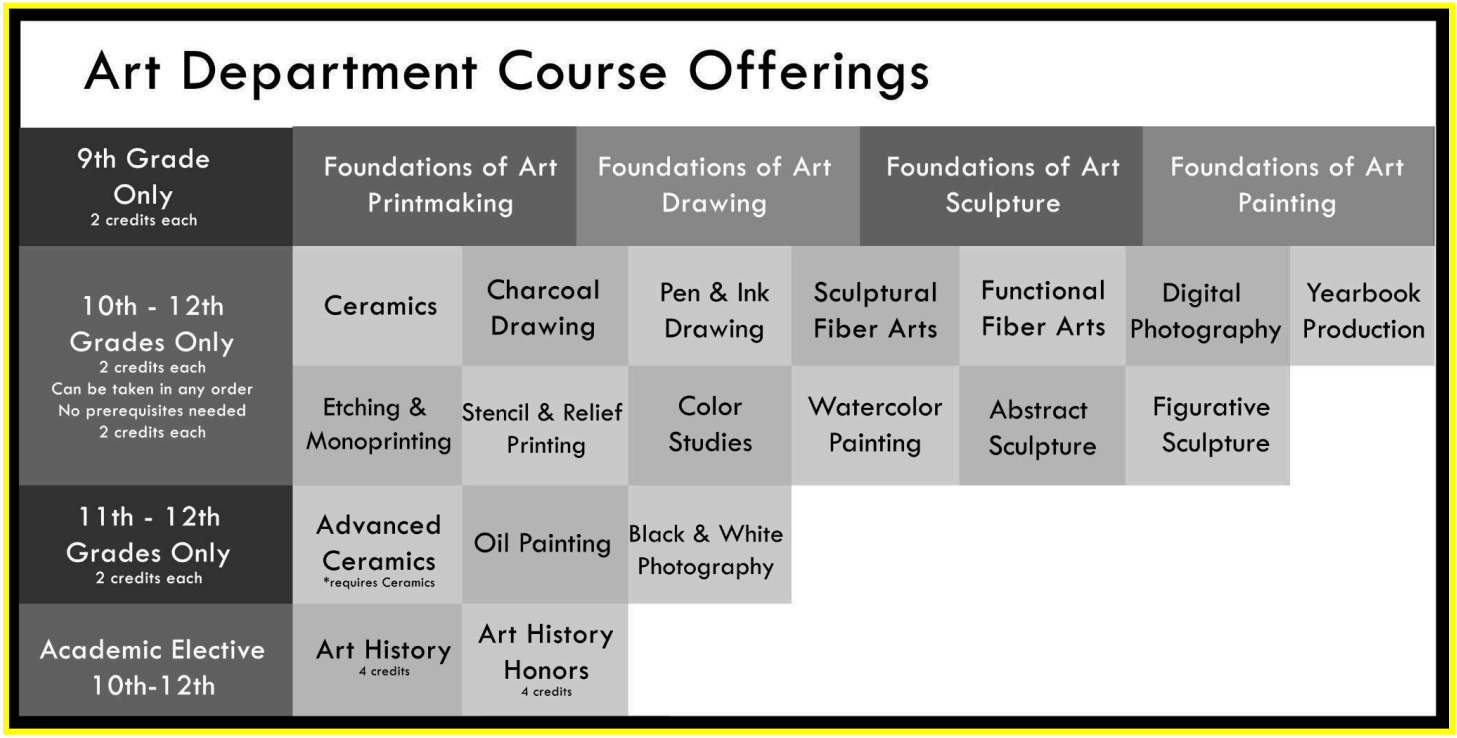
PE: Unified (8706)
Credits: 2
Prerequisite: None. Open to students in grades 10- 12. This course may be taken more than once for credit.
In this inclusion-centered class, students in both the General Education and Pathways to Independence programs will have the opportunity to try out a variety of physical education activities in a low-pressure environment. This experience is for self-motivated, independent and kind learners looking to build on their current leadership and humanitarian skills. There is a huge emphasis placed on building these skills as well as exhibiting positive and appropriate leadership behavior at all times. You will aid the teacher in the creation and delivery of lessons designed to build trust, communication, decision making and reflection. These activities will also aim to improve the physical skills of all students. Class content will include cooperative games, individual and group fitness, sport skills and game play. Students will be required to complete activity plans and implement/lead these lesson ideas, complete reflections and be expected to use their plus block period to continue this work in preparation for the week ahead.

Child Development (761)
Credits: 2
Prerequisite: None. Open to students in grades 9 - 12
Students in this course will study children through a variety of classroom experiences which includes: reading, viewing videos, and conversations with guest speakers who work with children in various settings including home child care. Special emphasis will be on pregnancy and birth, language development and gender differences in early childhood. Students will also study special issues and social problems of particular interest to them that relate to the physical, intellectual, emotional and social development of children.

Art

Department Overview:

The ARHS Art program is designed to allow students to select from a wide range of courses that reflect their particular interests in Fine Art. The four Foundations of Art course offerings are designed to give 9th grade students an introduction to the visual arts, each with a different focus. Foundations of Art courses are for 9th grade students only, and they are encouraged to take more than one. Most courses with a focus of or within a single media are open to all students in grades 10 through 12, without a prerequisite. These courses include: Charcoal Drawing, Pen & Ink Drawing, Stencil & Relief Printing, Etching & Monoprinting, Watercolor Painting, Color Studies, Ceramics, Figurative Sculpture, Abstract Sculpture, Functional Fiber Arts, and Sculptural Fiber Arts. Oil Painting, Black & White Photography, and Yearbook Production are open to all students in grades 11-12 only. Advanced Ceramics has a prerequisite of having taken Ceramics. All studio art courses are 2 credit courses. Art History is an academic elective offered through the Art Department, open to all students in grades 10-12, and is a semester length 4-credit course. We encourage all students to consider taking at least one studio art course before they graduate ARHS.



Course Descriptions:

Foundations of Art - Printmaking (6067)
Credits: 2
Prerequisite: None. Open to 9th grade students only
Students in this course will focus on the 'Elements of Art' and the 'Principles of Design' while exploring a range of printmaking techniques. Students will create prints that range from abstract to representational as they learn new techniques and implement new pictorial strategies. The following concepts will be emphasized: line, shape, value, form, color, texture, rhythm, and composition. Students will focus on compositional design as

well as developing critical approaches to content and expression as they design and execute engaging and well-crafted prints**.** They will be expected to participate actively in class critiques and discussions.

Foundations of Art - Drawing (6066)
Credits: 2
Prerequisite: None. Open to 9th grade students only
Students in this course will focus on the 'Elements of Art' and the 'Principles of Design' while exploring a range of two-dimensional drawing media. Students will create work using a variety of drawing techniques, drawing from both observation and imagination. The following concepts will be emphasized: line, shape, value, form, color, balance, emphasis, unity, proportion, and composition. Students will focus on compositional design as well as developing critical approaches to content and expression as they design and execute engaging and well-crafted drawings. They will be expected to participate actively in class critiques and discussions.

Foundations of Art - Sculpture (6064)
Credits: 2
Prerequisite: None. Open to 9th grade students only
Students in this course will focus on the 'Elements of Art' and the 'Principles of Design' while exploring a range of three-dimensional methods and materials. Students will create work using a variety of sculptural techniques including additive, subtractive and assemblage. The following concepts will be emphasized: mass, void, form, shape, balance, movement, texture, volume, rhythm, relief, proportion and abstraction. Students will use some of the following materials: clay, wire, wood, plaster, cardboard, and found objects. Students will focus on form and space as well as developing critical approaches to content and expression as they design and execute engaging and well-crafted sculptures. They will be expected to participate actively in class critiques and discussions.

