

Ayer Shirley Regional High School



Program of Studies 2022 – 2023

141 Washington Street
Ayer, MA 01432
Phone: 978-772-8600
Fax: 978-772-8615
www.asrsd.org

TABLE OF CONTENTS

LETTER FROM THE ADMINISTRATIVE TEAM	3
DISTRICT VISION STATEMENT	3
STATEMENT OF ACCREDITATION	4
DISTRICT CORE BELIEFS	4
PROMOTION AND GRADUATION CRITERIA	4
DUAL ENROLLMENT	7
PARTNERSHIP OPTIONS FOR COURSE CREDIT	8
COURSE LEVELS	9
RECOMMENDED PATHWAYS OF STUDY	9
COMPUTER EDUCATION	12
ENGLISH	14
FINE/VISUAL ARTS	17
HEALTH/PHYSICAL EDUCATION	19
MATHEMATICS	21
MUSIC	24
SCIENCE	25
COMPUTER SCIENCE	30
HISTORY AND SOCIAL SCIENCE	32
WORLD LANGUAGE	35
SPECIAL PROGRAMS	37
ADAPTIVE AND STRUCTURED LEARNING CENTERS	39
SCHOOL COUNSELING PROGRAM	43
COLLEGE & POST SECONDARY PLANNING	44
STANDARDIZED TESTING	43
TIMELINE FOR THE COLLEGE APPLICATION PROCESS	46

LETTER FROM THE ADMINISTRATIVE TEAM

Dear Students and Families:

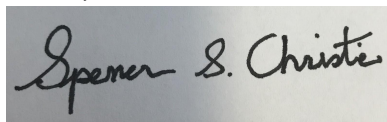
The 2022-2023 Ayer Shirley Regional High School Program of Studies is designed to be your guide to the many incredible academic experiences here at ASRHS. In this document, you will find a variety of courses and Pathways that are designed to meet the needs of a modern learner. Please read through this document carefully and choose courses that will both fit your needs and allow for true and personalized learning experiences.

Perhaps the most important aspects of this document are the conversations that will happen around the choice of courses and the focus on the needs of each individual student. Talking with your school counselor, teachers, and families as you decide which courses are a correct fit is paramount in this decision-making process.

Students will meet with their teachers and counselors in late winter to discuss appropriate placements for the following year. Through these meetings, students and teachers will discuss how a student may best find avenues to success through the list of courses that are offered. As students navigate through their course selections, they should consider their career pathways and how they will experience success at school.

At Ayer Shirley Regional High School, there are many ways that students find success, and none of them are mutually exclusive. Our students excel in the classroom, on stage, on our athletic fields, and in the art and music rooms. We implore our students to challenge themselves, and make decisions in their best interests. We wish all of our students the best of luck in the upcoming school year.

Sincerely,



Spencer S. Christie
Principal



Dr. Miriam Meyer
Assistant Principal

DISTRICT VISION STATEMENT

Our vision is to connect, engage, and inspire all students in the Ayer Shirley Regional School District to reach academic excellence. We, the educators of the Ayer Shirley Regional School District, will instill habits of reflection and inquiry to challenge our students in setting ambitious academic and personal goals. Students will develop a strong voice to express their thoughts and ideas in the community, and the confidence to showcase their talents and successes in preparation for entry into college and the world of work. 2014

DISTRICT MISSION STATEMENT

Learn ~ Grow ~ Explore ~ Connect ~ Collaborate ~ Communicate

The mission of the Ayer Shirley Regional School District is to educate - and to graduate - all of our students, and to foster a safe and respectful environment where each student develops the skills, character, and values needed to become a productive member of the global society. 2011

HIGH SCHOOL VISION STATEMENT

It is the mission of Ayer Shirley Regional High School, in partnership with parents and community members, to develop self-motivated, life-long learners, who are active and productive contributors to their communities, and who respect one another and honor diversity. In a safe environment, the school will promote an atmosphere of academic excellence, provide opportunities for students to be challenged, and meet the learning needs of all.

STATEMENT OF ACCREDITATION

ASRHS is accredited by the New England Association of Schools and Colleges, Inc., NEASC, a nongovernmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering postgraduate education.

Accreditation by the NEASC is not partial, but applies to the institution as a whole. As such, it is not a guarantee of the quality of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution. Inquiries regarding the status of an institution's accreditation by the NEASC should be directed to the administrative staff of the school or college. Individuals may also contact the Association via mail at:

New England Association of Schools and Colleges, 209 Burlington Road, Bedford, MA 01750-1433 or via telephone at 617-271-0022.

DISTRICT CORE BELIEFS

- We have high expectations for all students.
- Every student deserves a quality education.
- We believe in a personalized learning environment.
- Successful students are independent thinkers and doers, and persevere in finding solutions to problems.
- An educated child is one who has developed and evolved as a “whole child” – in the academic, social, emotional, personal and cultural domains.
- Habits of reflection, setting goals, and measuring one's progress support lifelong learning.
- Respect for self, property, and others are essential to a healthy learning community.
- Psychological and physical safety are necessary conditions for learning.
- Service to others builds character, is supportive of personal growth and career development, and connects students to the real world.
- Educators, students, families, and communities collaborating together results in high quality educational programming.

PROMOTION AND GRADUATION CRITERIA

Promotion from grade to grade is determined by credits earned through successful completion of scheduled courses. Credits are allotted on the basis of the amount of time that a class meets.

Students will be required to take a full academic load eliminating free periods. The number of credits listed below must be earned prior to the beginning of the school year in order for a student to be promoted to the next grade level. Students must earn 30 credits for promotion from grade nine to ten, 65 credits for promotion from grade ten to eleven, 105 credits for promotion from grade eleven to twelve, for a total of 135 credits in order to meet the local graduation requirement.

In addition to local graduation requirements, Competency Determination (CD) is a requisite for high school graduation under Massachusetts' state law, which requires students to demonstrate mastery of a common core of skills, competencies, and knowledge in the areas of Mathematics, English Language Arts, and Science & Technology/Engineering as measured by the MCAS exam. Competency Determination is achieved by students earning a score of “proficient” on each of the above mentioned MCAS exams. Students who pass MCAS but do not reach

proficiency will be placed on an Educational Proficiency Plan. This plan allows students to reach proficiency and complete all the ASRHS graduation requirements simultaneously.

Students transferring to ASRHS who have successfully met the standards of their previous school will have credits transferred in order to meet the requirements of Ayer Shirley Regional High School. It will be necessary for these students to meet ASRHS requirements from their date of entry. Transfer students will be ranked after two semesters of attending ASRHS. Students participating in dual enrollment are not included in class rank and GPA. Rank and GPA for dual enrollment students are based on the courses completed at Ayer Shirley Regional High School.

GRADE POINT AVERAGE

Grade point averages are based on grades and on the weight assigned to these grades according to the course difficulty level. Student grades, whether numeric or letter grades, are converted to a grade point value according to the chart below. A student's GPA is a part of his/her transcript and permanent record and is adjusted only as final grades are earned and credits are awarded at the end of the school year. Mid-year or third quarter updates are based upon quarter grades for year-long courses and includes final grades of semester courses.

Letter Grade	Numeric Grade	College Prep (+0)	Honors + CC (+0.5)	AP (+1)
A+	97-100	4.0	4.5	5.0
A	93-96	3.7	4.2	4.7
A-	90-92	3.5	4.0	4.5
B+	87-89	3.33	3.83	4.23
B	83-86	3.0	3.5	4.0
B-	80-82	2.67	3.17	3.67
C+	77-79	2.33	2.83	3.33
C	73-76	2.0	2.5	3.0
C-	70-72	1.67	2.17	2.67
D+	67-69	1.33	1.83	2.33
D	63-66	1	1.5	2.0
D-	60-62	0.67	1.17	1.67
F+	50-59	0	0	0
F	49 or below	0	0	0
NG	No Grade due to lack of attendance		Not included in the GPA Calculation	
SS				
I	Incomplete			
M	Medical			
W	Withdrawn			
P	Pass			

COMMUNITY SERVICE PROGRAM

Community service encourages students to become valuable resources to their communities through active participation in service programs and activities. As students look to become involved members of their communities, they can find ways of helping others, dedicating themselves to a cause and providing support for others. Students will fulfill 50 hours of community service as a requirement for commencement. This requirement will be prorated for students entering ASRHS after their sophomore year. Students will work collaboratively with their School Counselors to find appropriate placements and opportunities within the community. Community service can be completed after school, on weekends, on vacations, and during the summer following grades 9, 10, and 11 and 12. Booklets are available on the ASRHS website.

NAVIANCE

Ayer Shirley Regional High School has partnered with Naviance, an online software program, to provide a variety of tools for achievement through academic, career and college planning. These tools are located in *Naviance Student*, a special section of the Naviance website for students and families. *Naviance Student* provides access to online resources, facilitates communication with teachers and school counselors, and provides support to students as they complete college and career readiness activities such as completing a resume, requesting letters of recommendation, searching for colleges/careers, or applying for scholarships. Families will be provided with information at the start of the school year to establish secure *Naviance Student* user accounts.

GRADUATION REQUIREMENTS

The MassCore is a state recommended rigorous program of study that aligns high school course work with college and workforce expectations. ASRHS is striving for all students beginning with the graduating class of 2020 and beyond to meet both ASRSD and MassCore requirements. In addition, students are also required to meet the Competency Determination (CD) under Massachusetts' state law, which requires students to demonstrate mastery of a common core of skills, competencies, and knowledge in the areas of Mathematics, English Language Arts, and Biology or Science & Technology/Engineering as measured by the MCAS exam. Competency Determination is achieved by students earning a score of "proficient" on the Mathematics and English exams, and a score of "passing" on the Biology or Science & Technology/Engineering exam. Students who pass MCAS but do not reach proficiency will be placed on an Educational Proficiency Plan. This plan allows students to reach proficiency and complete all the ASRHS graduation requirements simultaneously.

Area of Study/Subject	ASRHS	MassCore
English	4 years	4 years
Math	4 years***	4 years
Science	4 years (3 lab-based) *, ***	3 years lab-based
History/Social Science	4 years	3 years
World Language	2 years**	2 years**
Fine Arts (visual, music, etc.)	1 year	1 year
Financial Literacy/Dollars and Sense	1 semester	N/A
Computers	1 year	N/A

Physical ¹ Education/Wellness	4 semesters (1 semester per year, 4 semesters total)	As required by state law, (M.G.L. c. 71, s. 3)
Additional Learning Opportunities	<ul style="list-style-type: none"> ● Advanced Placement classes ● Dual enrollment/middle college ● Senior Capstone ● Online courses for high school or college credit ● Service or work-based learning ● Internship/externship 	<ul style="list-style-type: none"> ● Advanced Placement classes ● Dual enrollment/middle college ● Senior project coursework ● Online courses for high school or college credit ● Service or work-based learning
Community Service	50 hours community service	

Typically, college and universities require a year each of the following: **Biology, Chemistry, and Physics.*

***Students must take two years of the **SAME** world language.*

****Students may substitute one unit of **Computer Science** that includes rigorous mathematical concepts, or rigorous scientific concepts, and aligns with the Digital Literacy and Computer Science standards for a mathematics or a laboratory science course.*

DUAL ENROLLMENT

Dual enrollment is an arrangement in which a high school student takes college courses. These courses can result in receiving college credit while still in high school. Courses should count toward Ayer Shirley Regional High School graduation requirements and the credits transfer with the student to college.

There are several benefits of dual enrollment. Dual enrollment challenges students with college-level coursework, eases the college transition, decreases the cost of college, fosters college aspirations, and can improve college outcomes.

Ayer Shirley Regional High School supports dual enrollment opportunities for juniors and seniors. Students must meet eligibility requirements, follow the dual enrollment procedure, and obtain approval for all classes by their School Counselor and an Administrator.

General Eligibility Requirements:

1. The student must be promoted out of tenth grade.
2. The student must be at least sixteen years old.
3. The student must have met all MCAS requirements in the given subjects.

ASRHS Dual Enrollment Procedure:

1. The student should meet with their School Counselor to express interest.
2. The School Counselor determines whether the request requires approval.
3. The School Counselor creates a plan and reviews it with the student and parents.
4. The School Counselor helps to complete the dual enrollment registration form.
5. The student and parent sign and submit the dual enrollment agreement.
6. The student registers for class with the college and completes it successfully.
7. The student releases the grade to ASRHS to receive ASRHS credit.

Ayer Shirley Regional High School often partners with Mount Wachusett Community College (MWCC) and Fitchburg State University (FSU), although other options are available. Please see your School Counselor for more information.

State colleges sometimes receive grants specifically for dual enrollment and are consequently able to offer courses at a discounted rate. These grants may have a GPA requirement. Be sure to ask colleges/universities about financial support when investigating dual enrollment options. Specific colleges/universities may have additional requirements. Please note that only courses taken at ASRHS as part of Dual Enrollment count towards ASRHS GPA.

For current dual enrollment students, Mrs. Sweetland will continue to work with your current college as needed, as well as potential colleges/universities on the courses which will transfer. No student is expected to graduate from a college/university this year.

For students interested in dual enrolling for next year, please contact Mrs. Sweetland at ksweetland@asrsd.org or Mr. Melanson jmelanson@asrsd.org for updated information.

SEAL OF BILITERACY

- Does your student speak, read, and write another language? (At home? In the community? In the classroom?)
- Is your student a junior or senior?
- Is your student in a level 4, 5, or AP Language class?

We are starting a program at the high school called the "Seal of Biliteracy". You can earn the Seal of Biliteracy if you can read, write and speak in English and another language. It does not have to be a language that you learned in school or that we offer. All languages are accepted and you can earn it in more than one.

Should your student meet all of the requirements the student will get a seal on their HS diploma stating that they are bilingual. This will be valuable for college and the workforce.

PARTNERSHIP OPTIONS FOR COURSE CREDIT

EDGENUITY

Edgenuity partners with schools and districts around the country to deliver blended learning through core courses, credit recovery, and supplemental instruction. The goal is to ensure students and teachers have access to engaging resources that propel success and meet students' diverse learning needs. Pairing online curriculum and real-time data with teacher-led instruction makes it possible to truly personalize learning for every student.

The successful Edgenuity student is self-motivated, a hard worker, tech savvy, and has the ability to work independently. ASRHS students can take their Edgenuity course as part of their course schedule during the day at ASRHS. A computer area has been established in the library for students enrolled in Edgenuity.

Students should see their school counselor if interested in taking an Edgenuity course. Registration is done on a first come, first served basis, and space is limited.

MOUNT WACHUSETT COMMUNITY COLLEGE (MWCC) MIDDLE COLLEGE PROGRAM

Students become eligible to enroll in MWCC courses in their junior and senior year. Students must have a 3.0 GPA and be in good academic standing. They must also obtain a proficient score on the Accuplacer (a placement exam which assesses college readiness in English – reading and writing, and math) and is required by MWCC in order to receive college credit.

DUAL ENROLLMENT & COLLEGE CREDIT

Students have the option of taking courses at local colleges while enrolled at ASRHS. College courses may be used for ASRHS graduation requirements with prior approval by the ASRHS Counseling Department. Each 3 credit college course is equal to 5 credits at ASRHS. College courses are on a self-pay basis; however, opportunities for dual enrollment may be available depending on state funding. Students should make arrangements through their counselor if interested in this option.

COURSE LEVELS

ACADEMIC COURSES

These courses are appropriate for all learners and are not considered college preparatory. Students are expected to have basic study habits and work at a steady pace.

COLLEGE PREPARATORY COURSES

The content and rigor prepares students for a post-secondary college level education. These courses are more intensive and demanding than academic courses. Students are expected to exhibit good basic study skills, consistent homework completion and work at a moderate pace.

HONORS COURSES

Honors level classes are rigorous, intensive, challenging courses where students are expected to be independent learners as well as exercise critical, creative and analytical thinking skills and work at an accelerated pace. Students are expected to have teacher recommendation in order to enroll in honors level courses. These courses are identified with the “H” code in the program of studies.

