

Monadnock Regional Middle High School



PROGRAM OF STUDIES

2024-2025

The community of Monadnock Regional Middle High School is dedicated to engaging all students in personal, civic and academic growth.

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Administrative Offices

Gregory Pickering - Principal
Becky Russell - High School Assistant Principal
Paul Goodhind - Middle School Assistant Principal
Kathryn Schnare - Special Education Coordinator
Tom Cote - Athletic Director
Samantha Sestito - Middle School Counselor
Kelsey Kilburn - High School Counselor
Bethany Maynard - High School Counselor

Division Leaders

Linda Minickiello - ELA and Social Studies
Erin Condap - FACS and Technology
Trevor Blanchard - Math
Matt Caron - PE, World Language and Fine and Performing Arts
John Naso - Science

NOTICE OF NON-DISCRIMINATION The School District of School Administrative Unit No.93 (Monadnock Regional School District) does not discriminate in its educational programs, activities or employment practices on the basis of race, color, national origin, age, sex, religion, marital status, or handicap under the provisions of Title VI and Title VII of the Civil Rights Act of 1964, the Age Discrimination Act of 1967, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Education of All Handicapped Children Act of 1975, the Individuals with Disabilities in Education Act of 1990, and the Americans with Disabilities Act of 1990. Any persons having inquiries concerning School Administrative Unit No. 93's policies of compliance with the regulations implementing these laws may contact the Director of Special Services, SAU No. 93, 600 Old Homestead Highway, Swanzey, NH 03446, (603) 352-6955, FAX (603) 358-6708. The School Districts of School Administrative Unit No. 93 will provide drug-free schools and workplaces in accordance with the Drug-Free Workplace Act of 1988 and it's implementing regulations.²

Dear Monadnock Community,

The Program of Studies has been created to help assist you in your journey throughout your high school career. Whatever path you choose; whichever class you take; our Program of Studies will help guide you and answer your questions.

I strongly encourage you, and your family, to read the following information and discuss it with your school counselor. They will be able to answer questions that you might have, and they will be able to assist you in choosing the appropriate course load for your upcoming school year. While planning your schedule, please keep in mind all of your short-and-long term goals. The courses you take now can pay huge dividends in your future.

At Monadnock, we encourage our students to be the best students, both academically and socially. Our scheduling process takes a significant amount of time and we take pride in what we are able to offer our students. Our courses are created with our students' interests in mind. Please read over our Program of Studies and feel free to email me or call me if you have any questions.

Respectfully,

Gregory Pickering
Principal
Monadnock Regional Middle High School
gpickering@mrsd.org
603-352-6575

Monadnock Regional Middle High School is fully accredited by the New England Association of Secondary Schools.

Accreditation of an institution by the New England Association indicates that it meets or exceeds standards and criteria for the assessment of institutional quality periodically applied through a peer group review process. An accredited school is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

The goals of NEASC Accreditation are effectiveness, improvement, and public assurance. Unlike popular websites, this does not involve comparing or ranking schools, but rather establishes a level of acceptable quality for all Accredited schools.

Accreditation has two faces: quality assurance and school improvement. Attention to the former has proved essential defending the independence of schools and providing relief from external regulation.

The primary function of NEASC Accreditation, however, is school improvement. Every independent school accredited by NEASC is assessed using the same protocols and materials, thus assuring that the school is faithful to its missions, conducts its programs appropriately to meet its goals, and fulfills the Standards of Accreditation established by the Commission on Independent Schools.

Introduction to our Program of Studies

The Program of Studies at Monadnock Regional Middle High School is designed to provide a description of courses to help students make informed decisions about their course selection. The Program of Studies meets the academic needs of students for their goals, interest and post-secondary plans.

Please follow the guidelines below so the best possible program can be scheduled to suit each student's four-year and post-secondary goals.

- Students must take all of the courses listed as required.
- Students must earn the required state credits to graduate. Credit will be awarded when all course competencies have been met.
- The school will make every effort to honor students' requests, but in the event of scheduling conflicts, students will be given the opportunity to choose other subjects whenever possible.
- After the first two weeks of a course, requests for schedule changes will not be honored except in cases of extenuating circumstances and with Principal approval.
- Students in grades 9, 10 and 11 must take at least six credited classes at MRMHS per semester.
- Students in the 12th grade must take at least five credited classes at MRMHS per semester.