Foundations of Art - Painting (6065)
Credits: 2
Prerequisite: None. Open to 9th grade students only
Students in this course will focus on the 'Elements of Art' and the 'Principles of Design' while exploring a range of water-based painting media and approaches to painting. Students will create paintings from observation, photographs, and their own imagination. The following concepts will be emphasized: line, shape, value, form, color, space, texture, rhythm, and composition. Students will focus on compositional design as well as developing critical approaches to content and expression as they design and execute engaging and well-crafted paintings. Specific painting techniques and brush skills will be introduced; including glazing, scumbling, impasto, alla prima, blocking, and modeling. Understanding basic color theory and color mixing is a core part of this course. Students will be expected to participate actively in class critiques and discussions.

Art History (626a)
Art History/Honors (626b)
Credits: 4
Prerequisite: None. Open to students in grades 10-12
This course is an academic course taught through the Art Department. Art History is a survey of artistic production from prehistory to the present day. We will examine the link between artistic production and historical events; how history shapes art and how art can shape history. The course covers architecture, painting, sculpture, and other art forms produced by many cultures and civilizations over six continents. Through slide presentations, discussions, readings, note keeping, writing, research, and field trips, students will

understand major works of art both formally and contextually. In addition to studying facts, students will learn to analyze, synthesize, and compare works of art, with an emphasis on the understanding of style.

Honors Option: Students will have additional weekly readings as well as completing independent research papers that focus on the formal, iconographic, and contextual analysis of individual artworks.

Ceramics (603a)
Credits: 2
Prerequisite: None. Open to students in grades 10-12
This course introduces students to the techniques and concepts of ceramics. Students will explore a variety of methods including throwing on a wheel, hand building, and sculpting with slab. Students will learn to alter thrown vessels to create sculptural forms - addressing the concepts of balance, proportion, volume and texture. Students will use sgraffito, carving, and additive methods to create expressive surfaces. Students will use glaze and underglaze to incorporate color, line, pattern, and texture to their ceramics. The decision to create functional work, or focus solely on form, is a decision student will get to make throughout the course. Emphasis is placed on developing an understanding and appreciation of artists, past and present, in the field of ceramics. Students will learn to think critically about their work and that of their peers through active participation in class critiques and discussions.

Advanced Ceramics (603b)
Credits: 2
Prerequisite: Ceramics
In this course students will build on their ceramic skills from the introductory course to create more complex and expressive work. Students will learn new techniques, as well as expand on the skills learned in Ceramics with the goal of creating work that addresses balance, movement, rhythm, pattern, form and texture. Students will learn the skills needed to create a series of works that may include lidded vessels, altered vessels, a pair, and a self-portrait teapot. Students will use underglaze, glaze, and stains to add color and emphasize texture. They will try other types of clay such as porcelain or terracotta. Students will follow form over function, but can choose whether to create a functional portfolio or focus solely on the sculptural aspect of ceramics. In addition to technical skills, we will discuss the role of ceramics in cultures past and present. Students will be challenged to critique their own work as well as the work of their peers. They will be expected to participate actively in class critiques and discussions.

Charcoal Drawing (6054)
Credits: 2
Prerequisite: None. Open to students in grades 10-12
In this course students will learn fundamental drawing techniques with an emphasis on using charcoal in its various forms. Students will learn to draw from observation, from photographic reference and from their imaginations. In addition to developing their technical skills, students will be challenged to work expressively and creatively with compressed charcoal, charcoal pencils and conte crayons. Working from project prompts that build in ambition and complexity, students will be encouraged to experiment and develop their creative voice. Students will be guided through each project with the assumption that they may have no experience with these materials and techniques. Through studio projects, demonstrations, slide presentations and critiques, students will gain the skills and confidence to express themselves creatively in this exciting drawing medium.

Pen & Ink Drawing (6055)
Credits: 2
Prerequisite: None. Open to students in grades 10-12
Students in this course will learn various pen & ink drawing techniques as they explore projects that utilize a variety of sources. Students will learn to use different types of pens and ink applicators, as well as brush & ink, and watercolor. Small studies will prepare students for self-designed projects, including a large illustration and a full-page comic. Students will be challenged to create original and authentic drawings grounded in creative thinking and the study of drawing fundamentals. In addition to developing their technical skills, students will be challenged to think critically and creatively about their own work and the work of their peers. They will be expected to participate actively in class critiques and discussions.

Functional Fiber Arts (6057)
Credits: 2
Prerequisite: None. Open to students in grades 10-12
Functional Fiber Arts is an introduction to creating usable and/or wearable artworks using a range of fiber including but not limited to fabric, thread, yarn, paper, dyes, and organic materials. Students in this course will learn methods of construction critical to creating functional objects such as books, garments, and vessels. Topics may include but are not limited to bookmaking, hand and machine sewing, embroidery, and weaving. Students will examine fiber arts practice as a means of preserving ancestral and community knowledge, explore contemporary craft practices, and study the role of fibers in a historical context.

Sculptural Fiber Arts (6056)
Credits: 2
Prerequisite: None. Open to students in grades 10-12
Sculptural Fiber Arts is an introduction to creating 3D artworks using a range of fiber including but not limited to fabric, thread, yarn, paper, dyes, and organic materials. Students in this course will learn methods of fiber manipulation and construction critical to creating sculptural art objects that address such formal concepts as balance, volume, and texture. Topics may include but are not limited to bookmaking, hand and machine sewing, embroidery, and weaving. Students will examine fiber arts practice as a means of preserving ancestral and community knowledge, explore the relevancy of fibers in contemporary artmaking practices, and study the role of fibers in the context of social justice movements. STUDENTS WHO HAVE TAKEN THE COURSE ENTITLED "FIBER ARTS" DURING SY 2022-23 OR 2023-24 SHOULD NOT TAKE THIS COURSE.

Watercolor Painting (6081)
Credits: 2
Prerequisite: None. Open to students in grades 10-12
Watercolor is a transparent paint that is thinned with water and then brushed onto absorbent paper. Many of us have used watercolors as children because they are wonderfully portable, generally non-toxic and clean up easily. During this course students will focus on building the following foundational skills: paint dilution, washes, glazing, and wet-into-wet techniques. Working from direct observation, imagination, and photographic reference, students will develop their ability to build an image from sketch to finish as well as working with more spontaneous techniques. Composition, depth, and color theory will be emphasized as students gain technical mastery. Through studio projects, demonstrations, slide presentations, and critiques, students will gain the skills and confidence to express themselves creatively in this exciting painting medium.

Oil Painting (6085)
Credits: 2
Prerequisite: None. Open to students in grades 11-12
As the name implies, oil painting uses drying oils as a medium as opposed to water. This difference allows oil paint to be blended and corrected over time. It is the most challenging of all painting media, and it is also many people's favorite. This course is an introduction to harnessing the potential of oil paint as students will learn to control and exploit its many unique properties. Students will complete a series of small studies as well as two substantial and original paintings, one on board and one on canvas. Techniques such as glazing, scumbling, impasto, imprimatura, alla prima, blocking, and blending will be practiced and then implemented. Color theory and color mixing are also a central part of the class. In addition to developing their technical skills, students will be challenged to think critically and creatively about their own work and the work of their peers. They will be expected to participate actively in class critiques and discussions. Some prior painting experience (any media) and basic knowledge of the color wheel is recommended but not required.

Color Studies (6221)
Credits: 2
Prerequisite: None. Open to students in grades 10-12
Color is an essential part of our everyday lives and an incredibly important aspect of art and design. In Color Studies, students will learn to see, understand, and use color effectively in art and in life. Students will work with paint, drawing materials, and collage as they explore color relationships, harmonies, and color relativity. Assignments will range from color matching exercises to ambitious, student driven projects. Along with learning about the technical aspects of color and visual perception, students will be encouraged to work intuitively as they hone their own color sense and develop their unique creative voices. Through studio projects, demonstrations, slide presentations and critiques, students will gain the skills and confidence to understand and work with color.