MOUNT WACHUSETT COMMUNITY COLLEGE (MWCC) COURSES

MWCC courses offered and taught at ASRH are rigorous college level classes in which students can begin earning college level credit. These courses follow the traditional college schedule .

ADVANCED PLACEMENT COURSES

Advanced Placement (AP) courses are designed to instruct students at a college level and prepare them for the Advanced Placement subject exams in the spring semester. Colleges and universities determine what score students must earn to have the AP course accepted at their institution. AP courses are most rigorous and students are expected to have exceeded the honors course level expectations to enroll in the courses. In the event an AP course is taught concurrently with an honors course, AP students will be expected to complete additional assignments in greater depth than the honors students. These courses are identified with the “AP” code in the program of studies. **Students who elect to take AP courses are required to take the AP exam for that course.**

RECOMMENDED PATHWAYS OF STUDY

In an effort to assist students and parents/guardians in understanding the options that ASRHS has to offer, we have established five pathways of study for graduation that students may select as a primary focus area: Mass Core, Honors/Early College/AP, STEM, Humanities and Early Childhood. Within each recommended pathway of study there are a variety of rigorous core academic courses from which students may choose with the assistance of their parents/guardians in consultation with their school counselor. These pathways are intended to meet the individual interests of students. Students are able to choose a recommended pathway of study or modify their course of study throughout their high school experience. Please note that there are other required courses/criteria that must be successfully completed in order to meet promotion and graduation requirements. Please see ASRHS graduation requirements for additional information.

MassCore

Strongly recommended by the Massachusetts Department of Elementary and Secondary Education for all high school students to complete.

9th GRADE	10th GRADE	11th GRADE	12th GRADE
Humanities English I CP	Humanities English II CP	American Literature CP	World Literature CP
Humanities U.S. History I CP	Humanities U.S. History II CP	Modern World History CP	U.S. Government CP
Integrated Math I CP or Integrated Math II CP	Integrated Math II CP or Integrated Math III CP	Integrated Math III CP or Advanced Mathematical Applications	Advanced Mathematical Applications, Advanced Algebra, Statistics H or AP
Biology CP	Chemistry CP	Physics CP	Science Elective
World Language	World Language	Elective	Elective or Senior Seminar

HONORS/AP/EARLY COLLEGE

9th GRADE	10th GRADE	11th GRADE	12th GRADE
Humanities English I H	Humanities English II H	American Literature H or AP Language and Composition	World Literature H or AP Literature and Composition
Humanities U.S. History I H	Humanities U.S. History II H	Modern World History H & Sociology H & Psychology C.C.	U.S. Government H or AP Government
Integrated Math I/II H or Integrated Math II H or Integrated Math II/III	Integrated Math II/III H or Integrated Math III H	Pre-Calculus H or AP Statistics	Statistics H, AP Calculus AB or BC or AP Statistics
Biology H	Chemistry H	AP Chemistry, AP Biology, AP Physics 1 or Physics H	AP Physics, Physics H or AP Biology
World Language	World Language	AP Computer Science Principles	Elective or Senior Seminar

*Students are able to enroll in AP classes, early college, or dual enrollment courses for college credit.

STEM

9 th GRADE	10 th GRADE	11 th GRADE	12 th GRADE
Principles of Engineering I or Computer Programming	Principles of Engineering I or Principles of Engineering II	CAD I Principles of Engineering II AP Computer Science Principles	CAD I CP CAD II CP AP Physics, Physics H Dollars & Sense Senior STEM Internship

HUMANITIES

Concentration	9 th GRADE	10 th GRADE	11 th GRADE	12 th GRADE
World Language	World Language 1 or World Language 2	World Language 2	World Language 3H	World Language 4H AP World Language
Studio Art	Visual Problem Solving or Drawing CP	Studio Art I	Studio Art II	Studio Art Portfolio H
Digital Art	Visual Problem Solving	Photo Video I or Computer Art and Design I	Photo Video II or Computer Art and Design II	Digital Studio Portfolio
Music	Band/Choir	Band/Choir	Band/Choir Music Theory I	Band /Choir Music Theory II

EARLY CHILDHOOD

Proposed courses will be held onsite at the Ayer Shirley Regional High School.

Practicums will be served in preschool classrooms at the Page Hilltop School.

	Semester I	Semester II
9 th Grade	Humanities I	Humanities I
10 th Grade	Humanities II	Humanities II
11 th grade	Introduction to Psychology 3 credits MWCC Note-currently taught at HS by MWCC instructor. No articulation agreement is required to earn college credit.	ECE 101 3 credits MWCC Introduction to Early Childhood Education course description, syllabus and curriculum units are attached. *MWCC recommends an ASRHS teacher to apply to be certified by MWCC to teach this

		course using MWCC course content and recommended text, No articulation agreement required
12th grade	Practicum I 4 credits (150 hrs- 10 hrs per week for 15 weeks) *Articulation agreement required to earn college credit ** Security Clearance Required	Practicum II 4 credits (150 hrs- 10 hrs per week for 15 weeks) *Credits to be awarded upon enrollment in MWCC's Early Education degree program

*Formal articulation agreement to be written by Linda Scullane and submitted for approval to Dr. Roseann Morel, Department Chair and Professor of Early Childhood Education, MWCC (Articulation agreement estimated to be confirmed in late January as college is on break until January 22, onsite visit to preschool classrooms may be required).
**Students participating in Practicum field experiences must undergo a Criminal Offender Record Information (CORI) check.

COURSE DESCRIPTIONS

The following course descriptions have been prepared to assist and guide students and parents in the selection of those subjects best suited to meet their individual needs, abilities, and objectives. Each student is expected to develop a four-year plan with the aid of his/her parents, teachers, and counselor. Attention should be given to interests and preferences, in order to ensure that a student's program fulfills his/her future occupational needs as well as graduation requirements, course prerequisites, and other considerations. The courses described below are a complete list of the courses offered by the high school; courses run based on interest and enrollment numbers each year.

Please note: For all course descriptions, S = Semester, Y = Year,
CP = College Preparatory, H = Honors, and AP = Advanced Placement

COMPUTER EDUCATION

WEB DESIGN

CRS 1642 GR 10-12 CR 2.5 S

In this class, students will learn the basics of designing and developing a web site. Topics will include the Internet, web design planning and navigation, web design principles, interactivity, and site management. Students will become familiar with Cascading Style Sheets.

COMPUTER APPLICATIONS

CRS 1652 GR 10-12 CR 2.5 S

This course is designed to help students acquire software application skills they can apply in classroom and professional settings. Students will use MS Office software to create word processing documents, spreadsheets, presentations, and simple databases. In addition, students will learn about the Google suite of products and extensions.

CRS 1635 GR 9-12 CR 2.5 S

SOCIAL MEDIA

Students will explore how social media has changed communication, how it can affect one's future, and how to use social media to its fullest advantage – personally and professionally. Additionally, students will learn the history of social media, as well as, legal and ethical responsibilities of developing and maintaining an online presence.

INTRO TO ANIMATION

CRS 1640 GR 10-12 CR 2.5 S

Students will learn tools and techniques to create animation sequences on the computer. They will learn how to create basic frame-by-frame animations and motion tweened animations.

DIGITAL ILLUSTRATION

CRS 1644 GR 10-12 CR 2.5 S

Students will produce a number of illustrations, using computer illustration and imaging software. Topics include methods for remaining artwork, capturing and expressive illustrative style, and portraying different moods or messages

within the illustration. Students will learn to illustrate using the many tools available to them within several software applications from the Adobe Creative suite. Drawing skills required.

COMPUTER LANGUAGES **CRS 1655** **GR 10-12** **CR 2.5** **S**

This course introduces students to how their computer “thinks,” as well as the art of programming. They will be introduced to different computer languages, i.e., Scratch, HTML, and CSS, and will gain hands on experience with programming and coding through several in-class projects.

ADVANCED PROGRAMMING H **CRS 1656** **GR 11-12** **CR 5.0** **Y**

In this class, students will be programming in Java, an object-oriented programming language. The course content will be similar to that offered in an introductory computer science class at most universities. Students will be learning all levels of the Java language including basic syntax, declaration of variables, if-else statements, for, while, and do-while loops, library classes, and GUI (graphical user interface) tools. This course will be especially helpful to students contemplating careers in computer science, business, and statistics, insurance and engineering. (Prerequisite: a grade of “C” or better in Computer Languages, a grade of “C” or better in Integrated Math I, and/or the permission of the department).

TELEVISION PRODUCTION **CRS 1636** **GR 9-12** **CR 2.5** **S**

In this course, students will study live television production. Students will produce projects in the on-campus TV studio to be viewed on campus, as well as being broadcast on Ayer Public Access Channel (APAC). Knowledge gained in this course may serve as a prerequisite for the APAC internship.

BROADCAST JOURNALISM **CRS 1625** **GR 9-12** **CR 2.5** **S**

This course introduces students to the basic concepts of broadcast journalism. They will study current news stories by looking at the questions asked to collect important details and advance onto writing their own news stories. Students will learn why “if it bleeds it leads,” but a camera isn’t always welcome in every news situation. Students will practice writing news stories which may cover local news, sports, and entertainment.

YEARBOOK/DESKTOP PUBLISHING **CRS 1837** **GR 10-12** **CR 5.0** **Y**

In this class, students will collect, analyze, and organize information and use page layout software to arrange text and graphics to create publications such as newsletters, flyers, and brochures. Students will also create the school yearbook. Through the yearbook, students will experience all aspects of publication design including planning, project management, deadlines, and promotion.

FROM RADIO TO NETFLIX **CRS 1610** **GR 9-12** **CR 2.5** **S**

This course will look at how TV shows have changed over the decades and how networks decide what they put on the air. Students will also understand how network TV has learned to compete with cable and streaming and how it has affected their programming. Students will view real world examples of shows, both domestic and international, which will support the ideas and theories presented in class.

VIDEO PRODUCTION A **CRS 1660** **GR 9-12** **CR 2.5** **S1 ONLY**

In addition to learning about the science and psychology behind filmmaking, students will participate in multiple group-based projects where they will assume a production role and construct a video from start to finish together. The projects and material in this course will have a focus on storyboarding, writing and practicing proper pre-production filmmaking techniques.

VIDEO PRODUCTION B **CRS 1661** **GR 9-12** **CR 2.5** **S2 ONLY**

In addition to learning about the science and psychology behind filmmaking, students will participate in multiple group-based projects where they will assume a production role and construct a video from start to finish together. The projects and material in this course will have a focus on editing, special effects and other post-production practices, utilizing the Adobe suite.

AMERICAN LITERATURE H **CRS 1140** **GR 11** **CR 5.0** **Y**

This required course presents the various genres of American literature from early colonial times to the present day in the context of reading, writing, listening, and speaking. Research techniques are taught and a research project is required. SAT preparation is given. The honors program is a more in depth analysis of topics presented and includes more readings, papers, and projects.

AMERICAN LITERATURE CP **CRS 1142** **GR 11** **CR 5.0** **Y**

This required course presents the various genres of American literature from early colonial times to the present day in the context of reading, writing, listening, and speaking. Research techniques are taught and a research project is required. SAT preparation is given.

ADVANCED PLACEMENT LANGUAGE AND COMPOSITION **CRS 1148** **GR 11-12** **CR 5.0** **Y**

This course offers a preparation for college level writing experience and simulates a first-year college composition class by preparing students to “write effectively and confidently in their college courses across the curriculum and in their professional and personal lives” (College Board). Students will read and analyze a wide range of nonfiction texts and images—from newspaper editorials, to travel writing, to literary non-fiction, to biography, to sermons, to era appropriate photographs, paintings and advertisements. Some relevant fiction selections may be incorporated. In terms of reading, students will learn how to analyze and critique a wide range of nonfiction texts. Students will become familiar with the rhetorical strategies that make for effective, persuasive writing. Specific attention will be paid to the development and analysis of a written argument. Students will learn how to identify the elements of a strong argument and will grow to improve their own written arguments. Finally, students will improve their mastery of standard written English and will grow in their ability to produce “analytic and argumentative compositions that introduce a complex idea and develop it” through the use of evidence. Students will continue to develop their ability to revise their own writing. Students are required to take the AP Exam in May.

ADVANCED PLACEMENT LITERATURE & COMPOSITION **CRS 1149** **GR 12** **CR 5.0** **Y**

Following the guidelines established by the AP Course Audit, this class is a freshman college level World Literature and Composition course. It is open to seniors on the basis of ability, interest, and motivation. This course will not only cover test preparation, but also includes literary selections each demanding critical, rigorous reading and analysis. Students are required to take the AP Exam in May.

WORLD LITERATURE H **CRS 1150** **GR 12** **CR 5.0** **Y**

This required course presents the various genres of world literature with a strong concentration in British literature, in the context of reading, writing, listening, and speaking. The honors program is a more in depth analysis of topics presented and includes more readings, papers, and projects. *This is a prerequisite for AP Literature & Composition.*

WORLD LITERATURE CP **CRS 1152** **GR 12** **CR 5.0** **Y**

This required course presents the various genres of world literature with a strong concentration in British literature, in the context of reading, writing, listening, and speaking.

CREATIVE WRITING **CRS 1160** **GR 10-12** **CR 2.5** **S**

This elective course is offered during alternating years and will provide students the opportunity to write and expand their writing repertoire by having them experiment with different forms and purposes of writing. The course will provide opportunities for students to publish their work. The class will produce a literary magazine.

CHILDREN'S LITERATURE **CRS 1164** **GR 10-12** **CR 2.5** **S**

This elective course is offered during alternating years and will take students on an adventure through the happy ever after that fairytales create. This course does not simply involve reading the fairytales that Disney creates, but the various other fairy tales that have been created over time from other cultures. Throughout this course fairytales will be read in order to discover how the perception of a fairytale changes as society changes and how the social structure of a specific time period affects the content of the fairytale.

SHORT STORIES **CRS 1166** **GR 10-12** **CR 2.5** **S**

This elective course is offered during alternating years and is an introduction to literature through various short stories written in the nineteenth and twentieth centuries. This survey of the short story genre explores realism, detective fiction, sensation, and gothic and will explain some essential elements of each. Students read short stories written by authors including, but not limited to the following: Poe, King, Jackson, Twain, James, Kipling, Lawrence, Woolf, Mansfield, Faulkner, Chekov, and Shaw.

THE ART OF COMMUNICATION **CRS 1167** **GR 9-12** **CR 2.5** **S**

This elective course provides students with an opportunity to improve their speaking and listening skills. This course will help students expand their interpersonal communication skills and develop their personal awareness and confidence. Emphasis will be placed on audience analysis, research, organization, preparation, and effective use of language and delivery for various types of speeches and communications.

CREATIVE POETRY **CRS 1168** **GR 10-12** **CR 2.5** **S**

This elective course is offered during alternating years and challenges students to look deeper within themselves, the natural world and the world their imagination can create. Throughout creative poetry students will look at various forms of poetry written by a number of well-known poets from the 1600's to the present. Every week or two a different form of poetry will be introduced, in which students will discover the history of various forms of poetry as well as important, influential poets. Various poetic forms and how they have changed throughout time will also be analyzed. During this course students will read and analyze various poems, as well as write poetry.

MULTICULTURAL LITERATURE **CRS 1277** **GR 10-12** **CR 2.5** **S**

This elective course introduces students to an alternative view of literature. Students read African-American, Latina-American, Native-American, and Asian-American authors and immerse themselves in these cultures through the study of film, non-fiction, art, food, and music.

INTRODUCTION TO GERMAN CULTURE CP **CRS 1279** **GR 10-12** **CR 2.5** **S**

This elective course is offered during alternating years and introduces students to rudimentary conversational German, as well as basic German geography, philosophy, literature, and art. Students are exposed to contemporary German films, music, magazines, and cultural practices.