Promotion Requirements:

Students will be promoted to the next grade but will be required to repeat any state required courses that they did not receive credit for. Any student who has not met the minimum requirement of 21 credits by the end of the 4th year, will be retained and may be ineligible to graduate the following year. (See reference pg. 11)

Add/Drop Procedure:

Students are encouraged to finalize their schedules prior to the first day of school. If changes need to be made due to placement issues or scheduling conflicts, they must be initiated within the first two weeks of a semester. No changes will be considered without extenuating circumstances and with Principal approval. Teacher initiated changes will be considered for placement considerations at any time during the year with permission of the parent, School Counselor and Principal. Two weeks after the first progress report, the letter grade at the time of the drop will be posted on the student's official transcript.

Early Graduation Procedure:

To be approved for early graduation, the parent/guardian and their child must submit the following packet by July 1st (entering their final graduation year) to the Principal.

Step 1: A letter written and signed by the parent/guardian and student stating their request and reason for early graduation.

Step 2: Parent/Guardian and student forwards the letter to the appropriate School Counselor.

Step 3: The School Counselor writes a letter outlining:

- Student's credits earned to date
- Student's courses needed to complete High School diploma
- Student's post-secondary plans
- Final recommendation to the Principal

Step 4: The School Counselor submits the packet to the Principal containing parent/student letter, School Counselor's letter and student transcript.

Step 5: The Principal makes the final decision and will reach out to the student, family and School Counselor with the decision.

Academic levels

Monadnock's courses are designed to suit students' academic abilities. Honors, College Prep (CP), and General vary in pace and depth. This allows teachers to use differentiation techniques to meet individual students' needs. At Monadnock, a number of our courses are categorized into those three academic levels: Honors, College Prep and General.

General Requirements and Course Selection Process

General Requirements:

To earn a Monadnock Regional Middle High School diploma, students must accrue at least 21 credits. Monadnock's school year is divided into two semesters. One credit (1.0) is earned by successfully completing a full-year course that meets daily. A half credit (0.5) is earned by successfully completing a half-year course that meets daily. Students will be informed of course competencies by individual teachers at the start of each course.

9th grade	
English 9	1 credit
Algebra*	1 credit
Earth Science	1 credit
History of Western Society	1 credit
Physical Education	1 credit
Elective course(s)	1.5 credits

- 9th grade students who have successfully earned Algebra credit in 8th grade will not need to repeat Algebra in 9th grade. Students will be placed in a Geometry course.

10th grade	
English 10	1 credit
Geometry	1 credit
Biology	1 credit
US History Pt. 1*	1 credit
Life Choices	.5 credit
Elective course(s)	1.5 credits

- Instead of taking USH Pt.1, students may also elect to take AP European History.

11th grade	
English 11	1 credit
Mathematics	1 credit
Chemistry	1 credit
US History Pt. 2	1 credit
Elective course(s)	2 credits

12th grade	
English 12	1 credit
Mathematics	1 credit
Physics	1 credit
Civics*	.5 credit
Economics	.5 credit
Elective course(s)	1 credit

- Students must pass the naturalization examination developed by the 2020 United States Citizen and Immigration Services, with a 70 percent or better, in order to graduate.

General Requirements and Course Selection Process

Diploma choices

Credits required for individual tiered diploma options

	MRMHS	NH Scholars	NH Scholars Fine Arts	NH Scholars STEM	MRMHS Distinction
English: 4 credits	4 credits required	4 credits required	4 credits required	4 credits required	4 credits required
Math: 4 credits	4 credits required ¹	4 credits required ²	4 credits required ³	4 credits required ⁴	4 credits required ⁵
Earth Science: 1 credit	1 credit required	1 credit required	1 credit required	1 credit required	1 credit required ⁶
Biology: 1 credit	1 credit required	1 credit required	1 credit required	1 credit required	1 credit required ⁷
Science electives: 2 credits	2 credits required	2 credits required ⁸	2 credits required ⁹	2 credits required ¹⁰	2 credits required ¹¹