Black & White Photography (6091)
Credits: 2
Prerequisite: None. Open to students in grades 11-12
In this course students will learn about the foundations of photography through the use of a 35mm film camera and a wet darkroom. Students will gain an understanding of the mechanics of a manual camera, black and white film developing, enlarging, printing and dry mounting. Students will gain an understanding of the concepts of light, composition, angle, contrast, depth of field, shutter speed and ISO. Throughout the course students will learn to critique their work as well as that of their peers through active participation in class critiques. Although not required, it is helpful to have use of a manual 35mm film camera. Students who do not have access to a camera may borrow one from the school. By studying and critiquing well known photographers from history to the present, and engaging in discussions about the impact of photography on society, students will gain the ability to create photographs that expose issues in their lives and bring awareness to the overlooked.

Digital Photography (619)
Credits: 2
Prerequisite: None. Open to all students in grades 10-12
In this course students will learn about the foundations of photography through the use of a DSLR digital camera and computer editing programs such as Adobe Photoshop. Students will gain an understanding of the mechanics of a DSLR camera, manual and semi-manual settings, photo manipulation, and digital image quality specifications. Students will develop a digital portfolio that showcases their unique creative voice and

demonstrates an understanding of concepts of light, composition, point of view, contrast, depth of field, shutter speed, aperture, and ISO. Throughout the course students will learn to critique their work as well as that of their peers through active participation in class critiques. Although not required, it is helpful to have use of a DSLR camera. Students who do not have access to a camera may borrow one from the school.

Stencil and Relief Printing (6115)
Credits: 2
Prerequisite: None. Open to students in grades 10-12
Stencil printing uses an exciting combination of painting and printmaking techniques. Artists use stencils as a quick way to create multiples of an image. In this class students will learn how to translate images-from photographic reference and from their imaginations-into the language of stencil printing. In relief printing, the artist draws a design backwards on a carvable surface like wood or linoleum. Then, using a carving tool, the artist cuts away the negative space in their design, leaving only the drawing raised up (in relief). The raised-up lines and shapes are inked with a roller and printed on paper. Artists can make many prints of the same image using different colored inks, different papers, and experimental techniques. Working from project prompts that build in ambition and complexity, students will be encouraged to experiment and develop their creative voice. Students will be guided through each project with the assumption that they may have no experience with these materials and techniques. Through studio projects, demonstrations, slide presentations, and critiques, students will gain the skills and confidence to express themselves creatively using these powerful printmaking techniques.

Etching & Monoprinting (6114) - Formerly Printmaking - Intaglio & Relief
Credits: 2
Prerequisite: None. Open to students in grades 10-12
Etchings are created by drawing lines into a metal or plastic plate. Artists then rub ink into incised lines and run the plate through a printing press with paper on top to make a print. In this class students will learn how to translate images from photographic reference and from their imaginations into the language of intaglio printing while learning to use the printing press. The monoprint is a form of printmaking where the image can only be made once, unlike most printmaking which allows for multiple originals. The beauty of monoprinting lies in its spontaneity and its allowance for combinations of printmaking, painting and drawing media. Working from project prompts that build in ambition and complexity, students will be encouraged to experiment and develop their creative voice. Students will be guided through each project with the assumption that they may have no experience with these materials and techniques. Through studio projects, demonstrations, slide presentations, and critiques, students will gain the skills and confidence to express themselves creatively using these powerful printmaking techniques.

Abstract Sculpture (6120)
Credits: 2
Prerequisite: None. Open to students in grades 10-12
This course explores modes of abstraction while introducing students to various concepts, methods, and materials specific to three-dimensional art. Students will focus on the evolution of abstraction in three dimensions by learning about the traditions of both non-western and 20th century modernist sculpture. Concepts covered include mass, void, organic form, geometric form, shape, plane, balance, movement, volume, rhythm, and dynamism. Some of the sculptural methods taught will include subtractive, additive, assemblage, and the use of armatures. Students will use some of the following materials: wire, plaster, cardboard, clay and found objects. They will be expected to actively discuss their own work and the work of their peers during class critiques and discussions.

Figurative Sculpture (6121)
Credits: 2
Prerequisite: None. Open to students in grades 10-12
In this course, students will learn about the methods and concepts of sculpture stemming from the human figure. Students will be introduced to the main sculptural methods including subtractive, additive and armatures. The concepts covered will include form, balance, shape, plane, proportion, movement, texture, volume, rhythm, mass & void. Students may use the following materials: clay, glaze, plaster, wire, wood, cardboard, and armatures. Students will be introduced to key sculptors from the past and present, and gain an understanding of the styles and periods they represent. They will learn to create expressive figures and build a strong portfolio of work. Students will learn to think critically about their work and that of their peers through active participation in class critiques. Students will learn about the role of sculpture in history, as well as analyzing the influences of public figurative sculpture in society today.

Yearbook Production (550)
Credits: 2
Prerequisite: None. Open to students in grades 10-12
In this course, students will learn the fundamentals of photography and graphic design as they document events during the school year and ultimately produce the ARHS yearbook. Students will use digital cameras to document school events, and learn various aspects of yearbook production such as layout and page design. Students will be responsible for multiple aspects of yearbook design, including theme development, design and formatting of pages, photography or creation of titles and artwork. Students can also take charge of the production of one or more sections of the book, including student life, events, performing arts, seniors, faculty, clubs, sports, advertising pages, the cover, table of contents and other pages. Students must be able to stay organized, work independently and with peers, critique and edit their own work and the work of others, and meet authentic deadlines. Assignments will be within the school and sometimes extend into the community. Students who have taken Computer Graphics or Digital Photography are encouraged to enroll. Unlike most courses, this course is eligible to be taken multiple times during the school year.

Performing Arts

Department Overview:

The Performing Arts Department welcomes students from all backgrounds and levels of experience to explore the world of music, theater and dance. Newcomers to our programs will find an exciting range of introductory classes with no prerequisites. More experienced students have the opportunity to continue and deepen their work through ensembles and advanced classes. All department courses emphasize active ways of learning, culminating in student-generated work. **We encourage all students to consider taking at least one performing arts course before they graduate ARHS.**

Introductory Courses (open to ALL students, 9-12, no experience needed)
The following classes have **no prerequisites** and are ideal means of exploring the department's offerings. See course descriptions below for more information.

Introduction to Dance
Introduction to Hip Hop Dance
Introduction to Bomba: Afro-Puerto Rican Drum, Dance & Song
Dance Theater Ensemble (Dance)
Theater for a New Era
Acting 1
Stagecraft
Music Theory
Music Production 1
Concert Choir
Steel Drumming

Ensemble Courses

The music and dance ensembles are unique among ARHS course offerings as their culminating activities involve performances outside of the regular school day. At the start of the school year, every student enrolled in a performing ensemble receives a schedule for the year of after-school performances and after-school rehearsals of the ensemble. This schedule should be shared with parents/guardians and should be considered a key part of the student's coursework.

9th and 10th Grade Ensemble Scheduling

We recognize that 9th and 10th grade students have many required courses, making participation in a two-term ensemble challenging. Guidance staff will work with all students to find solutions to fitting in their ensembles. We highly encourage students to continue with their ensembles with the knowledge that more elective spots will be open to them as they continue through high school. **Ensemble students facing difficult scheduling options should check in with their ensemble director or the department head prior to finishing their scheduling requests.**

Repeating Courses

A number of Performing Arts courses can be taken more than once for credit, and some courses look for student teaching assistants (done as an ALP) each year. See your instructor for details if you're interested.

Dance Courses

Introduction to Dance (631)
Credits: 2
Prerequisite: None. This course may be taken more than once for credit.
In this broad introductory class, students dance every day, building skills and technique in a variety of dance styles including Contemporary, Jazz, Hip Hop, and K-pop. Coordination, expression, and flexibility will be steadily developed over time, as well as joy, community, and self-care. Students will also engage with the communities, values, and traditions that gave rise to these dances. All levels are welcome.