HEROES AND VILLAINS **CRS 1170** **GR 9-12** **CR 2.5** **S**

In this elective course, students will read literature and watch movies and documentaries that will contribute to the discussion: what makes a good hero or villain? Characterization of such classic villains as Shakespeare's Iago will be compared and contrasted to modern villains like Hannibal Lecter. Ancient Achilles will be measured with recent heroes such as Batman and Erin Brokovich. Students will also engage in creative writing pieces in which they shape their own villains and heroes. A discussion of why mankind has an enduring need for heroic figures and their counterpart, the villains, will be the essential question for this course.

FINE/VISUAL ARTS

VISUAL PROBLEM SOLVING **CRS 1810** **GR 9-12** **CR 2.5** **S**

In this class, students will be introduced to a variety of media and techniques and acquire a basic visual arts vocabulary. Students will learn to identify the elements and principles of art and design in their work and the work of others. Projects will be exploratory in nature and may involve drawing, painting, collage, printmaking or ceramics.

PHOTO/VIDEO I **CRS 1801** **GR 9-12** **CR 2.5** **S**

This course is an introduction to photography and video. Topics will include basic camera operation, shot composition, and the use of the computer as an editing tool.

PHOTO/VIDEO II **CRS 1802** **GR 10-12** **CR 2.5** **S**

This course is a continuation of Photo/Video I. This course will help students develop a stronger understanding of the aesthetic and technical processes essential to the field of photography. Course topics include artistic & technical focus, digital printing, film photography, photographic lighting, the history of photography, and alternative photographic processes.

GRAPHIC DESIGN I **CRS 1803** **GR 9-12** **CR 2.5** **S**

This course will introduce students to the use of the computer as an art and design tool. Students will be exposed to a variety of programs within the Adobe Creative Suite and use them for computer illustration, graphic design, and animation.

GRAPHIC DESIGN II **CRS 1804** **GR 10-12** **CR 2.5** **S**

This course is a continuation of Computer Art & Design I. Students will expand their knowledge of tools and techniques available within the Adobe Creative Suite and apply them to a variety of computer illustration, graphic design, and animation projects. Students must have successfully completed Computer Art & Design I to enroll.

DIGITAL STUDIO PORTFOLIO **CRS 1805** **GR 11-12** **CR 5.0** **S**

This course is designed for the student who has demonstrated proficiency with tools and techniques in the Adobe Creative Suite and has a strong interest in photography, video, computer illustration, graphic design, and/or animation. Students will develop their own design problems and complete projects for local clients. Students must have successfully completed Photo/Video I & II and/or Computer Art and Design I & II and have instructor approval to enroll.

CERAMICS I **CRS 1822** **GR 9-12** **CR 2.5** **S**

This course is an introduction to clay hand-building techniques. Students will use pinch, coil, and slab methods to build functional and decorative pieces including bowls, pots, and boxes. Students will also model sculptural figures in clay. All projects will be glazed and fired.

CERAMICS II **CRS 1827** **GR 9-12** **CR 2.5** **S**

In this course, students develop hand building skills learned in Ceramics I, deepen their understanding of ceramic processes including firing, and are introduced to wheel throwing. An emphasis is placed on more complex techniques in ceramics such as mold making, surface decoration and glazing, and armature building. Students are encouraged to work more independently and have greater responsibility for maintaining the workspace.

STUDIO ART I **CRS 1806** **GR 9-12** **CR 2.5** **S**

This course introduces students to a variety of two-dimensional visual arts materials and techniques in drawing, painting, collage, and printmaking. We will explore how images are put together and how they make meaning and communicate ideas and messages to others.

STUDIO ART II **CRS 1807** **GR 10-12** **CR 2.5** **S**

This course is a continuation of Studio Art I and introduces students to new techniques in drawing, painting, collage, and printmaking. Students will expand their knowledge about art making in a thematic way. The course will have a common theme that bridges projects and assignments. Students must have successfully completed Studio Art I to enroll.

STUDIO ART PORTFOLIO H **CRS 1808** **GR 11-12** **CR 5.0** **Y**

This course is for students who would like to create an art portfolio for college and are interested in taking Studio Art AP, or have a strong personal interest in visual art. Projects will be developed on a more individual basis depending on student interests and portfolio needs. Students will become proficient in using the critique process to give and receive feedback on work. Students must have successfully completed Studio Art I and II or have instructor approval prior to enrolling.

ADVANCED PLACEMENT STUDIO ART **CRS 1809** **GR 11-12** **CR 5.0** **Y**

This course is for students who would like to submit a 2-Dimensional Design, 3-Dimensional Design, or Drawing portfolio to the College Board for AP scoring. Ideally the student has begun the process in Studio Art III H. The portfolio consists of three sections: quality, breadth, and concentration. A major component of the course is the concentration, which is an in-depth exploration of an artistic problem or idea. The course is usually taken as an honors independent study, with a visual arts teacher.

DRAWING **CRS 1824** **GR 9-12** **CR 2.5** **S**

This course will provide students with a sequential series of lessons designed to improve individual drawing skills. The purpose of this course is to improve skills to a point where student results match their expectations.

PAINTING AND COLORING **CRS 1833** **GR 9-12** **CR 2.5** **S**

This course is an introduction to painting. Students will identify and use the elements and principles of art in their work. They will also learn techniques for working with tempera, acrylic, and watercolor paints. Special emphasis will be placed on working with color.

Course Objectives: At the end of this course, students will be able to:

- Identify and describe elements of art in their work and the work of other artists.
- Organize color using the color wheel, using appropriate terminology, and apply knowledge to mix a variety of colors.
- Name/describe/match the hue, value, and saturation of a given color.
- Recognize complementary and analogous color schemes and use them to create color harmony in a work of art.
- Describe how differences between painting mediums influence how one uses a given medium.
- Use a variety of watercolor techniques to create a watercolor painting.
- Create a sense of light and shadow in a painting by adjusting the hue, value, and saturation of colors.
- Appreciate an abstract painting for its use of elements of art.
- Abstract recognizable imagery in the style of a famous abstract artist.

HEALTH/PHYSICAL EDUCATION

WELLNESS 9 **CRS 1915** **GR 9** **CR 2.5** **S**

This required course provides students with an overview of nutrition principles that are necessary for physical, emotional, mental, and social wellness. The course will emphasize making healthy choices, managing stress and anxiety, dealing with depression, developing healthy relationships, mindfulness, meditation, nutrition, body composition, eating disorders, alcohol, tobacco, and vaping, and certification in concussion education.

WELLNESS 10 **CRS 1916** **GR 10** **CR 2.5** **S**

The wellness 10 required course is designed to improve health literacy and develop skills needed to promote mental, physical, social, and emotional well-being. Topics may include sexually transmitted diseases, managing personal lifestyles, common illnesses, mindfulness, CPR certification, breathing techniques, communication, decision-making, and trends in health.

WELLNESS 11 **CRS 1917** **GR 11** **CR 2.5** **S**

The wellness 11 course builds on skills learned in wellness 9 and 10 and continues to improve health literacy as well as develop skills needed to promote leadership and mental, physical, social, and emotional well-being. Topics may include leadership, vaping, pregnancy and birth, human development and sexuality, parenting, drugs and alcohol, independent living skills, stress management, disease management and prevention, mindfulness, meditation, health careers, and creating a work-life balance.

WELLNESS 12 **CRS 1918** **GR12** **CR 2.5** **S**

The wellness 12 course builds on skills learned in wellness 9, 10, and 11 and continues to improve health literacy as well as develop skills needed to promote leadership and mental, physical, social, and emotional well-being. Topics focus on skills such as leadership, emotional intelligence (self-regulation, self-awareness, motivation, empathy and social skills), self-care, social-emotional learning, grit and resilience, and lifelong movement, nutrition, and fitness. This course satisfies the PE requirement for grade 12.

UNIFIED WELLNESS **CRS 1902** **GR 11-12** **CR 2.5** **S**

This course studies health-related topics and is open to juniors and seniors. Topics include fundamental information about body systems, nutrition, personal health, disease prevention, communication skills, human growth and development, risk assessment and refusal skills. The course provides peer buddies with the opportunity to be partnered with a student in the Life Skills program and participate in health educational activities as well as explore current topics related to disabilities and differentiated learning in a classroom setting. It is a suggested choice for students interested in career opportunities in the social services or educational field, and provides a community service option. It can replace the mandatory Wellness 11 for 11th graders.

UNIFIED PHYSICAL EDUCATION **CRS 1901** **GR 11-12** **CR 2.5** **S**

Unified Physical Education provides a unique opportunity for students with and without disabilities to come together through ongoing educational and physical activities, using the power of Special Olympics. The Unified Physical Education course is structured around the national physical education standards and grade-level outcomes. Additionally, the class supports the development of leadership skills for all students as well as the empowerment of ALL students to foster an inclusive class and school-wide environment. Students in Unified Physical Education courses may have the opportunity to participate in competitions with other schools or attend Special Olympics events. This course is open to students of all levels and in all grades.

FITNESS I **CRS 1924** **GR 9-12** **CR 2.5** **S**

This course is a required introduction to the basic components of fitness. Students will participate in nutrition, cardiovascular, muscular strength, muscular endurance and flexibility training programs. Students will learn the safety techniques to give them an efficient as well as a safe workout. Students are expected to create their own personal fitness program that can be easily monitored and tracked. Students will also write a paper on a specific fitness topic for their final project.

FITNESS II **CRS 1928** **GR 9-12** **CR 2.5** **S**

Students will build on previously learned skills by implementing components from Fitness 1 and incorporating it into focused fitness programs. Students will be required to develop and follow a specific action plan to make progress throughout the 20-week semester. Students will self-assess their plan and their progress and create a sport-specific final project.

PE STUDENT LEADER **CRS 1903** **GR 11-12** **CR 2.5** **S**

Junior and senior students who display outstanding qualities with regards to leadership ability and skill mastery may select this program upon approval of the wellness department. This group leader serves as the assistant to the teacher and should be capable of motivating younger students. Among other responsibilities, student Leaders will be asked to prepare equipment for the class activity, officiate and supervise the activity, and assist in clean up at the end of the activity. Students should also be knowledgeable about Google Docs. Interested students need to apply and be approved by the Athletic Director.

TEAM SPORTS AND ACTIVITIES **CRS 1970** **GR 9-12** **CR 2.5** **S**

This course offers a variety of physical activities, games, and team sports predicated on long-term athletic development. Core content includes fitness-related activities, team sports such as Speedball, Matball, basketball, floor hockey and others, team-building activities, and project adventure.

LIFETIME ACTIVITIES **CRS 1929** **GR 9-12** **CR 2.5** **S**

This alternating day, semester long course will provide the opportunity for students to participate in fitness enhancing activities on a more personal level. Emphasis will be placed on lifelong activities that encourage conditioning, flexibility, muscular strength, and cardiovascular endurance. All students will be required to wear appropriate clothing for participation. Activities will be seasonal and are activities that can be easily engaged by students through adulthood. Choices may include, but are not limited to, Project Adventure, archery, badminton, golf, tennis, XC skiing, snowshoeing, yoga, pilates, weights, walking, volleyball, pickleball, hiking and others.

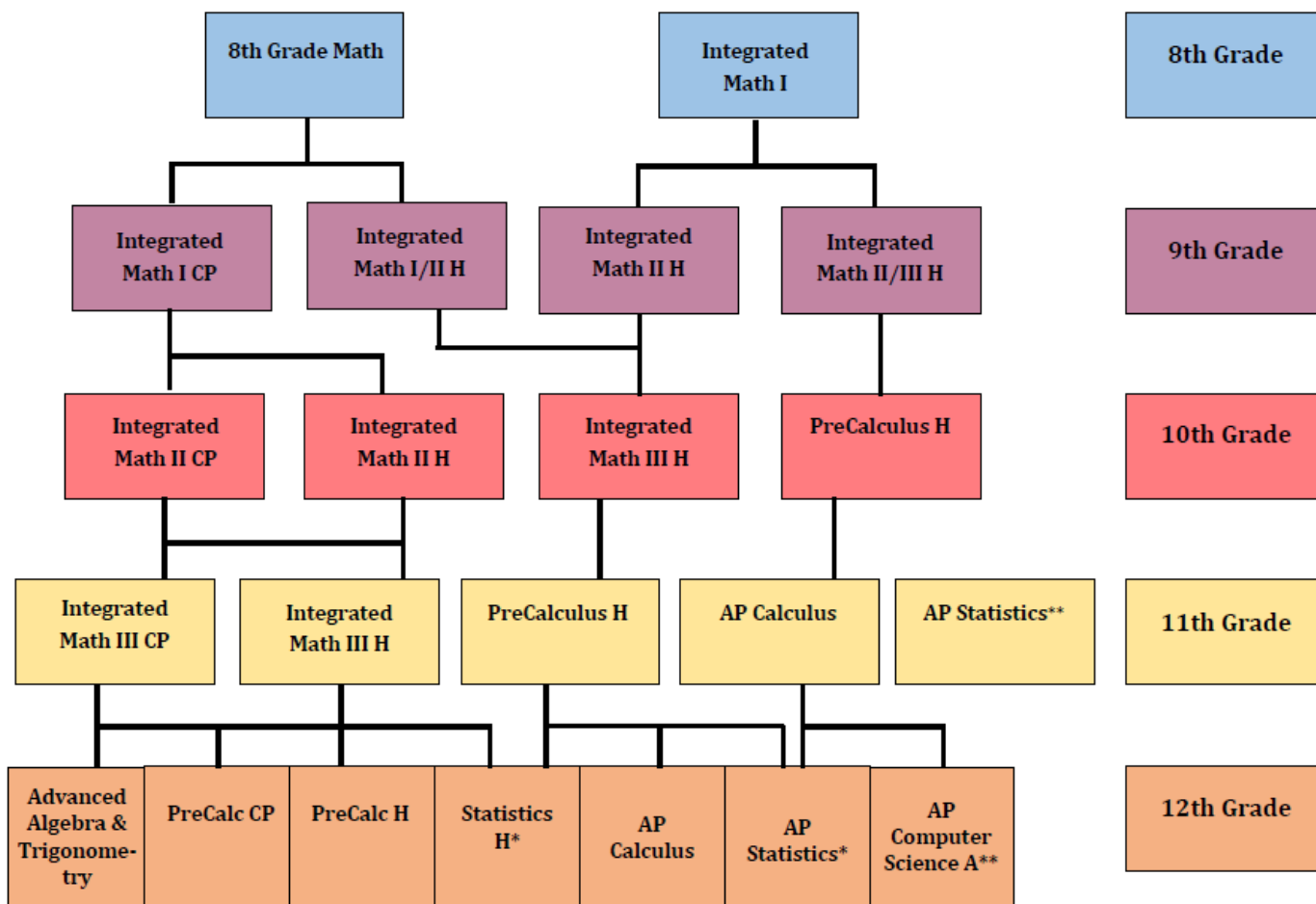
PERSONAL SAFETY - Rape Aggression Defense Systems (R.A.D.) **CRS 1930** **GR 11-12** **CR 2.5** **S**

R.A.D. Systems is a program that is designed to help men and women overcome the effects of sexual harassment and sexual violence on campus by teaching assertiveness, **awareness, risk reduction, risk recognition, avoidance and physical defense strategies**, since it has been well established that sexual harassment and sexual violence on campus are forms of sexual discrimination prohibited by Title IX. The classes consist of a PowerPoint presentation, warm-ups and stretches, learning and practicing self-defense techniques. The final class is a controlled, live simulation assault where students will put knowledge, instinct, and self-defense techniques into action. **Requirements:** *Signed forms, sneakers and a change of clothes.*

MATHEMATICS

Placement into a high school math course will be based on, but not limited to, academic achievement (grades), work ethic (homework), attendance record, results of standardized testing, and teacher's assessment of potential. Parents and/or students should contact their teacher or school counselor if they feel they need special permission to take a course.

ASRHS Math Department Course Flowchart 2022-2023



* = Can be taken concurrently with other courses.