¹ Algebra 1 is required

² Algebra 1, Geometry and Algebra 2 are required

³ Algebra 1, Geometry and Algebra 2 are required

⁴ Algebra 1, Geometry and Algebra 2 are required

⁵ Courses must be taken at a CP, Honors or AP level

⁶ Courses must be taken at a CP, Honors or AP level

⁷ Courses must be taken at a CP, Honors or AP level

⁸ Chemistry or Physics or HAP

⁹ Chemistry or Physics or HAP

¹⁰ Chemistry or Physics or HAP

¹¹ Chemistry or Physics or HAP

Civics: .5 credit	.5 credit required	.5 credit required	.5 credit required	.5 credit required	.5 credit required
Economics: .5 credit	.5 credit required	.5 credit required	.5 credit required	.5 credit required	.5 credit required
History of Western Civ.: ¹² 1 credit	1 credit required	1 credit required	1 credit required	1 credit required	1 credit required ¹³
USH Pt. 1: 1 credit	1 credit required	1 credit required	1 credit required	1 credit required	1 credit required ¹⁴
USH Pt. 2: ¹⁵ 1 credit	1 credit required	1 credit required	1 credit required	1 credit required	1 credit required ¹⁶
World Language		2 credits required	2 credits required	2 credits required	3 credits required
Arts:	.5 credit required	.5 credit required	.5 credit required	.5 credit required	.5 credit required
Computers:	.5 credit required	.5 credit required	.5 credit required	.5 credit required	.5 credit required
Life Choices: .5 credit	.5 credit required	.5 credit required	.5 credit required	.5 credit required	.5 credit required
Physical Education: 1 credit	1 credit required	1 credit required	1 credit required	1 credit required	1 credit required

¹² AP European History can be a substitute for HWC

¹³ Courses must be taken at a CP, Honors or AP level

¹⁴ Courses must be taken at a CP, Honors or AP level

¹⁵ AP US History can be a substitute for USH Pt. 2

¹⁶ Courses must be taken at a CP, Honors or AP level

Electives	2.5 credits required	3 credits required	3 credits required	3 credits required	4.5 credits required
Total credits required:	21 credits	23.5 credits	23.5 credits	23.5 credits	26 credits

Husky Habits

All courses at Monadnock Regional Middle High School are designed around essential knowledge and skills described by the following school-wide Husky Habits. These are the skills that we believe all students will need in order to be successful in the 21st century. All students must be college or career ready by the time they graduate from high school. Even if a student chooses not to attend post-secondary institutions upon graduation, they must have the knowledge and skills which will enable them to succeed in whichever direction they decide to pursue.

The requirements to work in today's world are constantly changing. Most careers demand continuous training. Most employers will require their employees to continue to learn to further their knowledge-base and to learn new skills. The technology and work processes in the 21st century continue to develop, improve, and change. Part of our job at Monadnock is to help ensure our students become successful young citizens that are prepared to adapt to the ever changing world.

The following Husky Habits are what we imbed in our curriculum at Monadnock. We believe that these skills are important to have in order to help students become successful adults in the future. Please take a moment and look over our Husky Habits and their rubrics.

COMMUNICATION:

The transfer of ideas and information

4 Advanced	3 Proficient	2 Improving	1 Beginning	0 No Evidence
I can consistently:	Most of the time I can independently:	With coaching, I can:	With direct assistance, I can:	
1. Use media fluently 2. Understand and analyze the essential parts of the topic 3. Choose media appropriate for the audience/ message 4. Listen/read attentively and respectfully	1. Use media fluently 2. Understand and analyze the essential parts of the topic 3. Choose media appropriate for the audience/ message 4. Listen/read attentively and respectfully	1. Use media fluently 2. Understand and analyze the essential parts of the topic 3. Choose media appropriate for the audience/ message 4. Listen/read attentively and respectfully	1. Use media fluently 2. Understand and analyze the essential parts of the topic 3. Choose media appropriate for the audience/ message 4. Listen/read attentively and respectfully	

PROBLEM-SOLVING:

Applying previous learning to new situations

4 Advanced	3 Proficient	2 Improving	1 Beginning	0 No Evidence
I can consistently:	Most of the time I can independently:	With coaching, I can:	With direct assistance, I can:	
1. Understand and evaluate the problem or issue 2. Identify strategies based on sufficient and reliable resources 3. Implement a strategy with justification 4. Analyze and evaluate the results of a strategy to determine the solution	1. Understand and evaluate the problem or issue 2. Identify strategies based on sufficient and reliable resources 3. Implement a strategy with justification 4. Analyze and evaluate the results of a strategy to determine the solution	1. Understand and evaluate the problem or issue 2. Identify strategies based on sufficient and reliable resources 3. Implement a strategy with justification 4. Analyze and evaluate the results of a strategy to determine the solution	1. Understand and evaluate the problem or issue 2. Identify strategies based on sufficient and reliable resources 3. Implement a strategy with justification 4. Analyze and evaluate the results of a strategy to determine the solution	

TECHNOLOGY LITERACY:

Human innovation in action

4 Advanced	3 Proficient	2 Improving	1 Beginning	0 No Evidence
I can consistently:	Most of the time I can independently:	With coaching, I can:	With direct assistance, I can:	
1. Use and manage technological systems and resources appropriately 2. Use technological systems safely	1. Use and manage technological systems and resources appropriately 2. Use technological systems safely	1. Use and manage technological systems and resources appropriately 2. Use technological systems safely	1. Use and manage technological systems and resources appropriately 2. Use technological systems safely	

CREATIVITY:

The development of new and innovative ideas and artifacts

4 Advanced	3 Proficient	2 Improving	1 Beginning	0 No Evidence
I can consistently:	Most of the time I can independently:	With coaching, I can:	With direct assistance, I can:	
1. Generate original ideas 2. Combine ideas in the creation of an original artifact	1. Generate original ideas 2. Combine ideas in the creation of an original artifact	1. Generate original ideas 2. Combine ideas in the creation of an original artifact	1. Generate original ideas 2. Combine ideas in the creation of an original artifact	

LIFE AND CAREER SKILLS:

The successful navigation of life after Monadnock

	4 Advanced	3 Proficient	2 Improving	1 Beginning	0 No Evidence
	I can consistently:	Most of the time I can independently:	With coaching, I can:	With direct assistance, I can:	
Collaboration	<ol style="list-style-type: none"> 1. Listen to others and share resources and ideas 2. Demonstrate flexibility 3. Accept and fulfill roles in a group 	<ol style="list-style-type: none"> 1. Listen to others and share resources and ideas 2. Demonstrate flexibility 3. Accept and fulfill roles in a group 	<ol style="list-style-type: none"> 1. Listen to others and share resources and ideas 2. Demonstrate flexibility 3. Accept and fulfill roles in a group 	<ol style="list-style-type: none"> 1. Listen to others and share resources and ideas 2. Demonstrate flexibility 3. Accept and fulfill roles in a group 	
Respect	<ol style="list-style-type: none"> 1. Follow classroom expectations 2. Demonstrate courtesy to others 	<ol style="list-style-type: none"> 1. Follow classroom expectations 2. Demonstrate courtesy to others 	<ol style="list-style-type: none"> 1. Follow classroom expectations 2. Demonstrate courtesy to others 	<ol style="list-style-type: none"> 1. Follow classroom expectations 2. Demonstrate courtesy to others 	
Self-Direction	<ol style="list-style-type: none"> 1. Initiate work and stay on task 2. Ask for and use feedback 3. Meet deadlines 	<ol style="list-style-type: none"> 1. Initiate work and stay on task 2. Ask for and use feedback 3. Meet deadlines 	<ol style="list-style-type: none"> 1. Initiate work and stay on task 2. Ask for and use feedback 3. Meet deadlines 	<ol style="list-style-type: none"> 1. Initiate work and stay on task 2. Ask for and use feedback 3. Meet deadlines 	

English

Advanced Placement English Language and Composition (Grade 11)

1 credit

The AP English Language and Composition course is designed to help students become skilled readers of prose written in a variety of rhetorical contexts. Students will become skilled in composing for a variety of purposes. Both their writing and their reading should make the students aware of the interactions among a writer's purpose, audience expectations, and subjects, including the way generic conventions and the resources of language contribute to effectiveness in writing. The course is designed as a suitable basis for a college semester's credit in English and will also prepare students for the Advanced Placement (English Language) examination. Students will participate in the Monadnock Reads program over the summer. Additional summer reading and writing will be required of students in the AP English program.

Advanced Placement English Literature and Composition (Grade 12)

1 credit

The AP English Literature and Composition course is designed to engage students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students can deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students should consider a work's structure, style, and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. The course is designed as a suitable basis for a college semester's credit in English and will also prepare students for the Advanced Placement (English Literature) Examination. Students will participate in the Monadnock Reads program over the summer. Additional summer reading and writing will be required of students in the AP English program.

College Composition: Creative Writing (Grades 10-12)

.5 or 1 credit

In this extensive course, students learn to write clearly and effectively for defined audiences through a variety of strategies. Emphasis is on the writing process from pre-writing through drafting, revising, and editing, using the small group method to guide understanding and growth. Students will study the genres of children and young adult literature, creative fiction, creative nonfiction, and poetry, culminating in a portfolio of their own work at the course's

end. This is a chance for students to engage seriously with the writer artist and to evolve as an artist in their own right.