Introduction to Hip Hop Dance (631a)
Credits: 2
Prerequisite: None. This course may be taken more than once for credit.
In this Hip Hop-focused introductory class, students dance every day, building skills and technique in the street dance styles of Hip Hop, House, Locking, and more. Groove, improvisation, and musicality will be steadily developed over time, as well as joy, community, and self-care. Because Hip Hop is a culture with historical roots, students will engage with the communities, values, and traditions that gave rise to these dances. All levels are welcome.

Introduction to Bomba: Afro-Puerto Rican Drum, Dance & Song (6352)
Credits: 2
Prerequisite: None. This course may be taken more than once for credit.
In this quarter-long introductory course, students learn how to drum, dance, and sing in the various styles of Afro-Puerto Rican Bomba. Students will also engage with the history of Bomba as African culture, and as resistance to enslavement and colonial oppression. All levels are welcome.

Dance Theater Ensemble (Dance) (636a)
Credits: 4
Prerequisite: None. This course may be taken more than once for credit
In this performance class, students with experience in all styles of dance come together to create, teach, and perform original dances. Through studying and experimenting with choreography and improvisation, students develop into more effective choreographers, teachers, collaborators, and performers. The group enjoys field trips and performs for a variety of audiences.

Dance Theater Ensemble (Hip Hop) (636b)
Credits: 4
Prerequisite: Audition. This course may be taken more than once for credit
Calling all Poets, Rappers, DJs, Visual Artists, Videographers, Musicians, Fashion Designers, Techies, Playwrights, Actors, Organizers, Activists, and Dancers. In this performance class, students will gain hands-on practice with a variety of art forms, including Hip Hop's 4 elements: Storytelling, Dance, Music, and Visual Art. They will also engage with Hip Hop Culture's history of young people making social change through artistic expression, and tell their own stories using art forms of their choice. The group enjoys field trips and performs for a variety of audiences.

Unified Performing Arts (8707)
Credits: 2 credit per quarter
Prerequisite: Open to students 11-12. This course may be taken more than once for credit.
In this inclusion-centered class, students in both the General Education and Pathways to Independence programs will have the opportunity to try out a variety of performing arts in a low-pressure environment. This is a class designed to meet each person's needs, and to build connections among students who don't often get to work together. According to student interest and comfort, we will practice dancing, singing, acting, music production, drums, & other instruments.

Theater Courses

Theater for a New Era (640)
Credits: 2
Prerequisite: None. This course may be taken more than once for credit.
This unique, project-based course will give you numerous opportunities to create and explore theatrical experiences with other people. Whether you're designing an escape room, an immersive theater piece for an audience of one, an interactive project designed for smartphones, or assembling a creative public event, the skills you learn in this class will equip you to make original, exciting work long after the class is complete. Students should expect an active, hands-on course that includes learning through video games, field trips, working with professional theater makers, and much more!

Acting 1 (638)
Credits: 2
Prerequisite: None. This course may be taken more than once for credit.
What makes a great stage performance seem so magnetic and "real"? Acting 1 is ideal for students interested in exploring that question in a fun, low-risk environment. Using a variety of exercises, games, and performance techniques in this class, students will learn how to bring their full selves to the characters they play. Daily in-class activities, from serious and silly, help prepare students for scene study and in-class performances. Perfect for students curious about acting & theater and for those wanting to bring some practical acting technique into their performances.

Acting 2 (639)
Credits: 2
Prerequisite: Acting 1 or permission of the instructor. This course may be taken more than once for credit.
In Acting 2, students focus more intensely on full-length plays as the vehicle for their work while being introduced to new acting methods. Building off of skills gained in Acting 1, students will pursue more "inside-out" techniques, particularly a method called Practical Aesthetics. In addition, students will explore "outside-in" techniques - methods of acting that focus first and foremost on physical explorations of character and story. Recommended particularly for all students interested in deepening their on-stage skills and/or attending college theater programs.

Stagecraft (637)
Credits: 2
Prerequisite: None. This course may be taken more than once for credit.
In this course, students will use the ARHS stage to take on project-based activities in stage design, set building, sound and stage lighting. Students will divide their time between in-class units on these subjects and

preparing sound, lighting and building for concerts, plays and other events that occur at the school. This is a physically active class that will require students to operate stage equipment and move heavy objects (stage lights, platforms, etc.) Design theory for the stage will be incorporated regularly into the practical work that students undertake. The ability to work safely on a range of individual and group projects is required.

Classroom Music Courses

Music Theory (668y)
Credits: 2
Prerequisite: None
Chords, scales, intervals, composing for one or two voices, ear training, elementary counterpoint and sight singing are the principal content of Music Theory, which builds from simple structures through increasingly complex techniques, including composition of original works on digital keyboards and music composition software. A beginner's knowledge of reading music notation is recommended but not required.

Music Production 1 (681)
Credits: 2
Prerequisite: None
In this quarter-long course, students will use the hardware and software in the Music Technology Lab to create original musical work spanning a variety of styles and genres. Through a series of listening exercises and composition projects, students will explore the unique musical characteristics of each genre and develop skills to compose their own melodies, beats, and chord progressions. Students will gain a basic proficiency on the MIDI keyboard and integrate basic music theory concepts into their work. They will also develop skills in recording, mixing, editing, and publishing music. No prior musical experience is required.

Music Production 2 (682)
Credits: 2
Prerequisite: Music Production 1 permission of the instructor
Music Production 2 is a deep dive into the specifics of recording, mixing and mastering music. Through a series of projects designed to simulate real-life scenarios, students will develop the ability to hear nuances in produced music, and build a refined understanding of compression, EQ, reverb, and various effects. Time will be included at the end of the semester for independent work, and a field trip to a local recording studio. Recommended for any student who creates music on their own time, or anyone interested in pursuing music production professionally.

Choir Ensembles

Concert Choir (662x)
Credits: 4
Prerequisite: None
Concert Choir is a mixed-voice choral ensemble open to any student at the high school who wants to grow as a singer. Students in the class will build techniques relating to breathing, posture, and tone production, and develop musical independence through ear training and sight reading. Repertoire includes songs from a variety of genres, including classical music of various periods, folk songs, spirituals, musical theater, and pop songs. No audition or performing experience is necessary.

Hurricane Singers (660C)
Credits: 4
Prerequisite: An audition. Open to students in grades 10-12
This auditioned ensemble is a performance-based class open to students with treble voices in grades 10-12. Students will perform challenging music from a variety of genres, including pop, folk songs from around the world, gospel, and classical music. Through this study of repertoire, students will develop mastery of various musical skills, including melodic and rhythmic sight-reading, singing in multiple parts, and development of ensemble sound. The ensemble will perform in several evening concerts throughout the year.

Chorale (661C)
Credits: 4
Prerequisite: An audition. Open to students in grades 10-12
Chorale is an auditioned, mixed-voice choral ensemble open to students in grades 10-12. Students will perform challenging repertoire from a variety of genres, with a focus on a cappella music from the past and present. Prior choral experience and familiarity with music notation is recommended. The ensemble will perform in several evening concerts throughout the year.

Band Ensembles

Steel Drumming (643)
Credits: 2
Prerequisite: None
Students will learn about the tradition of steel drumming by participating in a steel drum band. Students will learn to read music, learn about steel drums and the history of the instrument, and rehearse tunes as a group. Potential in-school performances for peers and staff.