** = MUST be taken concurrently with other courses.

Revised 1/2022 by C. Quinn

CRS 1470 GR 9 CR 5.0 Y

INTEGRATED MATH I CP

This course is the first in a series of three integrated math courses, designed to correspond with the new Common Core standards. Integrated Math 1 is designed to further explore the concepts introduced in the middle grades. In this course, students will build on their math vocabulary, a key component in math education. Significant focus will be given to the manipulation of different linear expressions and functions in order to find their solutions. Students will also be introduced to properties of triangles to prepare them for higher level Geometry. Graphing calculators are recommended for this course.

INTEGRATED MATH I/II HONORS **CRS 1476** **GR 9** **CR 5.0** **Y**

This 9th grade honors math course will cover topics from Integrated Math I and Integrated Math II Honors in a sequence that allows for deep conceptual understanding of all topics. Students will make conceptual connections between types of functions (linear, quadratic, exponential, trigonometric, and polynomial), congruence and similarity in geometry, trigonometry, statistics, and probability. Emphasis will be placed on developing students' critical thinking and problem solving skills. Graphing calculators are recommended for this course. Pre-Requisite: Completion of Pre-Algebra or equivalent

INTEGRATED MATH II **CRS 1471** **GR 9-10** **CR 5.0**

This course is the second in a series of three integrated math courses, designed to correspond with the new Common Core standards. Integrated Math 2 is designed to further explore the concepts that students learned in Integrated Math 1. In this course, students will extend their knowledge of the number system to include complex numbers. They will expand their triangle-sense to encompass similarity and basic trigonometry. Significant focus will be given to quadratics to provide students with the foundation necessary for future courses. Graphing calculators are recommended for this course. **Prerequisite:** Completion of Integrated Math 1

INTEGRATED MATH II H **CRS 1473** **GR 9-12** **CR 5.0** **Y**

This course is the second in a series of three accelerated integrated math courses, designed to correspond to the new Common Core Standards. This course covers understanding functions in depth including linear, exponential, quadratic, trigonometric, and polynomial functions, establishing criteria for congruence and similarity of polygons with an emphasis on proofs, developing an understanding of trigonometry, and expanding understanding of probability. Graphing calculators are recommended for this course. **Prerequisite:** Completion of Integrated Math 1

INTEGRATED MATH II/III H **CRS 1477** **GR 9-12** **CR 5.0** **Y**

This accelerated honors class will complete all of the coursework from Integrated Math II and Integrated Math III Honors in a sequence that will allow students to make conceptual connections among a variety of topics to prepare them to be successful in Calculus level studies. Students will perform in-depth studies of quadratic, polynomial, rational and trigonometric functions. They will explore the geometric concepts of similarity, solids and circles, and attention will be given to sequences and series. It is expected that students who complete this course are on pace to take one or two Advanced Placement Mathematics courses during their junior and/or senior years. Students are required to have a graphing calculator for this course. **Prerequisite:** Completion of Integrated Math I

INTEGRATED MATH III CP **CRS 1472** **GR 10-11** **CR 5.0** **Y**

This course is the third in a series of three integrated math courses, designed to correspond with the Massachusetts' Mathematics Frameworks. Integrated Math III is designed to build on the concepts that students learned in Integrated Math II. In this course, students will deepen their understanding of linear, quadratic, exponential, polynomial,

trigonometric, radical, and rational functions. Graphing calculators are recommended in this course. **Prerequisite:** Completion of Integrated Math II

INTEGRATED MATH III H **CRS 1474** **GR 10-11** **CR 5.0** **Y**

This course is the third in a series of two accelerated integrated math courses, designed to correspond with the 2011 Massachusetts' Mathematics Frameworks. This course is designed to build on the concepts students learned in Integrated Math II Honors. In this course, students will deepen their understanding of linear, quadratic, polynomial, rational, radical, and trigonometric functions. This course will also focus on applying algebraic, geometric, and trigonometric concepts to real world situations and strengthening students' problem solving skills. Other topics may include Sequences and Series, Statistics and Probability. Graphing calculators are recommended in this course. **Prerequisite:** Completion of Integrated Math II

ADVANCED ALGEBRA & TRIGONOMETRY **CRS 1433** **GR 12** **CR 5.0** **Y**

In this course, students will extend their knowledge of topics from Integrated Math III. Students will deepen their knowledge of algebraic equations, including polynomial, rational, trigonometric, and radical. Students will also explore more advanced concepts, such as radical functions, rational functions, unit circle trigonometry, and statistics and probability. Graphing calculators are recommended for this course. **Prerequisite:** Completion of Integrated Math III

PRE-CALCULUS CP **CRS 1448** **GR 11-12** **CR 5.0** **Y**

In this course, students will extend their knowledge of topics from Integrated Math III. Specific attention is paid to composition and inverses of functions, applications and graphing of trigonometric functions, trigonometric identities, and conic sections. Additional topics include complex numbers, polar equations and graphs, applications of logarithmic and exponential functions, vectors, and parametric equations. Graphing calculators are required in this course. **Prerequisite:** Completion of Integrated Math III

PRE-CALCULUS H **CRS 1455** **GR 11-12** **CR 5.0** **Y**

In this course, students will extend their knowledge of topics from Integrated Math 3 in preparation for Calculus. We begin by introducing exponential/logarithmic functions and building on students' trigonometric knowledge. We then explore key concepts from Polar, Parametric and Vector Functions and delve into Conic Sections and Sequences and Series. We finish the year with a rigorous treatment of Limits, Derivatives and Applications of Derivatives. Graphing calculators are required in this course. **Prerequisite:** Completion of Integrated Math III

ADVANCED PLACEMENT CALCULUS AB **CRS 1460** **GR** **CR 5.0** **Y**

In this course students will continue their study of Calculus topics including Limits and Continuity, Derivatives, and Integrals. Each topic will be studied on an abstract level as well as with real life applications in order to prepare students for success in taking the College Board's AP Calculus AB test in May. Graphing Calculators are required in this course. Students are required to take the AP Calculus AB test in May. **Prerequisite:** Completion of Pre-Calculus

ADVANCED PLACEMENT CALCULUS BC **CRS 1458** **GR 12** **CR 5.0** **Y**

In this fast-paced course, which is equivalent to two college calculus courses, students will begin with an in-depth exploration of key Calculus AB topics such as Limits, Derivatives, Integrals and their various applications. They will then extend this knowledge base with advanced Integration techniques, Euler's Method and Logistic Functions. Considerable time will be devoted to the BC topics of Sequences and Series (constructing Taylor Polynomials and verifying Intervals of Convergence). Differentiation and integration techniques will then be extended to Polar, Parametric and Vector Functions. Each topic will be studied on an abstract level as well as with real life applications in order to prepare students for success in taking the College Board's AP Calculus BC test in May. Graphing Calculators are required in this course. Students are required to take the AP Calculus BC test in May. Since this course covers two college course's worth of material, students will be expected to spend considerable time over the summer and/or outside of class learning new material. **Prerequisite:** Completion of Pre-Calculus Honors with Derivatives

STATISTICS H **CRS 1482** **GR 11-12** **CR 5.0** **Y**

This course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students will gain experience with data exploration, sampling and experimentation, modeling and statistical

inference. As part of the course, students will design experiments and studies to collect data and analyze by identifying patterns, important parameters and simulating using mathematical models. **Prerequisite:** Completion of Integrated 3

ADVANCED PLACEMENT STATISTICS **CRS 1462** **GR 11-12** **CR 5.0** **Y**

The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. This course draws connections between all aspects of the statistical process, including design, analysis, and conclusions. Additionally, using the vocabulary of statistics this course will teach students how to communicate statistical methods, results and interpretations. Students will learn how to use graphing calculators and read computer output in an effort to enhance the development of statistical understanding. A graphing calculator is required for this course. Students are required to take the AP Statistics test in May. **Prerequisite:** Recommendation of teacher or Special Permission from the math department liaison and school counselor.

MUSIC

CONCERT BAND CP **CRS 1856** **GR 9-12** **CR 2.5** **S**
 CRS 1860 **CR 5.0** **Y**

The ASRHS Concert Band performs a wide variety of music including marches, light concert music, and standard band literature. Participation is open to all brass, woodwind, and percussion players with middle school band experience, or at the instructor’s discretion. Enrollment in this course requires attendance at all scheduled concerts/events.

CRS 1858 **GR 9-12** **CR 5.0** **Y**
CONCERT BAND H **CRS 1859** **CR 2.5** **S**

The ASRHS Concert Band performs a wide variety of music including marches, light concert music. Participation is open to all brass, woodwind, and percussion players with middle school band experience, or at the instructor’s discretion. Enrollment in this course requires attendance at all scheduled concerts/events. In order to achieve honors credit, students will be expected to participate in supervised practice after-school and complete assignments throughout the year in addition to the CP requirements. Enrollment in this section of concert band requires the signed approval of a parent and the instructor.

CONCERT CHOIR CP **CRS 1862** **GR 9-12** **CR 2.5** **S**
 CRS 1863 **CR 5.0** **Y**

The ASRHS Concert Choir is a non-selective vocal performance ensemble. The course stresses the fundamentals of vocal technique and performance. Students study and perform music from a wide range of musical styles, encompassing all periods of music history and cultures. Previous singing experience is helpful, but not necessary. Enrollment in this course requires attendance at all scheduled concerts.

CONCERT CHOIR H **CRS 1865** **GR 9-12** **CR 2.5** **S**
 CRS 1864 **CR 5.0** **Y**

The ASRHS Concert Choir is a non-selective vocal performance ensemble. The course stresses the fundamentals of vocal technique and performance. Students study and perform music from a wide range of musical styles, encompassing all periods of music history and cultures. Previous singing experience is helpful, but not necessary. Enrollment in this course requires attendance at all scheduled concerts. In order to achieve honors credit, students will be expected to participate in supervised practice after-school and complete assignments throughout the year in addition to the CP requirements. Enrollment in this section of concert choir requires the signed approval of a parent and the instructor.

MUSIC IN OUR LIVES CP **CRS 1877** **GR 9-12** **CR 2.5** **S**

This course offers students with little to no musical experience exposure to many different aspects of music. It is intended for those students who are not really sure about music, and want to explore the musical world. Students will receive basic instruction in African drumming, guitar, singing, piano, percussion, reading musical notation, music history,

composition, and more. The goal is to help the students to make an educated choice as to what area of music they may wish to pursue in the future.

INTRODUCTION TO MUSIC THEORY/COMPOSITION CP CRS 1875 GR 9-12 CR 2.5 S

This course attempts to answer the question, how and why does music sound the way it does? Students will have an in-depth study of the basic elements of music including pitch, rhythm, melody, harmony, expressive elements, timbre, and form. Ability to sing or play an instrument is helpful, but not required to take the course.

MUSIC THEORY II H CRS 1876 GR 9-12 CR 2.5 S

This course is a continuation of Introduction to Music Theory/Composition and provides an in-depth study of harmony progressing through the 20th century and atonality. Students will also be introduced to ear training, dictation, and solfege. Enrollment in this course requires successful completion of Introduction to Music Theory/Composition and/or approval of the instructor.

INTRODUCTION TO GUITAR CP CRS 1882 GR 9-12 CR 2.5 S

This course is designed for students with little, or no, experience playing guitar, but wish to take their guitar study seriously. The concepts of reading and performing standard notation, chords, guitar technique, and improvisation will be presented. No experience in choral or instrumental music is necessary. Students do not need to know how to read music to enroll in this course.

GUITAR II CRS 1883 GR 9-12 CR 2.5 S

This class will be a continuation from Guitar I. Students will continue to learn the classical style of playing, as well as chords, scales and improvisation. They will learn music from a variety of different genres, including classical, jazz and popular music.

PIANO I CRS 1880 GR 9-12 CR 2.5 S

In this class students will learn the fundamentals of piano. They will learn how to read music and perform music with both their left and right hands while utilizing proper technique. Students will learn and perform scales and repertoire from classical music to today's popular music.

PIANO II CRS 1881 GR 9-12 CR 2.5 S

This class will be a continuation from Piano I. Students will continue to learn the proper techniques of piano performance, as well as chords, scales and improvisation. They will learn music from a variety of different genres, including classical, jazz and popular music.

SCIENCE

PRINCIPLES OF ENGINEERING I CP CRS 1576 GR 9-12 CR 5.0 Y

This is a hands-on science course that begins the STEM Pathway. It introduces the student to *Foundations of Engineering and Technology*, which is Dr. R. Thomas Wright's text that is widely accepted by the ITEEA (International Technology and Engineering Educators Association), an organization devoted to improving technology education and engineering through the use of technology, innovation, design, and engineering at the K-12 levels. The course is in alignment with the high school technology/engineering standards outlined in the most current Massachusetts Science and Technology/Engineering Curriculum Framework which have been revised from previous frameworks to reflect NGSS (Next Generation Science Standards). The Engineering Technology Standards (ETS 1 through 4) expect students to apply a variety of science and engineering practices to four core ideas of technology/engineering: *Engineering Design; Materials, Tools, and Manufacturing; Technological Systems; Energy and Power Technologies*. POE I encourages the student to utilize a systems approach, and the Engineering Design Process to address real-world complexities in various technological areas, mostly manufacturing and construction. Students will learn skills such as reading, interpreting, and creating

engineering drawings along with measurement and the safe use of appropriate tools for specific projects. Students will implement their problem-solving skills in order to design and construct solutions for 3-D mock-ups, scale models, and prototypes both from the text and beyond. Through the topics addressed and skills taught, students will become more scientifically and technologically literate citizens so that they can analyze information, and use critical thinking processes to make informed decisions. Students in this course will learn the necessary skills in drafting and design to be successful in future courses in the STEM Pathway, such as POE II and Computer Aided Design (CAD). Experience in the engineering laboratory/projects, and how they relate to theoretical discussion (vice-versa) will set the foundation for examinations and mathematical problems. Students will be expected to examine data, and then extrapolate/draw conclusions. There is an expectation that students will be able to work independently and within their design teams. At the conclusion of the course, students will be prepared to earn a CAREER SKILLS Certificate in STEM through Precision Exams' Foundation of Technology Standards covering material from POE I. Please note, this course is a lab science course. Please note, this course is a lab science course.

PRINCIPLES OF ENGINEERING II CP CRS 1577 GR 10-12 CR 5.0 Y

Building upon the skills and content learned in POE I, students will take their knowledge of the design and engineering process one step further in this second offering in the STEM Pathway using *Foundations of Engineering and Technology*, and apply it to solving some of the world's current technological dilemmas including, but not limited to, energy efficiency with regard to ecological and environmental concerns. Students will work collaboratively to design, develop, and construct prototypes that will foster their knowledge of any explored technological area. They will see how engineers bring together science and mathematics to solve problems in manufacturing, construction, power and energy, information and communication, transportation, medical and health, as well as agriculture and biotechnology. Students may participate in a STEM Internship at local businesses or industries, so they can be exposed to many industrial applications to see the relevance of STEM in the global economy. This component would serve as the School-to-Career portion of the course, and would align with the Massachusetts concept of College and Career Readiness. Consistent with POE I, students will be prepared to take the end of the course assessment through Precision Exams. Students in this course will learn the necessary skills to be successful in future studies in engineering, such as Computer Aided Design. *Prerequisite: Completion of Principles of Engineering I CP or prior participation on the High School FIRST Robotics team with special permission (please note that Robotics Team participation does not constitute academic credit for Principles of Engineering I).* Please note, this course is a lab science course.

BIOLOGY CP CRS 1532 GR 9 CR 5.0 Y

This course is a college preparatory level course for introductory Biology. Students will satisfy one of their high school laboratory science requirements by conducting hands-on activities as well as laboratories which utilize Scientific Inquiry skills as outlined in the Massachusetts Science Frameworks. In this class students will study the basic characteristics that all living organisms share by looking at cell structure, molecular biology, heredity and genetic variation, reproduction, photosynthesis, cellular respiration, evolution, and the interdependence of all life forms on earth. All coursework is designed to satisfy the State Frameworks for High School Biology. Please note, this course is a lab science course. Please note, this course is a lab science course.