Symphony Band (671x)
Credits: 4
Prerequisite: Previous experience on a band instrument or permission from the instructor. Open to students in grades 9-12
The Symphony Band is open to all students in grades 9-12 who have previous experience on a woodwind, brass, or percussion instrument, OR have permission from the instructor. The repertoire performed includes, but is not limited to, classical music of all time periods, jazz, and pop music. Students will increase their level of performance skills, particularly in the areas of collaboration, expression, intonation, and interpretation. The ensemble gives 3-4 concerts each year. No audition is required. This course may be taken more than once for credit.

Wind Ensemble (672C)
Credits: 4
Prerequisite: An audition. Open to students in grades 10-12
The Wind Ensemble is a select ensemble for woodwind, brass and percussion instruments in grades 10-12. The repertoire consists of a variety of works including classic band literature, contemporary compositions, and student-selected chamber music. The ensemble performs 3-5 concerts each year. Membership is by audition with the instructor. This course may be taken more than once for credit.

Jazz Workshop (664C)
Credits: 4
Prerequisite: An audition. Open to students in grades 9-12
Jazz Workshop provides an intensive jazz education for students interested in learning or continuing their jazz skills, including improvisation, rehearsing in small ensembles, jazz theory, jazz history, reading jazz notation (scales and chords), and ear training. Styles performed include, but are not limited to, swing, blues, Latin styles, and funk. Frequent public performances are given, both on and off campus. Membership is by audition. Preference is given to students in grades 10-12. This course may be taken more than once for credit.

Orchestra Ensembles

Philharmonia (669x)
Credits: 4
Prerequisite: Prior experience on a stringed instrument. Open to students in grades 9-12
The Philharmonia is open to students in grade 9-12 who play the violin, viola, cello or double bass. The ensemble performs three evening concerts each year. In addition, the ensemble performs less formal daytime concerts in the Hampshire County area. The repertoire consists of varied musical selections, drawn from the classical orchestra tradition, from the Baroque to the contemporary, as well as music representing world music traditions and popular music of the United States.

Symphonic Orchestra (670A)
Credits: 4
Prerequisite: An audition. Open to students in grades 10-12
The Symphonic Orchestra is a select ensemble open to students in grades 10-12 who play the violin, viola, cello or double bass. The ensemble performs three evening concerts each year. The repertoire consists of quality orchestra music from the 18th, 19th, 20th and 21st centuries, including concertos, movie scores.the finest music from the Baroque to the Contemporary periods. The student entering this ensemble must have played for at least one year in the Philharmonia or a similar orchestral ensemble. The student entering this ensemble should be able to perform music at the Grade IV or V level in accordance with the New York State Music Association Manual. Admission is based on an audition with the Director or participation in the Western District Senior Orchestra.

Computer, Technology and Engineering

Department Overview:

Computer, technology, and engineering electives are designed to prepare students to meet the challenges of an automated society in industry and post-secondary education in the information age. Broad-based content and transferable skills are emphasized, as well as the attitudes necessary to pursue educational and career goals. Development of skills in communications, problem solving, decision making, computer literacy, and career information are integrated throughout the curriculum.

Computer courses provide a general introduction to computer programming, web design, or computer graphics. Students who have a strong interest in computer programming or an area of study in which computers are extensively used should consider taking additional courses in the programming sequence. Students who wish to further expand their background in computer programming upon completion of our computer science sequence should consider the possibility of taking computer science courses at Amherst College or the University of Massachusetts while receiving credit through the ALP program at the high school.

Innovations Pathways Program in Advanced Manufacturing:

The Advanced Manufacturing Pathway is a DESE-designated career pathways program that prepares ARHS students for the modern manufacturing industry through courses, specialized training, professional development and career exposure (i.e. industry tours, speakers and internships). The ARHS Advanced Manufacturing Pathway allows students to build on their interests and make career connections outside of the classroom. Regardless of their skill level and experience, students are invited to choose and discover how the curriculum can prepare them for careers in this industry.

Explore all that ARHS has to offer in its Advanced Manufacturing Career Pathway program:

- Take ARHS courses in engineering & design, electronics, computer-aided design, computer science, manufacturing/fabrication and robotics
- Learn foundational and cutting-edge industry skills, i.e. creating 2D & 3D sketches, material & machine handling, building prototypes, reading blueprints, and developing project management skills
- Participate in diverse hands-on projects, internships, training and certifications you'll need to be ready for this in-demand industry
- Design a unique pathway, discover careers and join the growing number of young engineers, designers and technicians already advancing in this career pathway

Students take ARHS technical electives and complete advanced courses through Advanced Placement offerings in order to enhance the skills and foundational knowledge required for the industry. Opportunities to explore the industry through internships with local employers, certificates, company tours, guest speakers and field trips will uniquely enhance the pathway experience. In addition to coursework and internships, students in the Manufacturing Pathways program are trained in professional skills and gain access to enhanced supports for future planning. The courses, internships, and career experiences offered will be a blend of manufacturing, technology and engineering, providing ARHS students with the best preparation for the fast-evolving, diverse and collaborative work these careers will require.

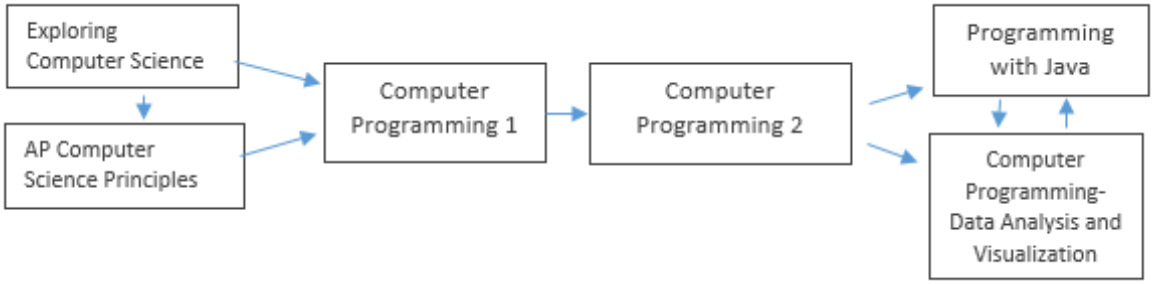
The Pathway invites a diversity of engaged students - students that are approaching the manufacturing, technology and engineering field from all levels of interest - and invites those willing to do what it takes to study and train for the industry. Interested students can speak with Computer Science & Engineering faculty, Innovation Pathways Coordinator or their School Counselors for help with accessing the interest form and signing up for an info session.

Due to the nature of the course sequence and program experiences, students are offered the opportunity to join the pathway program during their 9th or 10th grade year at ARHS. This program has *no additional costs* associated with it.

Must Take in Grade 9 or 10	Choose at least 1 additional technical course	Choose 2 advanced courses	Must Take in Grade 11 or 12	Must Take in Grade 12
Intro to Engineering & Design	● Intro to Electrical Engineering ● Intro to Robotics ● Engineering Graphics 1 (CAD 1) ● Engineering Graphics 2 (CAD 2)	AP Computer Science AP Environmental Science AP Biology AP Calculus AP Physics	Advanced Engineering & Design Engineering for Social Good	IP Senior Internship

Computer Science Sequence:

ARHS students start the computer science sequence by either taking AP Computer Science Principles (APCSP), a full-semester intensive computer science course, or Exploring Computer Science (ECS), a one-quarter computer science course, or Computer Programming 1 (*with permission of instructor*). From ECS students can either elect to go into AP CSP, which offers more exposure to the broad field of computer science, or go into Computer Programming 1 (CP1) where they will focus on learning to code in Python. AP CSP students will go directly into CP1; they do not have the option of taking ECS. From CP1 students will continue developing their coding skills in Computer Programming 2 and then can take Programming with Java and/or Computer Programming Data Analysis and Visualization in any order.