BIOLOGY H CRS 1530 GR 9 CR 5.0 Y

Students coming in from 8th grade must be recommended into this class by their current science teacher. Students will satisfy one of their high school laboratory science requirements by conducting hands-on activities as well as laboratories which utilize Scientific Inquiry skills as outlined in the Massachusetts Science Frameworks. In this class students will study the characteristics that all living organisms share by looking deeper into cell structure, molecular biology, heredity and genetic variation, reproduction, photosynthesis, cellular respiration, evolution, and the interdependence of all life forms on earth. Students who take this course are challenged to use many higher order critical and creative thinking skills in both written and oral work. Student research and oral presentations are included, as are formal written lab reports. All coursework is designed to satisfy the State Frameworks for High School Biology. Please note, this course is a lab science course.

ADVANCED PLACEMENT BIOLOGY CRS 1560 GR 11 CR 5.0 Y

This laboratory science course follows the AP Course Audit syllabus for AP Biology. This course cultivates the students' understanding of biology through inquiry-based investigations as they explore two additional major topics:

1-Living systems store, retrieve, transmit and respond to information essential to life processes.

2-Biological systems interact, and these systems and their interactions possess complex properties.

The inquiry based investigations require students to ask questions, make observations and predictions, design experiments, analyze data, and construct arguments in a collaborative setting, where they direct and monitor their progress. Students are required to take the national Biology AP exam in May. **Prerequisite:** Biology and Chemistry. Please note, this course is a lab science course. Please note, this course is a lab science course.

CHEMISTRY CP **CRS 1542** **GR 10-12** **CR 5.0** **Y**

This class is a laboratory science course and will begin with an introduction to data analysis, uncertainty in measurement, and will continue with topics such as Matter and change, Problem Solving in Chemistry, Atomic Structure, Chemical Names and Formulas, Chemistry Quantities and Reactions, Stoichiometry, The Systems of Matter, Thermochemistry, Behavior of Gases, Bonding, Acids and Bases, Properties of Solutions, Chemical Periodicities, Water and Aqueous Systems. This course will offer students opportunities to learn, practice, and master skills relevant to their everyday world and to their future professional goals. **Prerequisite:** Completion of Biology AND Integrated Math 2, OR Special Permission. Please note, this course is a lab science course.

CHEMISTRY H **CRS 1541** **GR 10-12** **CR 5.0** **Y**

This class is a laboratory science course and begins with data analysis, uncertainty in measurement, and will continue with topics such as Matter and change, Problem Solving in Chemistry, Atomic Structure, Chemical Names and Formulas, Chemistry Quantities and Reactions, Stoichiometry, The Systems of Matter, Thermochemistry, Behavior of Gases, Bonding, Acids and Bases, Properties of Solutions, Chemical Periodicities, Water and Aqueous Systems. Students will make use of both experiment and theory to gain a better understanding of the nature of matter and of the experiment. This course places emphasis on the mathematics involved in solving problems as well as the critical thinking process. This course will offer students opportunities to learn, practice, and master skills relevant to their everyday world and to their future professional goals. **Prerequisite:** Completion of Biology AND Integrated Math 2, OR Special Permission. Please note, this course is a lab science course.

ADVANCED PLACEMENT CHEMISTRY **CRS 1543** **GR 11-12** **CR 5.0** **Y**

Advanced Placement Chemistry is the equivalent of a freshman college chemistry course; therefore, this class will be taught on the college level. This course is based on the curriculum of the College Board to prepare students for the Advanced Placement exam in May. Course content will require a great deal of extra time and effort on the part of students. This is a rigorous course that will prepare students for further study in science. Advanced topics include kinetics, equilibria, complex ions, oxidation – reactions, electrochemistry, acids and bases, buffers, thermodynamics, and organic chemistry. Students are required to take the Advanced Placement Chemistry exam in May. **Prerequisite:** Chemistry. Please note, this course is a lab science course.

PHYSICS CP **CRS 1549** **GR 11-12** **CR 5.0** **Y**

Students will be conducting hands-on studies of the physical laws of nature, with topics ranging from Motion, Force, Energy, Electricity and Magnetism, Waves, Sound and Light explored in extensive lab investigations. Problem solving and logical reasoning skills are the main focus of students' work in this course, with mathematical relationships of physical phenomenon being extensively studied. Selected topics of modern physics will be introduced as the course progresses. **Prerequisite:** Successful completion of Chemistry and Integrated Math II, or Special Permission. Please note, this course is a lab science course.

PHYSICS H **CRS 1551** **GR 11-12** **CR 5.0** **Y**

This class is a laboratory science for students who are planning to continue their education at a four-year college or university. Students will conduct an intensive investigation of concepts outlined in the Massachusetts State Frameworks for Introductory Physics through both laboratory activities and project-based applications of scientific principles. These will include Forces and their Interactions, Newton's Laws, Motion and Momentum, Electromagnetism, Electrical Circuits, Energy Conservation and Energy Fields, Thermal Systems, Wave Mechanics, and Technological advancements related to the study of Physics. Physics Honors will progress at a level of rigor below that of Physics AP, covering slightly more material than Physics CP, but without as much depth of understanding AP Physics. Problem solving and logical reasoning skills are considered vital ingredients to students' success in the course and will be honed during the study of the course material. **Prerequisite:** Completion of Integrated Math III and Chemistry. Please note, this course is a lab science course.

ADVANCED PLACEMENT PHYSICS I **CRS 1553** **GR 11-12** **CR 5.0** **Y**

This class is a laboratory science course and is designed to be the equivalent of a first-semester college course in Physics and follows the AP Course Audit syllabus for AP Physics I. An algebra-based approach will be used in an in-depth investigation of the following topics: Kinematics & Dynamics, Forces & Newton's Laws of Motion, Gravitation, Circular Motion, Simple Harmonic Motion, Impulse & Linear Momentum, Work & Energy, Conservation Laws of Momentum & Energy, Thermodynamic Laws, Rotational Motion, Electrostatics, Electromagnetism, DC Resistance Circuits, Mechanical Waves, and Sound. This foundation of Classical Physics lays the groundwork for the studies of advanced topics such as Light, Atomic and Quantum Particle Physics and the theories of General and Special Relativity. Students will be provided opportunities for individual as well as group learning within a series of scientific investigations. Students will engage in hands-on inquiry to help accomplish a large portion of the goals of this course and support learning of the foundational principles of the AP syllabus, and will be expected to utilize logic and reasoning skills in study of the course material. Students are required to take the AP Physics exam in May. **Prerequisites:** Completion of Integrated Math III or Advanced Algebra and Chemistry, or with special permission. Please note, this course is a lab science course.

ADVANCED PHYSICS C: MECHANICS **CRS 1552** **GR 11-12** **CR 5.0** **Y**

This class is designed to be the equivalent of a college course in Physics and follows the College Board-approved course of study for AP Physics C: Mechanics. A basic calculus-based approach will be used in an in-depth investigation of topics in Classical Mechanical Physics, including Kinematics, Newton's Laws, Energy, Rotational and Wave Motion, and Gravitational Motion. Opportunities will be provided for individual as well as group learning within a series of scientific investigations. Students will be expected to develop and utilize their logic and reasoning skills in a deep study of the course material, and will engage in hands-on inquiry to help accomplish an integral portion of the goals of this course and support their learning of the foundational principles of the College Board curriculum. Students are required to take the AP exam in May.

Prerequisites: Successful completion of Physics and completion of Pre-Calculus w/Derivatives H, or concurrent study of AP Calculus AB or BC. Please note, this course is a lab science course.

ANATOMY AND PHYSIOLOGY H **CRS 1536** **GR 11-12** **CR 5.0** **Y**

This elective laboratory science course is designed for the student who has an interest in general science, nursing, medicine, or physical therapy. Emphasis will be placed on the development of critical thinking and problem solving skills. Students will learn about the structure of the human body as well as the functions that those structures perform. The course contains a variety of student led presentations about illnesses relating to the various systems. The course culminates with the dissection of a fetal pig. The purpose of this is to experience the various systems first hand.

Prerequisite: Completion of Biology or Special Permission. Please note, this course is a lab science course.

ENVIRONMENTAL SCIENCE CP **CRS 1580** **GR 10-12** **CR 5.0** **Y**

Environmental science explores the interrelatedness between the environment and life on earth. It is designed to promote the understanding of the power of diversity and the interrelationships among all living things to the environment. Students will understand that science is a unique and powerful way to learn about the natural world and relies upon curiosity, creativity, observation, analysis, and critical thinking. Through scientific inquiry, students will learn

about the ecosystems around them, biodiversity and sustainability, climate change, human interactions that affect the environment as well as environmental laws and regulations. The learning strategies include, but are not limited to laboratory investigations, field study, online research, projects, reading assignments with class discussion, video and lecture. The goal of this class is to use the strategies and concepts learned to expand our knowledge and think critically about our role in the environment and strive to develop working solutions to some of the biggest environmental issues that the world faces today. **Prerequisite:** Successful completion of biology. Please note, this course is a lab science course.

ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE CRS 1588 GR 11-12 CR 5.0 Y

AP Environmental Science is a full year course designed to engage students with the scientific principles, concepts, and methodologies required to understand the interrelationships within the natural world. The course examines nine units of study which include: the Living World Ecosystems and Biodiversity, Populations, Earth Systems and Resources, Land and Water Use, Energy Resources and Consumption, Atmospheric, Aquatic and Terrestrial Pollution, and Global Change. Students will identify and analyze natural and human-made environmental problems, and examine alternative solutions for resolving or preventing them. It is highly recommended that students take the AP Environmental Science Exam at the end of the year. **Prerequisite:** Students complete two years of high school laboratory science, one of which includes Biology. Please note, this course is a lab science course.

ASTRONOMY CP CRS 1590 GR 11-12 CR 2.5 S

In Astronomy, the class begins with how astronomers name stars/compare their brightness, how Earth's motions affect the appearance in the sky, factors that cause seasonal change, and how astronomical cycles affect Earth's climate. As the course progresses, students will learn about the cycles of the moon, origin of modern astronomy, gravity, light and telescopes, atoms and spectra, sun, family of stars, and neutron stars and black holes. In addition, there will be exposure to the Milky Way Galaxy, other galaxies, and the Solar System where students will finalize their study with understanding of how the Solar System originated complete with an in depth look at planet Earth, as well as other planets, meteorites, asteroids, and comets. The astronomical unit, light-year, speed of light, and gravitational constant are just some of the concepts/values that students will be using in order to effectively solve problems. Students will be expected to apply and manipulate various mathematical equations/formulas to determine desired quantities, perform unit conversion using dimensional analysis, as well as construct/interpret graphs. Students will work independently/cooperatively with another student/other students to present material from the text in both oral and written form. Activities and laboratory investigations will be done at various times. Written assignments and examinations will occur for each unit. **Prerequisite:** Completion of Integrated Math II Honors or Integrated Math III CP, or special permission from instructor.

METEOROLOGY CP CRS 1591 GR 11-12 CR 2.5 S

In Meteorology, it has always been said, "If you don't like the weather in New England, just wait a few minutes, and it will change." Students will gain an appreciation of the many variables that play into forecasting, especially for different regions. While gaining this appreciation, students will become familiar with the Earth and its atmosphere, the warming of the planet and the atmosphere, seasonal and daily temperatures, humidity, different types of condensation, stability and cloud development, different forms of precipitation, air pressure and winds, air masses and fronts, weather forecasting, severe weather and storms, the changing climate of our planet, and air pollution along with its effects. Students will demonstrate the ability to describe the cycles in nature as described by meteorology and observe the behavior of celestial objects. One of the many goals is for students to be able to listen/watch a meteorologist's forecast and have in-depth understanding of what is being communicated to the listener/viewer. Students will be expected to apply and manipulate various mathematical equations/formulas to determine desired quantities, perform unit conversion using dimensional analysis, as well as construct/interpret graphs. Students will work independently/cooperatively with another student/other students to present material from the text in both oral and written form. Activities and laboratory investigations will be done at various times. Written assignments and examinations will occur for each unit. **Prerequisite:** Completion of Integrated Math II Honors or Integrated Math III CP, or special permission from

Topics specific to mechanical CAD, architectural CAD, and electrical CAD will also be discussed through this course. Examination of the use of finite element analysis to study stress and strain on loaded models will conclude the course.

Prerequisites: Completion of Principles of Engineering I, completion or concurrent study of Principles of Engineering II (or special permission from the instructor), and previous or concurrent study of Integrated Math II.

COMPUTER SCIENCE

We believe in CS because all students are at the heart of what we do. We believe that learning is a joyous activity, and through a K-12 Computer Science implementation will position students on the cutting edge in the world of technology to contribute productively to society as a whole. Our goal is to make students competitive whether they move on to the workforce or higher education. The use of Computer Science will enable students to achieve meritocracy in the world of work, higher education and life beyond the ASRSD walls. By developing learners who are innovative, effective problem finders and problem solvers, learners will apply their thinking to new and/or unique challenges we have yet to encounter. All students can be both producers and consumers of technology and understand how technology impacts and influences them as well as the agency they possess to influence technological advances.

COMPUTER SCIENCE ESSENTIALS	CRS 1672	GR 9-12	CR 5.0	Y
------------------------------------	-----------------	----------------	---------------	----------

With emphasis on computational thinking and collaboration, this year-long course provides an excellent entry point for students to begin or continue the PLTW Computer Science PreK-12 experience. Computer Science Essentials will expose students to a diverse set of computational thinking concepts, fundamentals, and tools, allowing them to gain understanding and build confidence. In Computer Science Essentials, students will use visual, block-based programming and seamlessly transition to text-based programming with languages such as Python to create apps and develop websites, and learn how to make computers work together to put their design into practice. They'll apply computational thinking practices, build their vocabulary, and collaborate just as computing professionals do to create products that address topics and problems important to them. Computer Science Essentials helps students create a strong foundation to advance to Computer Science Principles, Computer Science A, and beyond.

ADVANCED PLACEMENT COMPUTER SCIENCE PRINCIPLES	CRS 1669	GR 10-12	CR 5.0	Y
---	-----------------	-----------------	---------------	----------

AP Computer Science Principles introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. The course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and computing impacts. AP Computer Science Principles will give students the opportunity to use technology to address real-world problems and build relevant solutions. Students are required to take the AP Exam in May.

ADVANCED PLACEMENT COMPUTER SCIENCE: A	CRS 1671	GR 11-12	CR 5.0	Y
---	-----------------	-----------------	---------------	----------

AP Computer Science A introduces students to computer science through programming. Fundamental topics in this course include the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems. The course emphasizes object-oriented programming and design using the Java programming language. Students are required to take the AP Exam in May. Please note, this course is a lab science course. (Can be counted as Math, Lab Science, or Computer credit.,

CYBERSECURITY	CRS 1673	GR 10-12	CR 5.0	
----------------------	-----------------	-----------------	---------------	--

Cybersecurity introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in Cybersecurity, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

ROBOTICS **CRS 1674** **GR 9-12** **CR 2.5** **S**

This course uses a hands-on approach to introduce the basic concepts of robotics. Students will gain knowledge and skills in physics, technology, engineering and math while constructing and programming their own robots. The course culminates in a capstone project that challenges the student to solve a real-life problem.

INTRODUCTION TO PYTHON LANGUAGE **CRS 1675** **GR 9-12** **S**

Why Learn Python? Python is a general-purpose, versatile and popular programming language. It's great as a first language because it is concise and easy to read, and it is also a good language to have in any programmer's stack as it can be used for everything from web development to software development and scientific applications. This course is a great introduction to both fundamental programming concepts and the Python programming language. By the end, you'll be comfortable programming in Python and using your skill to tackle real world challenges. This class is a great introduction to programming and will prepare you for the AP Computer Principles and or AP Computer Programming A.