All engineering classes are interdisciplinary in nature and provide significant reinforcement of traditional academic classes. The strongest linkages are with science, mathematics and art. Most classes are presented using a problem-solving approach to better meet the needs of many learning styles. While all of the courses in the Technology Education program respond to the content and skills mandates of the Science and Technology/Engineering Frameworks, the Engineering & Technology classes most closely reflect the content in the state curriculum document. Students taking a series of courses can get started on a career path or build skills and knowledge at their own pace. All technology and engineering courses are activity and lab-based.

Career/Vocational Technical Education (CVTE) Certificate Program:

Students who complete three or more courses in one of our Career and Vocational Technical Education programs will earn a certificate of recognition.

To earn a certificate in **Radio and TV Broadcasting,** students must complete **all** of the following courses:

- Video Production (formerly Video & Audio Technology 1)
- Advanced Video Production
- Broadcast Journalism

To earn a certificate in **Engineering,** students must complete a minimum of **three** of the following courses:

- Introduction to Engineering and Design
- Introduction to Electrical Engineering
- Introduction to Robotics Engineering
- Advanced Engineering and Design
- CAD 1 Engineering Graphics 1
- CAD 2 Engineering Graphics 2
- Engineering for Social Good

Course Descriptions:

Video Production (520x)
Credits: 2
Prerequisite: None. Open to all students in grades 9-12
In this class, students will explore the media of digital sound and video to create stories and messages. Students will learn the basics of video camera operation; the art of cinematography; camera angles and movements; the use of sound mixers, microphones and sound editing. Students will produce an audio public

service announcement, a “how-to” video and a television commercial. All work is completed in groups of 2-3. This class may require some work outside of class, including homework, filming, and/or editing.

Advanced Video Production (520b)
Credits: 2
Prerequisite: Video Production or permission of the teacher. Open to all students in grades 10-12
This class offers students who already know the basics of cinematography, camera operation, lighting and sound equipment and editing. It is an opportunity to further develop shooting and editing skills through the production of portfolio pieces. Students will work on 2-3 in-depth activities individually or in pairs. The emphasis will be on the documentary and music video and the use of special effects and cinematographic and editorial storytelling techniques used in those genres. Students will learn how to use green-screen, compositing, as well as other special effects. This class requires work outside of class.

Broadcast Journalism (521)
Credits: 2
Prerequisite: Video Production
This class introduces students to “live” television studio production techniques. Students will plan and produce two thirty-minute news programs. Students will take on the roles of anchorperson, director, sound/lighting technician, camera operator, weather person or sportscaster. The program will include pre-recorded journalistic videos, such as news packages, reviews and human-interest stories. Time may be needed outside of class to complete projects. Curriculum will also cover broadcasting history and operations, media ownership, censorship, current issues in broadcast journalism, and will include a field trip to a local television station.

Computer Graphics (580)
Credits: 2
Prerequisite: None. Open to all students in grades 9-12
Students will learn the basics of Adobe imaging programs-- Photoshop and Illustrator. The course covers the tools, menus, and palettes for each application as students complete projects for both print and web-based media. Projects include print and web advertisements, graphical user interface, photo retouching, logo design, and vector artwork. The curriculum covers color theory, image layout, graphic design, marketing, typography and simple animation, among other topics.

Computer Animation (596)
Credits: 2
Prerequisite: Computer Graphics or permission of instructor.
Animation has been a loved medium since the early days of film. The technology has evolved from flip books through the modern Pixar movies. This class will explore the techniques used to bring still images to life through a variety of projects, from stop-motion videos to animated GIFs using Adobe Photoshop, AfterEffects and other software. Students will explore tweening, keyframing, and possibly motion capture or 3D, time permitting. No experience is necessary, but computer and/or artistic skills are highly recommended.

Web Design 1 (586)
Credits: 2
Prerequisite: None
This course introduces students to the fundamentals of website design and creation. Organization and navigational design, visual layout, and selection of material will be covered. Students will learn the Hypertext

Markup Language (HTML) and how to write Cascading Style Sheets. Students will design and create websites from a variety of perspectives including the personal, business and educational. This is a hands-on course that requires time at a computer workstation to fulfill all class project objectives. In order to succeed, students may have to spend time after school in a computer lab.

Web Design 2 (589)
Credits: 2
Prerequisite: Web Design 1. Open to students in grades 10-12.
This course is designed to expand and deepen the web design skills students developed in Web Design 1. The following topics will be covered: Advanced HTML, Professional Layout and Design, Advanced Cascading Style Sheets, as well as some Java Scripting. Students will participate in both personal and professional-quality projects. This is a hands-on course that requires time at a computer workstation to fulfill all class project objectives. In order to succeed, students may have to spend time after school in a computer lab.

Exploring Computer Science (590)
Credits: 2
Prerequisite: Successful completion of Algebra.
Exploring Computer Science (ECS) is intended for students with limited exposure to computer science. This course provides exposure to a wide range of computer science disciplines and aims to develop the confidence and interest required to take other computer science courses at the high school. Topics include human computer interaction, web design, computer programming, animation, and robotics. Exploring Computer Science teaches students the computational practices of algorithm design, problem solving, and programming within a context that is relevant to their lives.

AP Computer Science Principles (595)
Credits: 4
Prerequisite: Successful completion of Algebra, Algebra 8, Algebra 8+, or Integrated Math 1
Advanced Placement - Computer Science Principles (AP-CSP) is a one semester, rigorous, entry-level course that introduces students to the foundations of modern computing. The course covers a broad range of foundational topics such as programming, algorithms, the Internet, big data, digital privacy and security, and the societal impacts of computing. Students will build socially useful mobile apps. The course's AP "exam" is based 60% on the written test in May and 40% on the two projects that students complete during the school year.

Computer Programming 1 (591)
Credits: 2
Prerequisite: Successful completion of Algebra 1.
Computer programming is the world where creativity meets technology. You imagine something that you want the computer to do and then you teach the computer how to do it. Programming is both intriguing and challenging; you have to apply analytical reasoning in order to get your program to work. This introductory course builds understanding of fundamental programming concepts. Working with a partner, students complete lab activities to study the following topics: variables, repetition loops, lists, decision structures, and subroutines. They apply this knowledge to projects of their own design.

Computer Programming 2 (592)
Credits: 2
Prerequisite: Computer Programming 1

This course emphasizes cultivation of good programming habits and communication skills in a team programming environment. The curriculum focuses on important ideas in software engineering, such as documentation, testing and flexibility. Students will work both independently and in small groups to design projects, which may include games, animations, and other types of programs. With extensive use of user-defined types, students begin the transition to object-oriented thinking and prepare for higher level computer science courses.

Computer Programming with Java (5931)
Credits: 2
Prerequisite: Computer Programming 2 or B- or better in Computer Programming 1
This course introduces students to the object-oriented paradigm of computer science. Social responsibility and open-source programming are also major themes. Java topics we will explore include: variables, operators, control flow, arrays, methods and classes. Students will apply these concepts as they work on individual and team programming projects.

Computer Programming- Data Analysis and Visualization (594)
Credits: 2
Prerequisite: Computer Programming 2
This course explores "Big Data" and how to explore it and derive meaning from it. Students will write programs to build tools, such as interactive plots, that give themselves and others the ability to creatively explore and visualize the patterns in the data. They will also learn how to build databases to store and extract data, and to transform data into configurations more conducive to asking questions. There will be both individual and group projects.

CAD 1 Engineering Graphic 1 (5303)
Credits: 2
Prerequisite: None
This course will introduce students to AutoCAD 2022 through a series of practical, problem solving projects. They will learn how to operate the program and its features by producing a number of 2D and 3D models on the computer. Each project gets progressively more challenging, allowing students to build and hone their skills, culminating in an individual, final design project. The students will also learn the basics of drafting on paper with traditional drawing tools and equipment. This course is an ideal starting point for those students with an interest in design, architecture, manufacturing and engineering.