INTRODUCTION TO COMPUTER APP MAKING AND PSEUDO CODE **CRS 1676** **GR 9-12** **S**

This curriculum is intended to be delivered in a semester-long course. It is not a sit and listen type of class. It is targeted at beginner level programming students interested in learning about creating phone apps and the fundamentals of pseudocode and programming. Students will practice thinking computationally: to decompose problems, abstract and modularize, reuse and remix existing solutions. Using the MIT App Inventor, a blocks-based programming language, with a development environment that runs in a browser, we will build mobile apps, test, redesign and debug our work to arrive at functioning programs. The work is very hands on and project oriented. Students build their digital confidence, learn about what is happening within their phones and become empowered to create, and explore.

HISTORY AND SOCIAL SCIENCE

Our high-quality Social Science curriculum is based on the three pillars of Content Standards, Literacy Standards for History and Social Science, and Standards for History and Social Science Practice. Our core courses and electives weave these three standards pillars together to create engaging skill and content-based learning opportunities. The courses below are proposed for the 2019-2020 school year and are subject to change based upon the new pathways established in the 2018 History and Social Science Frameworks.

HUMANITIES U.S. HISTORY I CP **CRS 1226** **GR 9** **CR 5.0** **Y**

This required course presents the political, ethical, behavioral, and intellectual foundations of society through an integrated study of world literature and U.S. history, covering the years 1763-1877. Students will learn the relationship between ideas and events and relate them to the present within the context of reading, writing, listening, and speaking. This course is an integrated course taken in the same block with the Humanities I course listed under the English offerings. (Please note, students will receive an identical grade for CRS 1126 and CRS 1226, as they are a team-taught course)

HUMANITIES U.S. HISTORY I H **CRS 1227** **GR 9** **CR 5.0** **Y**

This required course presents the political, ethical, behavioral, and intellectual foundations of society through an integrated study of world literature and U.S. history, covering the years 1763-1877. Students will learn the relationship between ideas and events and relate them to the present within the context of reading, writing, listening, and speaking. This course is an integrated course taken in the same block with the Humanities I course listed under the English offerings. This honors program is a more in depth analysis of topics presented and includes more readings, papers, and projects. (Please note, students will receive an identical grade for CRS 1127 and CRS 1227, as they are a team-taught course)

HUMANITIES IA CP **CRS 1131** **GR 10-12** **CR 5.0**
Y

This co-taught class centered on elements identified in the MA Core Curriculum Frameworks with a focus on US Hx I and grades 9 English. This required course presents a political, ethical, behavioral and intellectual foundation of society through an integrated study of literature and US History covering 1800-1919 and 1920-present day.

HUMANITIES IIB CP **CRS 1132** **GR 10-12** **CR 5.0** **Y**

This co-taught required class is centered on elements identified in the MA Core Curriculum Frameworks with a focus on US Hx II and grade and grade 10 English. Students will learn the relationship between ideas and events and relate them to the present within the context of reading, writing, listening and speaking.

HUMANITIES U.S. HISTORY II CP **CRS 1228** **GR 10** **CR 5.0** **Y**

This required course presents the political, ethical, behavioral, and intellectual foundations of society through an integrated study of world literature and U.S. history, covering the years 1877 to present. Students will learn the relationship between ideas and events and relate them to the present within the context of reading, writing, listening, and speaking. This course is an integrated course taken in the same block with the Humanities II course listed under the English offerings. (Please note, students will receive an identical grade for CRS 1128 and CRS 1228, as they are a team-taught course)

HUMANITIES U.S. HISTORY II H **CRS 1229** **GR 10** **CR 5.0** **Y**

This required course presents the political, ethical, behavioral, and intellectual foundations of society through an integrated study of world literature and U.S. history, covering the years 1877 to present. Students will learn the relationship between ideas and events and relate them to the present within the context of reading, writing, listening, and speaking. This course is an integrated course taken in the same block with the Humanities II course listed under the English offerings. This honors program is a more in depth analysis of topics presented and includes more readings, papers, and projects. Academic demands are intensified and challenging as topic analysis ventures beyond the scope of a survey course. (Please note, students will receive an identical grade for CRS 1129 and CRS 1229, as they are a team-taught course)

MODERN WORLD HISTORY CP **CRS 1282** **GR 11** **CR 5.0** **Y**

This required course surveys world history from 1800 to present. Emphasis will be placed on the following topics: the growth of Nationalism, the Industrial Revolution and the social and political changes in Europe, Asia, Africa, and Latin America in the 19th and the 20th centuries; the Great Wars 1914-1945; the Cold War Era; and the contemporary world.

MODERN WORLD HISTORY H **CRS 1280** **GR 11** **CR 5.0** **Y**

This required course surveys world history from 1800 to present. Emphasis will be placed on the following topics: the growth of Nationalism, the Industrial Revolution and the social and political changes in Europe, Asia, Africa, and Latin America in the 19th and the 20th centuries; the Great Wars 1914-1945; the Cold War Era; and the contemporary world. The honors program is a more in depth analysis of the topics presented. More reading, papers, and projects will be expected of students.

UNITED STATES GOVERNMENT CP **CRS 1244** **GR 12** **CR 5.0** **Y**

**COMPETITION, CORRUPTION & CURRENCY;
THE HISTORY OF SPORTS** **CRS 1266** **GR 10-12** **CR 2.5** **S**

This elective course focuses on the study of sports through history. Potential topics may include Olympics, steroids and scandals, international sports, economics, media and recreational sports.

INFAMOUS CRIMES, CRIMINALS & TRIALS **CRS 1223** **GR 10-12** **CR 2.5** **S**

This course will examine and analyze the lives, times, and deeds of famous criminals in different eras in American history including outlaws from the American “Old West” such as Billy the Kid, Butch Cassidy and the Sundance Kid, the “Hole In the Wall Gang”, and Jesse and Frank James among others. Other eras and genres will include criminals in the early part of the 1900’s such as Bonny Parker and Clyde Barrow and others, the rise of the “Mafia” and crime figures such as Al Capone and others, famous cult criminals such as Charles Manson and the Manson Family and others, and culminate with a look at recent white-collar crime figures such as Bernie Madoff and others. Famous “Lawmen” from each era such as Wyatt Earp, Elliott Ness, and J. Edgar Hoover, among others will also be studied. An integral part of the examination of these criminals and their trials will be an analysis of the social forces that led to the existence of these criminals and their crimes and the lawmen who brought them to justice, and a critical look at the development of the American legal system as it dealt with these individuals in a changing social and technological environment.

INTRO TO LAW & CRIMINAL JUSTICE **CRS 1272** **GR 10-12** **CR 2.5** **S**

In this elective course students survey the criminal justice system in the United States including its main components: law enforcement, courts, and corrections. Special emphasis is placed on the sequence of events and decision points within the system as well as the historical, developmental, and societal influences. The functions of federal, state, country, and local agencies are examined.

HISTORY THROUGH FILM **CRS 1291** **GR 10-12** **CR 2.5** **S**

This is a Social Studies elective that uses movies as a window to study society and how it has changed over time. Films, the era in which they were made, as well as their historical accuracy will be evaluated throughout the course. Although films are a major source material of the course, there will be a substantial amount of reading, discussion, and project work throughout the course.

THE EVOLUTION OF AMERICAN WOMEN **CRS 1248** **GR 11-12** **CR 2.5** **S**

This elective course will focus on the impact of women on American history with some attention paid to the effect of current international issues and women’s rights. Current issues that women face will be addressed including health, political and religious issues. The course will culminate with an analysis of how Hollywood, society, and media portray femininity and beauty.

HISTORY OF ROCK AND ROLL **CRS 1872** **GR 10-12** **CR 2.5** **S**

This course will take a look at the progression and development of music from Delta and Chicago Blues to the Rock ‘n Roll era. This will include the recording process, instruments used during the rock and roll era, and the transition from blues to hard rock. We will be listening to selections ranging from Muddy Waters, Elvis, Johnny Cash, Creedence Clearwater Revival, The Beatles, The Rolling Stones, Led Zeppelin and many more. The course will transition from hard rock to the dark ages of rock and roll, then the rejuvenation of hard rock music in the 1980’s and end with the 1990’s grunge scene.

RAINBOWS & RIOTS **CRS 1267** **GR 11-12** **CR 2.5** **S**

This course will cover the social construction of identities and investigate how they have changed over time. We will examine the many diverse experiences of identity and attraction throughout the world and throughout history, and compare those experiences to today. We will discuss the roots of identities like lesbian, gay, transgender, queer, and many more. The course will begin with a discussion of identities as spectrums and transition to an examination of LGBTQ+ experiences in history, closing with what those experiences look like today.

WORLD LANGUAGE

MANDARIN I CP **CRS 1370** **GR 9-12** **CR 5.0** **Y**

Chinese characters are used extensively throughout the course accompanied by Pinyin, which acts as a pronunciation guide. Pinyin is gradually omitted as students become familiar with the characters and vocabulary. Students will learn pronunciation skills, common characters, basic grammar, simple phrases and sentence patterns that are needed for communicating in basic, practical situations. Thematic topics include, introductions, numbers, age, identifying others, family, pets, countries, nationalities sports, friends and food. Relevant cultural topics about China are also included.

MANDARIN II CP **CRS 1371** **GR 10-12** **CR 5.0** **Y**

This course is a continuation of Mandarin I. Students will continue to expand their understanding of vocabulary and grammatical structure in Mandarin Chinese. Students will learn and expand on skills needed to navigate a variety of situations in daily life. Students will comprehend and produce more complex structures to develop fluency. This course will further develop students' communicative competence in listening, speaking, reading and writing. Continued study of Chinese culture will also be included. **Prerequisite:** Mandarin I or teacher approval.

FRENCH I CP **CRS 1321** **GR 9-12** **CR 5.0** **Y**

This course develops knowledge of basic French, including vocabulary regarding family, friends, personal possessions, places, clothing, shopping, and weekend activities. Students will develop an appreciation of the cultural differences between French-speaking nations, and will learn about the daily life of French teenagers.

FRENCH II CP **CRS 1322** **GR 9-12** **CR 5.0** **Y**

This course furthers the development of spoken and written French with the addition of new vocabulary and verb tenses. Linguistic and cultural differences continue to be explored. Students will begin to read and write longer passages and stories in French.

FRENCH2/3H **CRS 1326** **GR 9-10.** **CR 5.0** **Y**

This accelerated honors class will complete all of the required skills and objectives from French 2 and French 3 in a sequence that will allow students to make connections among a variety of topics to prepare them to be successful in upper level language studies. Students will perform advanced reading, writing, listening and speaking skills and will progress from a Novice High Level to the Intermediate-Mid Level on the ACTFL scale. It is expected that students who complete this course are on pace to take AP French during their senior year. **Prerequisite:** Completion of French 1 and teacher recommendation

FRENCH III CP **CRS 1328** **GR 10-12** **CR 5.0** **Y**

In this course, students will continue to build grammatical skills and their vocabulary, while continuing to perform previous learning standards. Students will discuss a variety of topics in open-ended discussions throughout the year as well as expand their written and presentational expression. Students will also listen to and read unaltered realia. This course is taught primarily in French. **Prerequisite:** Students must have a C or higher in French II or teacher recommendation to register for this course.

FRENCH III H **CRS 1323** **GR 10-12** **CR 5.0** **Y**

This course covers everything listed in French III CP and completes the grammatical mastery of the French language, culminating with the uses of the subjunctive. The course is taught primarily in French, and students will have longer reading and writing projects. Students will also learn about French art and history as. **Prerequisite:** Must have received a C or better in French II and teacher recommendation.

FRENCH IV H **CRS 1324** **GR 10-12** **CR 5.0** **Y**

Students at this level will be reading articles discussing current events in francophone cultures and perfecting writing and speaking skills. This course is taught in French. Advanced placement exams in French may be a possible outcome.

FRENCH V H **CRS 1325** **GR 11-12** **CR 5.0** **Y**

This course will continue to advance students in all areas of language proficiency, preparing them to handle complex real-world situations. In French V, the emphasis is on the thorough review of all aspects of the language. Through writing and speaking on a wide range of topics, students expand their vocabulary, develop their writing style and improve their critical thinking skills. This course prepares the advanced student to take the Advanced Placement French Language exam if they choose

ADVANCED PLACEMENT FRENCH (VIRTUAL) **CRS 1327** **GR 11-12** **CR 5.0** **Y**

Students who have completed the fifth level French course are ready to focus on the four skills of reading, writing, listening and speaking in French that are evaluated by the French Language Advanced Placement Exam. Students continue with extensive reading, writing and discussion, and in addition have assignments that parallel the structure of the exam: reading passages for comprehension, listening for comprehension, timed writing and speaking sessions. Prior to the exam in May students will have taken three timed practice exams. They will finish the course ready to succeed to the best of their ability on the French language and culture, Advanced Placement exam, which is equivalent to the completion of a third year college course.

SPANISH I CP **CRS 1361** **GR 9-12** **CR 5.0** **Y**

This course completes the elementary level of the curriculum. There is continued development of listening, speaking, reading and writing skills. Students learn their way around on topics including vocabulary regarding family, friends, personal possessions, places, clothing, shopping, and weekend activities. An increasing emphasis is placed upon vocabulary building, grammar expansion, and interdisciplinary studies.

SPANISH II CP **CRS 1362** **GR 9-12** **CR 5.0** **Y**

This course builds on the foundation established in the Spanish I courses. New grammar concepts are presented. Vocabulary building continues to be stressed. Students should be able to present short presentations in Spanish and write short compositions. The culture and interdisciplinary studies are continued and expanded.

SPANISH III CP **CRS 1366** **GR 10-12** **CR 5.0** **Y**

This course completes the intermediate level of the curriculum at a college preparatory level. At this point, students should be able to write compositions in Spanish as well as express themselves orally on a variety of topics with a greater degree of accuracy and fluency. The culture and interdisciplinary studies are continued and expanded. This course is taught mostly in Spanish. Students must have a C or higher in Spanish II or teacher recommendation to register for this course.

SPANISH III H **CRS 1363** **GR 10-12** **CR 5.0** **Y**

This course covers everything listed in Spanish III CP. The course is taught primarily in Spanish, and students will have longer reading and writing projects. Students should be self-motivated speakers. **Prerequisite:** Must have received a C or better in Spanish II and teacher recommendation.

SPANISH IV H **CRS 1364** **GR 10-12** **CR 5.0** **Y**

This course further expands Spanish III. Some new grammatical structures are introduced and others reinforced. Vocabulary is specific, directed and extensive. There are readings from recognized Hispanic authors and other supplemental materials. This course is taught completely in Spanish. Students should be fluent speakers. Students are expected to converse completely in Spanish. A project is required.

ADVANCED PLACEMENT SPANISH AND CULTURE **CRS 1365** **GR 11-12** **CR 5.0** **Y**

An in-depth review and reinforcement of grammar, verbs and vocabulary through literature, this course is the equivalent of a freshman year college course. It will follow the prescribed AP curriculum. Students will be prepared and expected to take the AP examination in Language. Class will be conducted in Spanish.

Special Note: Students entering high school language from middle school language must have an 85% in Level I in the middle school to begin at level 2 in the high school. Parents will have the option of requesting testing if they disagree with placement

SPECIAL PROGRAMS

RESEARCH SKILLS **CRS 2025** **GR 9-12** **CR 2.5** **S**

Introduction to library print and electronic resources to support student research, information tasks, and proper citation. Students will become familiar with the configuration and use of the library catalog in order to locate materials for research and recreational reading; online databases and websites to access information for research purposes; and methods to evaluate information. Students will be expected to complete several assignments throughout the semester, including research projects, using the information and skills covered in class.

LIBRARY ASSISTANT **CRS 2017** **GR 11-12** **CR 2.5** **S**
CRS 2018 **CR 5.0** **Y**

This course introduces students to the subject of library and information science and organization. Under the direction and supervision of the high school librarian, students taking this course assist with collection maintenance and special projects to support library activities. Grading is done on a pass/fail basis. Enrollment is limited. Students must obtain permission from the high school librarian in order to enroll in this course.

SENIOR INTERNSHIP **CRS 2004** **GR 12** **CR MAY VARY** **Y**

This class is for students who would like to explore future career goals to help in their choice of future education. This class incorporates intensive research with an off campus internship which culminates in a presentation at the end of the course to a panel of judges from the school community. Selection for this class is based on criteria established by the Senior Internship committee, plus a proposal submitted by the students. Students receive credit for this course.

APAC INDEPENDENT STUDY **CRS 2026** **GR 11-12** **CR W.5** **S**

Ayer Public Access Corporation (APAC) is offering an internship for Ayer-Shirley Regional High Schoolers. For interested students this independent study offers a chance to work for and alongside members of the APAC staff as students’ film, edit and cut programs that will be shown both at the high school and on APAC.

EARLY CHILDHOOD **CRS 2041** **GR 11** **CR 5.0** **S2**

This course is an introduction to the field of early childhood. It studies the foundations, history, philosophy, ethics, the role of the teacher, and the changing needs of children in a variety of settings. This course will address licensing

regulations, state and national standards and how they impact on the social, emotional, and intellectual growth of the child. Students participating in field experiences must undergo a Criminal Offender Record Information (CORI) check.

CRS 2019 GR 12 CR 0 S

WORK STUDY

This course provides an opportunity for seniors to engage in exploring one or more career opportunities. Seniors must have met graduation requirements and have received administrator approval. This is a non-credit bearing course; rather students get paid. This is a supervised program between ASRHS and the employer.

INDEPENDENT ACADEMIC STUDY CRS 1056, 1057, 1058 GR 10-12 CR 2.5 CR 5.0 S Y

This course is for students who have an interest in advanced study in a specific subject area. Students wishing to enroll in this class must submit a proposal which includes the learning objectives, curriculum components, method of evaluation, and identify the cooperating teacher. A committee must approve the proposal for the student to enroll in the course. If warranted, Honors level credit will be awarded with an alternate course number. This course may be taken for a year or semester as determined by the committee.

EMERGENCY MEDICAL TECHNICIAN CRS 2040 GR 12 CR 5.0 Y

As part of a special waiver to Massachusetts’ E.M.T. certification guidelines, ASRHS seniors may participate with community adults in an Ayer Ambulance Service sponsored E.M.T. Basic Training course. Course participants spend approximately 150 hours on a combination of classroom lectures, practical skill sessions, and riding as assistants on ambulance calls. Topics such as basic human anatomy, general pharmacology, respiratory and cardiovascular emergencies, disease-related medical conditions, environmental and behavioral emergencies, musculoskeletal care, soft tissue injuries, trauma and infant and child trauma are covered in the class. Upon successful completion of the course, students take the state written and practical exams for full E.M.T. – B certification. The expenses that students are to be responsible for are as follows: National Certification, \$80; Massachusetts Certification, \$150; and State/MWCC Practical Exam Fee, \$130. This course is limited to 20 – 25 seniors only.

ENGLISH LANGUAGE DEVELOPMENT CRS 1048 GR 9-12 CR 5.0 Y

This course is designed for English Language Learners and focuses on the development of oral and written communication skills using a developmental approach to English language acquisition. Emphasis is placed on speaking and pronunciation, listening and differentiating common and uncommon sounds as these affect meaning, reading for understanding, and writing with an academic purpose. Grammar is introduced as students gain fluency and confidence in academic English. Materials used for instructional purposes focus on the history, traditions, cultural perspectives and values common to American culture without diminishing these aspects of any other culture. Instruction utilizes multiple strategies and takes prior knowledge and students’ own traditions into account in differentiating instruction. May be repeated as required for credit.

ADAPTIVE AND STRUCTURED LEARNING CENTERS

Special education supports throughout Ayer Shirley Regional School District are offered along a continuum of service. Students requiring specialized instruction access the school’s curriculum in a variety of ways depending on individual student needs. This includes access to a modified curriculum within general education classes, as well as specialized instruction in substantially separate classes that are geared toward improving basic skills, life skills, and passing the MCAS while focusing on the student’s individualized education program (IEP). Schedules will vary depending on the individual needs and the program in which the student is placed. ASRHS provides instruction and consultative support as required by the IEP to students enrolled in all courses.

The Ayer Shirley Regional High School special education department utilizes and adheres to the Massachusetts Frameworks & Common Core of Learning state standards. Modifications are determined during the Special Education team meeting process and are designed to meet the disability-related needs of individual students. Students receive these different services based on their eligibility and as written in their IEP.

LC ENGLISH I

CRS 0370

CR 5.0

Y

This class is designed to expose students to current/classic novels and plays. Students will be reading (in some cases out loud) and completing written assignments and projects that correspond to the novel/play. Students will also be learning vocabulary associated with literature. We will also focus on how to write using the MCAS grading rubric. Possible novels and plays are; Tom Sawyer and Huckleberry Finn, A Christmas Carol, The Old Man and the Sea, Romeo and Juliet, and various short stories or poems.

LC ENGLISH II

CRS 0371

CR 5.0

Y

This class is designed to expose students to current/classic novels and plays. Students will be reading (in some cases out loud) and completing written assignments and projects that correspond to the novel/play. Students will also be learning vocabulary associated with literature. We will also focus on how to write using the MCAS grading rubric. Possible novels and plays are; The Outsiders, Gulliver's Travels, Frankenstein, Macbeth, and various short stories or poems.

LC ENGLISH III

CRS 0372

CR 5.0

Y

This class is designed to expose students to current/classic novels and plays. Students will be reading (in some cases out loud) and completing written assignments and projects that correspond to the novel/play. Students will also be learning vocabulary associated with literature. We will also focus on how to write using the MCAS grading rubric. Possible novels and plays are; The Pearl, Frankenstein, Julius Caesar, and various short stories or poems.

LC ENGLISH IV

CRS 0373

CR 5.0

Y

This class is designed to expose students to current/classic novels and plays. Students will be reading (in some cases out loud) and completing written assignments and projects that correspond to the novel/play. Students will also be learning vocabulary associated with literature. We will also focus on how to write using the MCAS grading rubric. Possible novels and plays are; Animal Farm, The Pearl, Tears of a Tiger, Hamlet, and various short stories or poems.

LC HISTORY I

CRS 0365

CR 5.0

Y

Identify Primary Sources vs Secondary Sources. Read examples of each and be able to label which type of source it is.

US History I will cover the time period starting with Andrew Jackson to the US's involvement in WWI. Included topics will be the Louisiana Purchase, Missouri Compromise, Monroe Doctrine, Abolitionist, Mexican War, Kansas-Nebraska Act, Dred Scott decision, and the Civil War, Reconstruction, Native American Removal, the Second Industrial Revolution, Immigration, World War I.

LC HISTORY II

CRS 0366

CR 5.0

Y

Identify Primary Sources vs Secondary Sources. Read examples of each and be able to label which type of source it is.

US History II will cover the period from the 1920's until Present Day. Included topics will be The Roaring 20's, The Great Depression, The US involvement in (WWII), the Cold War, the Civil Rights Movement, Vietnam War, and A New World Order.

LC HISTORY III

CRS 0367

CR 5.0

Y

Identify Primary Sources vs Secondary Sources. Read examples of each and be able to label which type of source it is.

We will be covering World History from the Enlightenment Period in Europe to the present day. Topics covered will include: Absolute Monarchs in Europe, French Revolution and Napoleon, Nationalist Revolutions Sweep the West, Industrial Revolution

and Modern Society, Global Imperialism, The Great War, The Russian Revolution and the Man of Steel, Totalitarianism in the 1930's- 1940's, WWII and the Holocaust, Spread of Communism and the End of Empires, Fall of Communism and Rise of Terrorism, and Current Events

LC HISTORY IV **CRS 0368** **CR 5.0** **Y**

Identify Primary Sources vs Secondary Sources. Read examples of each and be able to label which type of source it is.

US Government will cover the foundations of American Democracy, Interaction Among the Branches of Government, Civil Liberties and Civil Rights, and Political Beliefs.

LC SCIENCE I **CRS 0360** **CR 5.0** **Y**

This course is intended to provide students with a better understanding of the scientific method, cell theory, characteristics and classification of living things and their relationship to the environment. The students will also have a better understanding of heredity and reproduction. Interactive learning will be stressed and connections made across the curriculum. Students have the ability to take the Biology MCAS at the end of this course.

LC SCIENCE II **CRS 0361** **CR 5.0** **Y**

This course is a continuation of Science 1. Students will focus on viruses and bacteria and the role they play in our society, plant systems and functions, biochemistry and body systems. These topics are taught within the developmental frameworks, stressing the relationship between structure and function of living things. Students will have to take the Biology MCAS at the end of this course.

LC SCIENCE III **CRS 0362** **CR 5.0** **Y**

This course is intended to provide students with a working knowledge of the scientific method, standard measurements, the characteristics of the earth, gravity, global atmospheric processes and man's effect on them, various cycles on the earth, and the chemical makeup of the earth. Upon completion of this course students will be able to demonstrate a fundamental understanding of the processes on the earth and its cycles and the makeup of the earth and man's effect on the planet.

LC SCIENCE IV **CRS 0363** **CR 5.0** **Y**

Students will be conducting hands-on studies of the physical laws of nature, with topics ranging from Motion, Force, Energy, Electricity and Magnetism, Waves, Sound and Light explored in extensive lab investigations. Problem solving and logical reasoning skills are the main focus of students' work in this course. Selected topics of modern physics may be introduced as the course progresses.

LC MATH I **CRS 0374** **CR 5.0** **Y**

Math 1 is designed to further explore the concepts introduced in the middle grades and to correspond with the Common Core standards. In this course, students will build on their math vocabulary, a key component in math education. Significant focus will be given to the manipulation of different linear expressions and functions in order to find their solutions. Students will also be introduced to properties of triangles to prepare them for higher level Geometry.

LC MATH II **CRS 0375** **CR 5.0** **Y**

Math 2 is designed to further explore the concepts of Geometry and correspond with the Common Core standards. In this course students will build on their math vocabulary as it relates to Geometry. Significant focus will be placed on volume and area of shapes, angles, and transformations and translations.

LC MATH III **CRS 0376** **CR 5.0** **Y**

Math 3 is designed to further explore the concepts introduced in Math 1 & 2 and to correspond with the Common Core standards. In this course, students will build on their math vocabulary, a key component in math education. Significant focus will be given to the manipulation of different linear expressions and functions in order to find their solutions.

LC MATH IV **CRS 0377** **CR 5.0** **Y**

The goal of this Mathematics course is for the student to demonstrate an understanding of financial literacy, and how it affects their future. Students will examine their roles as consumers, investors, employees, and benefits to having good credit. Topics of discussion will include balancing/setting a budget, mastering checking and savings accounts, local businesses and the personal impact of social decisions on the economy and personal finance.

VOCATIONAL SKILLS I **CRS 0378** **CR 5.0** **Y**

This class is designed to expose students to workplace safety, interest survey for potential careers, identify personality traits, development of soft vocational skills and hard vocational skills, and workplace appearance. Where appropriate there will be trips into the community to support life skill development and classroom curriculum.

VOCATIONAL SKILLS II **CRS 0379** **CR 5.0** **Y**

This class is designed to expose students to the development of soft vocational skills and hard vocational skills, goal setting and evaluation, job search skills, basic interview skills, and basic money management skills. Where appropriate there will be trips into the community to support life skill development and classroom curriculum.

VOCATIONAL SKILLS III **CRS 0380** **CR 5.0** **Y**

This class is designed to expose students to development of soft vocational skills and hard vocational skills, sending professional emails, in depth interview skills, Ethics, basic money management skills, and group work dynamics. Where appropriate there will be trips into the community to support life skill development and classroom curriculum.

VOCATIONAL SKILLS IV **CRS 0381** **CR 5.0** **Y**

This class is designed to expose students to a variety of vocational skills including creating a functioning vocational portfolio to take with them upon graduation. Included is an interest survey, resume, cover letter, references, and work samples. Students will create professional work samples around their personal vocational interests to demonstrate understanding of their preferred future careers. Where appropriate there will be trips into the community to support life skill development and classroom curriculum.

COMMUNITY AWARENESS I **CRS 0382** **CR 5.0** **Y**

This class is designed to expose students to their IEP's, the IEP process including how it affects them and how they can affect it. Life Skills topics include successful routines, time management, different types of planners, basic cooking skills including apps and starters, knife skills, with kitchen safety. Where appropriate there will be trips into the community to support life skill development and classroom curriculum.

COMMUNITY AWARENESS II **CRS 0383** **CR 5.0** **Y**

This class is designed to expose students to basic cooking skills with a focus on Breakfast, knife skills, and kitchen safety. Life skills will include social skills in various settings, making decisions using informed consent, types of motivation and how to motivate yourself. Where appropriate there will be trips into the community to support life skill development and classroom curriculum.

COMMUNITY AWARENESS III **CRS 0384** **CR 5.0** **Y**

This class is designed to expose students to basic cooking skills with a focus on a dinner menu, knife skills, and kitchen safety. Life skills will include social skills in various settings, problem solving real life situations, and managing a household budget. Where appropriate there will be trips into the community to support life skill development and classroom curriculum.

COMMUNITY AWARENESS IV **CRS 0385** **CR 5.0** **Y**

This class is designed to expose students to basic cooking skills with a focus on a dinner menu, knife skills, and kitchen safety. Life skills will include social skills around how to plan/host a party, creating and maintaining friendships, tool/workplace safety, what's in a basic home tool kit, and minor home repairs. Where appropriate there will be trips into the community to support life skill development and classroom curriculum.

ACADEMIC DEVELOPMENT

CRS 1037, GR 9-12 CR 5.0 Y
CRS 1038
CRS 1039

Students are instructed in learning strategies, and they receive academic instruction in areas identified by their individualized educational program (IEP). Students will learn skills that will enable them to achieve academic success by receiving instruction in a supportive learning environment. Students will receive academic support and learn appropriate strategies that will help them succeed across the curriculum. Students are assigned to this Elective as part of the Individualized Education Program (IEP) process.

READING DEVELOPMENT I & II

CRS 1069 GR 9-12 CR 5.0 Y
CRS 1070

This course is designed to help students develop fundamental reading skills crucial for success in their academic classes.

SCHOOL COUNSELING PROGRAM

MISSION

School Counseling and Guidance Services are available and essential for all students. The mission of the Ayer Shirley Regional High School Counseling department is to empower all students to reach their full potential in academic, social/emotional, and career/technical development while instilling the values of high expectations, life-long learning, appreciation of diversity, and responsible citizenship.

INTRODUCTION

School Counseling (Guidance) is a part of Ayer Shirley Regional High School's total educational program. It provides assistance to the individual student as well as to groups. By developing an understanding of his/her characteristics and potential, a student gains the knowledge necessary for personal fulfillment and social responsibility.

The school counseling office atmosphere is personal and confidential. Counselors are available by appointment, before and after school, and during class time in cases of emergency. Counselors take a continued interest in each student as a person and assist the student to increase self-confidence and feelings of personal worth. Periodically, a counselor will be available for after school and evening appointments.

Services are delivered in individual, small, and large group settings and are designed to meet the school counseling standards developed by the American School Counselor Association, the Massachusetts School Counselors Association, supported by the Massachusetts Department of Elementary and Secondary Education and aligned with the Massachusetts Frameworks. The three domains are Academic/Technical, Personal/Social, and Workplace Readiness Development. Within each of these domains, career development benchmarks and competencies are identified and can be incorporated into other curricular domains.

Grade appropriate activities will be introduced in collaboration with teachers integrating school counseling objectives across the curriculum.

COURSE CHANGES

As a general rule, students will not be permitted to change courses without good cause. **However, if it is determined that a student is misplaced, a change may be made to a full year course within the first ten days of school, and a change in a semester course within the first ten days of the semester.** Changes typically require consultation with the student, the teacher, and a parent or guardian.

SCHEDULING NOTICE

A course may be canceled because of under-enrollment or lack of available teaching personnel for a particular course. There are two semesters annually; core academic courses meet year long, while most electives are semester long courses.