CAD 2 Engineering Graphic 2 (5304)
Credits: 2
Prerequisite - minimum B+ in CAD1 Fundamentals of AutoCAD/CAD 1 Engineering Graphic 1
This course builds upon the experience and skills gained in CAD 1. It requires students to be proficient in the basics of AutoCAD and drafting on paper while introducing devices like 3D printers, CNC machines and a Laser engraver/cutter. Students will design products in CAD that will be realized as 3D solid objects using the digital fabrication devices. Alongside AutoCAD, students will become familiar with the software controlling the devices and be responsible for setting up and managing them. This is an ideal class for students who have successfully completed CAD1 and want to extend their knowledge of digital fabrication for manufacturing and engineering.

Introduction to Engineering and Design (formally known as Mechanical Engineering) (5393)
Credits: 2
Prerequisite: None
This course will introduce students to engineering by engaging them in a number of individual and group problem solving projects. Most of the work in this class is practical/hands-on in nature and it establishes a great foundation for other engineering themed classes at ARHS. The course also introduces students to engineering problem solving and related conceptual skills and frameworks and skills. They will learn how to safely operate a variety of hand tools and machinery, select materials for specific purposes and work effectively in a very dynamic environment. Most of the projects will involve creating or controlling some kind of movement and will require ingenuity, creativity and teamwork to complete. The engineering lab is well equipped both with traditional machines and modern digital fabrication devices.

Introduction to Robotics Engineering (5382)
Credits: 2
Prerequisite: None
This course will introduce students to robotics by providing them with a practical, hands-on experience of designing, making, programming and testing robots. They will be using the Lego EV3 robotic system coupled with the Lego EV3 Classroom software which is basically Scratch. There is a wide variety of projects to complete that get more challenging as the course progresses. Students work in pairs as robot makers or programmers, support each other and build the skills required to solve daily problems. The robots are tested at the end of each challenge and grades are awarded based on the robot meeting its design requirements. The programming and the robots are both user-friendly so this class is a great way to get into robotics for those students with little or no experience.

Advanced Engineering and Design (5394)
Credits: 2
Prerequisite: Introduction to Engineering and Design (formally known as Mechanical Engineering)
Note: Preference will be given to Juniors and Seniors enrolled in the Innovations Pathways Program.
This Advanced Engineering and Design course is intended to provide high school students with a comprehensive understanding of modern design, manufacturing processes, technologies, and engineering principles. Students will engage in hands-on activities, projects, and theoretical studies to develop the skills and knowledge necessary for success in the advanced manufacturing industry. The course will cover topics such as materials science, computer-aided design (CAD), computer-aided manufacturing (CAM), robotics, quality control, and the integration of emerging technologies in manufacturing.

Introduction to Electrical Engineering (5372)
Credits: 2
Prerequisite: None
This course introduces students to the basic concepts involved in AC and DC circuits, static electricity, and the effects of resistance, capacitance, current flow, electromagnetism, induction, and batteries through a practical, project-based experience. The students will spend time modeling circuits both mathematically and on a breadboard before making their own circuit board and soldering in the required components. They will be learning how to use various test and measuring equipment as well as how to design and make their own circuits. An eye for detail, an interest in technology, good math skills and an ability to work on a very small scale are crucial. This class is a great compliment to our engineering, robotics and CAD classes.

Engineering for Social Good (5402)
Credits: 4
Prerequisite: Introduction to Engineering and Design (formally known as Mechanical Engineering)
Note: Preference will be given to Juniors and Seniors enrolled in the Innovations Pathways Program.
Engineering for Social Good is a multidisciplinary, project-based course that engages students in identifying, conceptualizing and engineering solutions to local school or community-based problems. Students will begin with learning empathic approaches to identifying needs in their community, through listening-oriented community interviews. From these interviews, students will identify a problem in their school or community that they are capable of engineering a solution for. They will then go through the engineering process to design, build, and implement a solution to address the problem, reflecting real-world best-practices. Examples of possible projects include: improving the energy efficiency of the school, reducing food waste in our cafeteria, and improving the accessibility of our school to students with disabilities.

Special Education & Intervention

Academic Skills (8011A)
Credits: 2 credits per semester
The Academic Skills course develops executive functioning, academic and transition skills to enable achievement in high school and postsecondary settings. Academic Skills uses specialized academic instruction in math, reading, and writing, along with an executive functioning and transition curriculum to address areas of individual need aligned to the ARHS content curriculum. Students are taught to self-monitor, self-advocate, appropriately plan for completion of all assignments, and to create a post-high school plan. Academic Skills will offer the opportunity to check in with Special Education teachers and receive targeted interventions based on Individualized Education Plan (IEP) goals. Students should still plan to complete homework outside of school as there is not enough time in Academic Skills to complete all assignments in that setting.

Students are assessed based on participation in class activities and on-going work with building self-advocacy skills.

SSP Academic Skills (8004A) (Student Support Program)
Credits: 2 credits per semester
Students work both collaboratively and independently with their teacher to develop a toolbox of strategies and coping mechanisms in order to gain greater access to the curriculum. Students are taught to self-monitor, self-advocate, appropriately plan for completion of all assignments, and to create a post-high school plan. Academic Skills will offer the opportunity to check in with Special Education teachers and receive targeted interventions based on Individualized Education Plan (IEP) goals. Students should still plan to complete homework outside of school as there is not enough time in Academic Skills to complete all assignments in that setting. Students will receive a grade of pass/fail, assessment will be based on participation in class activities and on-going work with building a toolbox of coping strategies.

AIMS Academic Skills (8002E) (Academic Individualized Mainstream Support)
Credits: 2 credits per semester
In addition to the Academic Skills course description above, this class delivers highly individualized instruction and support for students on the Autism Spectrum in self-management, social navigation, communication, and transition to adulthood.

ILA Academic Skills Class (853E) (Integrated Language Arts)
Credits: 2 per semester
In addition to the Academic Skills course descriptions above, this class uses specialized academic instruction in reading and writing to address areas of individual need aligned to the ARHS content curriculum. Students will receive targeted interventions based on Individualized Education Plan (IEP) goals, especially reading intervention.

Integrated Language Arts 9A and 9B (875D and 875E)/10A and 10B (876D and 876E)
Credits: 4 English/4 Elective
The Integrated Language Arts course incorporates systematic, multi-sensory approaches to delivering standards-based instruction and curriculum that supports language development. ILA mirrors the general education curriculum but is modified in pace and level and tailored to meet the individual learning needs of its students. The reading curriculum encompasses fiction, nonfiction, poetry, and dramatic text with an emphasis

on depth and a slower pace to allow for explicit instruction in reading comprehension skills, vocabulary growth and improved reading fluency. Instruction on analytic writing skills is woven throughout the study of literature and students are encouraged to improve their independent writing abilities as well as their comfort in utilizing assistive technology. Students are challenged to reach their goals in English Language Arts as dictated by their IEPs as well as to push themselves in the areas of self-advocacy and academic esteem.

Topics in English Literature 9/10 (8181)
Topics in English Literature 11/12 (8182)
Credits: 4
Topics in English Literature supports development of reading comprehension, foundational writing skills, literary concepts, and listening and speaking skills through substantially modified curriculum and instruction. The reading curriculum encompasses fiction, nonfiction, poetry, and dramatic text with an emphasis on comprehension and occasionally some analysis. The class runs at a slower pace to allow for explicit instruction in reading comprehension skills and vocabulary growth. There is opportunity for flexible pacing, substantial modification, focused attention, and support on lessons, with significant instructional time dedicated to repetition and practice around foundational language arts skills. Writing and reading assignments will be completed in a highly scaffolded classroom environment.

Topics in Global History 1 (819C)
Credits: 4
This one semester course in global history is designed to acquaint students with a variety of world cultures. Students focus on developing reading of nonfiction texts, writing skills as well as test taking and study skills. The format of this course will stress hands-on projects as well as structured reading and writing assignments. Most of the projects and writing assignments will be completed in class, but regular homework will also be assigned. This class provides substantial teacher assistance with writing and reading as well as organizational skills.