COLLEGE & POST SECONDARY PLANNING

The college search and application process involve long term planning. Beginning in ninth grade with the creation of the 4-year plan counselors and students work collaboratively in selecting an appropriate post-secondary path. Counselors support, guide, and assist students in the following areas:

- Course selection
- College search process
- College majors and related careers
- PSAT/SAT/SAT Subject/ACT testing
- College application process
- Essay/Resume writing
- Letters of Recommendations
- College visits and interviews
- Financial Aid/Scholarships
- Career Interest/Development
- Social/Emotional Development

The School Counseling office is using Naviance, a college and career exploration and planning tool. The comprehensive college and career readiness resources assist students and families in bridging academic preparation and future goals. It also provides schools and districts with the tools to help students and families gather information they need to help prepare for life after high school. Naviance has tools that students will use to create a plan for their future as they discover their individual strengths and learning styles while exploring college and career options based on their results. Naviance will be used in all grades in order to communicate activities that need to be completed by students and to send information on college and career readiness to parents.

Students are encouraged to utilize the school counselors and the resources available in the school counseling office to assist them in this process. The School Counseling Suite has computers available to the students to aid them in obtaining information about colleges and careers.

STANDARDIZED TESTING

The following is a summary of the testing programs made available to the students through the School Counseling office. Most of this testing is voluntary; however, students who plan to attend college after high school should take full advantage of all the testing opportunities available. These tests are usually a requirement for college admissions, so students must do their research to see what is required by each school organization.

Information about testing will be available on the ASRHS School Counseling website; however, it is the responsibility of the student to register for these exams, watch their deadlines, and to research which colleges require additional testing (such as the SAT Subject Test). The standardized tests recommended by the school counseling department are:

- **MCAS** – Competency Determination (CD) is a requisite for high school graduation under Massachusetts’ state law, which requires students to demonstrate mastery of a common core of skills, competencies, and knowledge in the areas of Mathematics, English Language Arts, and Biology or Science & Technology/Engineering as measured by the MCAS exam. Competency Determination is achieved by students earning a score of “proficient” on the Mathematics and English MCAS exams, and a score of “passing” on the Biology or Science & Technology/Engineering exam. Students who pass MCAS but do not reach proficiency will be placed on an Educational Proficiency Plan. This plan allows students to reach proficiency and complete all the ASRHS graduation requirements simultaneously.

- **Preliminary Scholastic Aptitude Test and National Merit Scholarship Qualifying Test (PSAT/NMSQT)** – this approximately two-hour version of the SAT is valuable for practice. It is highly recommended that students take this test in October of their sophomore AND junior year. For juniors, the PSAT is a National Merit Scholarship Qualifying Test utilized by the National Merit Scholarship Program sponsors to identify students who may qualify for scholarship consideration. A detailed individual report is provided to each participant highlighting their weaknesses and strengths, and also offers them information about how to begin their college admissions journey. This test is offered only once per year. Registration information is available in the school counseling office at the beginning of each school year.
- **Standardized Aptitude Test (SAT)** – The SAT is a globally recognized college admission test that shows colleges what you know and how well you can apply that knowledge. It tests your knowledge of reading, writing and math – subjects that are taught every day in high school classrooms. Most students take the SAT during their junior or senior year of high school, and almost all colleges and universities use the SAT to make admission decisions. Practice test, tips, as well as registration information, are available at www.collegeboard.org. Students should create a College Board account by visiting collegeboard.org.
- **SAT Subject Test** – Subject tests are hour-long, content-based tests that allow you to showcase achievement in specific subject areas where you excel. These are the only national admission tests where you choose the tests that best showcase your achievements and interests. SAT Subject Tests allow you to differentiate yourself in the college admission process or send a strong message regarding your readiness to study specific majors or programs in college. There are 20 SAT Subject Tests in five general subject areas: English, history, languages, mathematics and science. Some of the more competitive colleges REQUIRE 2-3 SAT Subject Tests; it is the responsibility of the student to see if it is necessary for the colleges they are applying to.
- **ACT** – The ACT is also a nationally accepted college entrance exam and is looked at interchangeably with the SAT and SAT Subject Tests. It assesses a high school student’s general education development and their ability to complete college-level work. The multiple-choice test covers four skill areas: English, mathematics, reading, and science. The writing test, which is optional, measures skills in planning and writing a short essay. In order for the ACT to be considered in place of the SAT for college admissions, The student MUST take the optional writing section. Visit www.actstudent.org for additional information, practice tests, and registration information.
- **Advanced Placement Exams** – AP exams are offered in May to all students who have participated in an AP course throughout the school year, at the high school. Through AP’s college-level courses and exams, you can earn college credit and stand out in the admission process. See your counselor for more information.

CONFERENCES WITH COLLEGE REPRESENTATIVES

In the fall of each school year, admissions representatives of schools and colleges visit the high school to meet with seniors and juniors who may be interested in receiving information about that program. It is to the student’s advantage to attend these meetings, specifically for the schools that are their top choices. When representatives of schools or colleges visit the high school, notification will be posted in the School Counseling Suite, announced, and placed on television monitors.

NCAA – NATIONAL COLLEGIATE ATHLETIC ASSOCIATION

Student-athletes must register with the NCAA Eligibility Center to be eligible to play NCAA Division I or II sports in college. Athletes playing in Division III do not have to register. Students should work closely with their coaches and school counselor to determine if they should complete this process.

What is the NCAA Eligibility Center?

The NCAA Eligibility Center certifies whether prospective college athletes are eligible to play sports at NCAA Division I or II institutions. It does this by reviewing the student-athlete’s academic record, SAT or ACT scores, and amateur status to ensure conformity with NCAA rules. Students considering playing DI or DII athletics in college should complete NCAA registration and send their transcript by the end of junior year and must have a minimum GPA of 2.5.

What are NCAA Divisions I, II, and III?

The NCAA is the governing body of many intercollegiate sports. Each college regulated by the NCAA has established rules on eligibility, recruiting and financial aid, and falls into one of the three membership divisions (Divisions I, II, and III). Divisions are based on college size and the scope of their athletic programs and scholarships.

When should students register?

The NCAA recommends that student-athletes register at the beginning of their junior year in high school, but many students register after their junior year. There is no registration deadline; but students must be cleared by the Eligibility Center before they receive athletic scholarships or compete at a Division I or II institution.

How do students register?

Students must register online at the NCAA Eligibility Center. The link for this site is <https://web3.ncaa.org/ecwr3/>. Students will have to enter personal information, answer questions about their course work and sports participation outside of high school and pay a registration fee.

Can students have the registration fee waived?

Students who have received a waiver for the SAT or ACT are eligible for a waiver of the registration fee. The student's counselor must submit confirmation of the student's test fee waiver. Please see your counselor for more information.

FINANCIAL AID AND SCHOLARSHIPS

In view of the ever-increasing costs of college, families need to take advantage of all resources available to finance higher education for their children. The school counseling department partners with MEFA (Massachusetts Educational Financing Authority) to bring parents and students the most up to date information and assistance regarding financial aid for college. Parents are able to access this information from the school counseling website, Naviance or by visiting the following:

- www.naviance.com (Naviance)
- www.mefa.org (Massachusetts Educational Financing Authority)
- www.fafsa.ed.gov (Free Application for Federal Student Aid)
- www.studentaid.gov (Federal Student Aid)
- www.collegeboard.org (CollegeBoard)

Scholarships from other sources – Throughout the year, the school counseling department receives notifications from local, state, and national organizations offering scholarships to our students. These scholarships are primarily from business, industrial, professional, and fraternal organizations. Criteria for these awards are usually based on academic achievement, community service, test scores, essays, and leadership qualities. These scholarships are publicized and updated on Naviance. It is the responsibility of the student to regularly check for updates and deadlines, and to pursue these opportunities. School counselors are ready to offer any assistance with this process in regards to information, recommendation letters, and transcripts.

In addition, it is important for families to inquire about scholarships offered by their own employers, fraternal and veteran organizations, and church groups.

Local Scholarships for ASRHS students – In addition to the aforementioned scholarships, numerous local scholarships are also available specifically for Ayer and Shirley students at the high school. Information regarding these scholarships and individual applications are discussed at a senior class meeting and posted on Naviance. Selection for all of these scholarships is based upon application criteria set by the donors, and upon being awarded by the ASRHS Scholarship Committee, will be announced at the annual Scholarship and Awards Ceremony.

MASSACHUSETTS STATE COLLEGES AND UNIVERSITY

MINIMUM ADMISSIONS STANDARDS

The Board of Higher Education requires a minimum of college preparatory coursework across the disciplines in order to be considered for admission to any of the state colleges or universities.

The chart below outlines the admission standards with respect to GPA and standardized test scores:

- Minimum Weighted, recalculated high school G.P.A. 3.0
- State College SAT Scores (math and critical reading (CR) combined only) 920-1120
- UMass SAT Scores (math and CR combined only) 950-1150
- A sliding scale will be used for students with a G.P.A. between 2.0-2.99

Weighted High School GPA	UMass Campuses Admission Combined CR and Math SAT Scores Must Equal or Exceed	State University Admission Combined CR and Math SAT Scores Must Equal or Exceed
	<i>ACT equivalent in parentheses</i>	<i>ACT equivalent in parentheses</i>
2.51-2.99	1030 (20)	990 (19)
2.41-2.50	1070 (21)	1030 (20)
2.31-2.40	1110 (22)	1070 (21)
2.21-2.30	1140 (23)	1110 (22)
2.11-2.20	1180 (24)	1140 (23)
2.00-2.10	1220 (25)	1180 (24)

No student with a GPA below 2.00 may be admitted to a state university campus. Special admissions criteria do exist; go to the Massachusetts Board of Higher Education (www.mass.edu) or the Massachusetts Department of Elementary and Secondary Education (www.doe.mass.edu) for more information.

TIMELINE FOR THE COLLEGE/TRADE SCHOOL APPLICATION/ PROCESS

Planning for college involves a series of activities that begins well in advance of high school graduation. Students who plan ahead and start the process early will have the greatest variety of opportunities, for both college admission and financial aid. The following is a suggested timeline of tasks for students as they work towards college admissions.

FRESHMAN/SOPHOMORE YEARS

- Enroll in a strong college-preparatory curriculum
- Achieve academically
- Become familiar with counselors and services of Ayer Shirley Regional High School
- Become involved in sports and/or activities
- Smart Goal Development
- Resume Building
- Job Interviewing Skills
- Complete Naviance Activities
 - Strength Explorer Assessment
 - College Search
 - AchieveWorks Intelligences
 - AchieveWorks Personality
 - Career Exploration
- October (Grade 10): May take the PSAT/NMSQT if desired
- May (Grade 10): take SAT Subject tests; Biology Test, for example, if appropriate

SPRING/SUMMER BEFORE JUNIOR YEAR

- Complete at least one college search activity to generate a list of 10-20 possible schools
- Identify general criteria for admission to these colleges or a program of your choice and to ensure that you are taking the right high school courses to meet the criteria (i.e. Taking Anatomy & Physiology as a senior if you want to major in Nursing)
- Begin to develop a college timeline (include dates for tests (PSAT/SAT/ACT), application deadlines, financial aid application deadlines, etc.)
- Talk with your parents about your college plans and encourage them to visit campuses with you

FALL OF JUNIOR YEAR

- Register to take the PSAT/NMSQT to prepare for the SAT and to qualify for National Merit Scholarships
- Plan to attend college fairs and college representative visits at your school and in the community
- Continue researching the colleges or Trade Schools on your list with your counselor and parents

WINTER/SPRING OF JUNIOR YEAR

Schedule a meeting with your Parent/Guardian and your School Counselor to discuss Post Secondary Planning

- Register for the SAT Reasoning Test with Writing or the ACT with Writing. If you are planning to apply early to college, you should have 1-2 college entrance exams completed by June
- Register for the SAT Subject Tests if your college requires it, or if you show a proficiency in a certain subject area
- Post Secondary Plan Workbook
- Begin narrowing down your college list to 6-10 colleges and In Naviance:
 - Complete College Super Match
 - Add college to “Colleges I’m Thinking About”
 - Begin Scholarship search
 - Update Resume
 - Career Exploration/Career Cluster /Roadtrip Nation
- **VISIT COLLEGES!!** Tour campuses and make appointments with admissions counselors .
- Attend Financial Aid seminars in preparation for applying for aid the following year
- Attend the NEACAC Fair in May, when available
- Seek out **summer internship or volunteer opportunities** to strengthen your resume
- Choose senior year courses that will show your strengths and will allow you to shine

SUMMER BEFORE SENIOR YEAR

- Sign up for an account on www.commonapplication.org, after August 1. You can apply to more than 500 colleges with this ONE application with the click of a button
- Research your college/tradde school essay topics and begin putting together your essay drafts
- Continue with Summer Internships and Volunteer Opportunities

SENIOR YEAR

Naviance Activities to be completed throughout the year:

- Add Colleges to “Colleges I’m Applying to” list
- Request transcripts
- Request teacher/Counselor Recommendations
- Complete Game Plan Survey
- Update Resume
- Apply for Scholarships

- Career Exploration

SEPTEMBER

Begin gathering your financial information to apply for the FAFSA on October 1st or soon after.

- Finalize your list of colleges /trade schools that you will be applying to
- Sign up to take the SAT with Writing or ACT with Writing in October, November, or December
- Be aware of EARLY ACTION/DECISION deadlines
- Request teacher recommendations for your college applications or Trade School Application (with the help of your counselor)
- Continue drafting your college/trade school essays and have teachers/parents/counselors proofread everything for you.
- Take the ASVAB CEP if applicable
- Apply to Vocational/Trade School

OCTOBER/NOVEMBER

- Complete and submit your FAFSA as soon after October 1st as possible
- Attend FAFSA Day – www.fafsaday.org
- Research the CSS PROFILE form and if your college requires it, fill it out now (most top tier schools will require this additional financial form)
- Finalize your college essays
- Ensure your recommendations are in progress
- Watch your EARLY ACTION/EARLY DECISION deadlines as most begin November 1st
- Meet again with your counselor to review your list of colleges and to ensure you haven't missed any steps
- Attend a Financial Aid Workshop at ASRHS
- Obtain Transcript Request Forms in the school counseling office or on the ASRHS school counseling website to ensure all your records are forwarded to your college choices

DECEMBER

- Obtain and complete any additional financial aid forms required by your colleges
- Begin applying for scholarships that are posted in the School Counseling Suite and on the school website
- Attempt to submit your top three choice school applications before Christmas break. Early action/decision applications must be submitted prior to this

JANUARY

- Research scholarship opportunities
- Complete and submit your remaining college applications

FEBRUARY/MARCH

- Respond to any financial aid letters and correspondence from colleges
- Mid-year grades will be automatically sent unless you request us not to
- Apply for local and graduation scholarships

APRIL

- Most selective colleges start to announce their decisions in April. Decide which one is best for you
- Inform your counselor of college acceptance, rejections, or wait list status. Bring in copies of letters to your counselor
- Compare award letters and narrow to final decision
- Give thank you notes to teachers who wrote you letters of recommendation

- Also send thank you letters to donors if you receive scholarship awards

MAY/JUNE

- Send a deposit to your chosen college by May 1st
- Inform the School Counseling Office of your final choice
- The common date used by colleges to commit (deposit) to a college is on or before May 1st
- Request that final grades be sent to the college/university you plan to attend
- Celebrate your graduation from Ayer Shirley Regional High School

STUDENTS CONSIDERING ALTERNATIVES TO COLLEGE

Students who are not planning to attend college after high school should consider following the above guidelines to maximize their potential opportunities. In many cases, students decide late in their high school career that they do want to attend a college. Additionally, many vocational/technical post-secondary schools, career schools, apprenticeships and employers will consider the applicant's high school record prior to deciding to admit or employ a person.

This Program of Studies and any updates can be accessed by visiting www.asrsd.o