Topics in US History (836A)
Credits: 4
This one semester course in United States history is organized thematically that will focus on the following themes. The format of the class will stress projects and hands-on assignments as well as structured reading and writing assignments. Most of the essay writing assignments will be completed in class, but regular homework will also be assigned. This class provides substantial teacher assistance with writing and reading as well as organizational skills.

Topics in Consumer Economics (8481)
Credits: 4
This one semester financial literacy course teaches students how to make wise financial decisions to promote financial well-being over their lifetime. The course teaches basic skills in understanding our financial system, including personal debt, money management, taxes, banking, financing post-secondary education choices, independent living skills and learning rights as a consumer and workplace rights. The class provides substantial teacher support with reading, writing, and creating projects. There is an emphasis on needed real life skills.

Topics in Mathematics 1 (8202)
Credits: 8
This first year of the intervention math sequence offers students opportunities to strengthen their number sense, their understanding of operations, their fluency with math facts and calculations, and their ability to apply mathematics to real life situations. In Topics in Math 1, students engage in intensive work with fractions and decimals, operations on fractions and decimals, and positive and negative numbers. An online portal provides students with extra practice on the concepts and skills they are learning in class. Emphasis is on mastering the concepts and skills necessary to move forward towards the Algebra/Geometry sequence. Academic work in mathematics is supplemented with instruction in and practice of math skills related to activities of daily living (i.e., financial literacy, time, measurement, etc.).

Topics in Mathematics 2 (8204)
Credits: 8
This second year of the intervention math sequence offers students additional opportunities to strengthen their number sense, their understanding of operations, their fluency with math facts and calculations, and their ability to apply mathematics to real life situations. In Topics in Math 2, students work on proportional reasoning including rates, ratios, and percentages, and move on to work with linear relationships. An online portal provides students with extra practice on the concepts and skills they are learning in class. Emphasis is once again on mastering the concepts and skills necessary to move forward towards the Algebra/Geometry sequence. Academic work in mathematics is supplemented with instruction in and practice of math skills related to activities of daily living (i.e., financial literacy, time, measurement, etc.).

Topics in Mathematics 3 (8209)
Credits: 4
This third course of the intervention math sequence offers students additional opportunities to strengthen their number sense, their understanding of operations, their fluency with math facts and calculations, and their ability to apply mathematics to real life situations. In Topics in Math 3, students work on understanding and calculating percent increases and decreases in consumer settings, calculating interest rates, calculating and using statistical measures of central tendency, using algebraic formulas to solve word problems and understanding the use of graphs or data samples in persuasive advertising. Emphasis is once again on mastering the concepts and skills necessary to move forward towards the Algebra/Geometry sequence.

STEPs Program: The STEPs program is a substantially separate classroom designed to meet the needs of the students placed there through the IEP team process. The program is supported by a lead teacher, subject area co teachers who provide instruction in the program, a shared clinician, a therapeutic para, and additional paras as needed.

<u>The following courses are offered in the Steps Program and are only open to students in the program. The curriculum and instruction include multimodal learning, adaptive pacing, and individualized assignments as needed.</u>

Issues in Math (86041)
Credits: 4
This one semester block course is designed to provide varied and individualized instruction to students in a range of math topics from pre-algebra to Algebra 2. The course work is modified to meet the students at their instructional level and engage them in short lessons and independent work at their own pace.

Issues in Biology (86031)
Credits: 4
This one semester block course follows the state frameworks to prepare students for both the MCAS test and future science courses in high school. Hands on learning and visuals are emphasized. Students receive integrated support to complete assignments and organize a portfolio of work. Topics of study include the basic properties of living things, macromolecules, cells and cell processes, DNA, protein synthesis, genetics, natural selection and evolution.

Issues in English (86021)
Credits: 4
This one semester block course provides an individualized English curriculum which values student choice and interest. The course is designed to meet each student at their instructional level and supports development of reading comprehension, foundational writing skills, literary concepts, and listening and speaking skills through substantially modified curriculum and instruction.

Issues in US History (not offered 24/25)
Credits: 4
This one semester course in United States history will focus on issues in US History thematically looking at social movements, US growth at home and abroad, War and Peace, and the immigrant experience. The format of the class will stress projects and hands-on assignments as well as structured reading and writing assignments. The essay writing assignments will be completed in class. This class provides substantial assistance with writing and reading as well as organizational skills.

Issues in Consumer Economics (86061)
Credits: 4
This one semester financial literacy course teaches students how to make wise financial decisions to promote financial well-being over their lifetime. The course teaches basic skills in understanding our financial system, including personal debt, money management, taxes, banking, financing post-secondary education choices, independent living skills and learning rights as a consumer and workplace rights. The class provides substantial teacher support with reading, writing, and creating projects. There is an emphasis on needed real life skills.

Issues in Democracy and Your Rights (not offered 24/25)
Credits: 4
This one semester course will focus on the founding of the American government and how to compare to other forms of government, the Constitution and the rights and responsibilities of citizens in a democratic society. In addition, the roles of political parties, campaigns & elections, public opinion, and the media will also be covered.

Pathways to Independence Program (PIP):
The Pathways to Independence Program (PIP) is a specially designed program for students requiring a significant level of support in planning for their transition into adulthood to become contributing members of their community. The embedded transition services are a coordinated set of activities that are based on the student's needs and that take into account individual preferences and interests. The three focus areas for transition service delivery are: preparedness for postsecondary education and training, employment and vocational skills, and community linkages and independent living skills. Person-Centered-Planning and self-determination are at the core of the program, beginning in 9th grade and carrying through 12+.

The following Pathways to Independence courses offer significantly modified curricula, aligned to Massachusetts Curriculum Frameworks, using evidenced-based curriculum. All courses are semester based, earn 4 credits per semester, and are assessed by pass/fail grading.

Independent Living/Vocational Skills (8801)
Credits: 4 credits per semester
This course encompasses the development of skills in self-determination as it relates to living independently and gaining pre-employment skills necessary to engage in supportive or competitive employment. Skill development focuses on those necessary for healthful living, including indoor and outdoor safety, food preparation and healthy eating, home and workplace cleanliness, personal care and grooming, vocational awareness, and leisure skill development. The course may include travel training on the PVTA bus system, meal planning, shopping, money management, work-based experience, time management, adult agency linkages, and leisure activity interest exploration. Individual programming is tailored to interest and ability and functional academic and communication are embedded into all activities.

Functional Academics (8101)
Credits: 4 credits per semester
This course is designed to build fundamental reading, writing, mathematics and communication skills that students will use in their transition to adult life. Topics in literature, current events, geography, measurement, money management, estimation, data collection, and computer literacy are infused with functional applications that are highly differentiated to each student's ability. Curricula include News2You, Unique Learning, Money Math, Teachtown Encore, and Edmark Reading. Students work on individualized goals in both small group and structured 1:1 setting.

Social Skills (833)
Credits: 4 credits per semester
This course focuses on skill development related to communication, perspective taking, teamwork, community building, boundaries and relationships, confidence, self-advocacy and self-determination, self-regulation, critical thinking and creative thinking. Students use the Whole Selves curriculum to identify different types of relationships and expected behaviors and boundaries for each relationship type.

Unified PE (8706)
Credits: 2 credit per quarter
Inclusive Physical Education class for students in the Pathways to Independence Program. Students will work with general education peer mentors through social skills such as friendship development as well as physical sport and fitness related skills.

Unified Performing Arts (8707)
Credits: 2 credit per quarter
Inclusive Performing Arts class for students in the Pathways to Independence Program. Students will work with general education peer mentors through social skills such as friendship development as well as theater and other creative skills.