***This course does not meet English graduation competency requirements.**

English (Grades 9-12) (Offered as General, College Prep or Honors/AP)

1 credit

English is intended to prepare students for college or career after graduation. The reading in English ranges in genres, culture, and centuries. Students will independently read and comprehend complex literary and informational texts. Students will analyze and discuss how literature provides insights into the human condition. Students will write narrative, informative, and argumentative essays. Each year, students will conduct a major research based assignment using information they have evaluated to support their claims. They will also participate in class discussions and individually present information to an audience. Students will participate in the Monadnock Reads program over the summer.

Journalism (Grades 9-12)

.5 credit

In this course, students will study how various media have been used to send messages to the general public. Topics will include the history of journalism, law ethics, reporting, writing, editing, photography, management, teamwork, advertising, and design. Students in this class will also be responsible for producing the news articles for the MRHS student newspaper, The Pawprint, which may be produced by the Publication Graphics class. This course emphasizes Common Core Standards related to writing and language. This course may be repeated for credit.

***This course does not meet English graduation competency requirements.**

Senior English Topics (Offered as College Prep or Honors)

1 credit

The Senior English Topics program focuses on college and career readiness. All topics classes will integrate and evaluate multiple sources of information presented in complex literary and informational text and media. Students will evaluate sources, cite material, and write reflective, narrative, and research based essays. Students will also have several opportunities to participate in whole class and group discussions. Their ability to listen and collaborate will be crucial. Students will also be required to speak to an audience on a particular topic. All students will participate in the Monadnock Reads program over the summer. Below you will find a list of Senior course topics and their descriptions.

***Please note: Seniors must be enrolled in a senior English course each semester.**

British Literature

.5 credit

British Literature focuses on authors and works from the Anglo-Saxon era through the twentieth century. Lessons emphasize links between literature, culture and history. In addition, students will learn appropriate vocabulary and literary terms.

Children's Literature

.5 credit

This elective is a concentrated reading course designed to impart the knowledge necessary for an appreciation and understanding of children's literature and its use. In addition to reading the classics and the critically acclaimed works of both fiction and nonfiction by modern writers, students will study poetry, folklore, and mythology and examine the relationship between illustration and text.

Survey of Crime and Justice

.5 credit

This elective deals with the philosophical foundations of right and wrong, good and evil and crime and justice as they appear in conditions and circumstances of life. In both fictional and non-fictional works, as well as case studies, students will have the opportunity to learn how authors reflect the times, ideas, and social issues of the period, and see how ideas of justice have evolved and changed throughout Western history. Students will analyze world literature through the lens of law, public safety and security by reading, writing, speaking, and critical viewing.

Film Studies

.5 credit

Film Studies will introduce the history and development of film as well as survey significant film genres. Students will view representative films from the twentieth and twenty-first centuries to see how film storytelling and techniques have evolved. In addition to learning specific critical viewing strategies, students will write several film analysis papers and film reviews.

Literature of the Vietnam War

.5 credit

This course will provide students with a deeper understanding of the texts based on the Vietnam War, including representations from different sides of the war. The course will also increase students' awareness of historical, political, and social ramifications of the war and will explore the relationships of events to artistic depiction of those events (film, music, literature). Students will be required to write several short papers, present findings on different aspects of the 1960s era, and critically view reports and film.

Media Studies

.5 credit

This course is designed to help students develop an informed, critical, and practical understanding of media including analysis of digital media. We will explore the goals and methods of various media industries, identify the effects media has on us as individuals and a society, and understand the benefits and potential negative effects of media content, while identifying techniques to become more media literate.

Race and Gender in Literature and Media

.5 credit

This course will focus on the representation of gender and race in literature and media from a critical perspective. Students will analyze how literature and media texts, such as advertisement, movies, songs, television series, may either contribute to or undermine the inequalities that still exist today.

Science Fiction and Fantasy

.5 credit

This course will introduce students to the history and evolution of the science fiction and fantasy genres throughout English and British history. Students will study several themes and study how history, philosophy, linguistics, religion, the rise of technology and the loss and gain of freedom are cemented in the fundamentals of humanity. Students will use a variety of implementations to study science fiction and fantasy, including literature, film, art, and music, while employing varying methods of analysis. Students will become familiar with textual, technological, and literary vocabulary as well as studying rhetorical devices as a means for further understanding.

Sports Literature

.5 credit

Through this course, students will explore and learn about a variety of sports that they are familiar with such as soccer, baseball, and hockey and sports that seem extreme and or

unconventional such as rock climbing, telemark skiing, and white water rafting. Students will also write about their own experience with sports, and learn techniques for reporting about sporting events, local, national and world wide. Students will also research proactive safety measures as well as reactive ones in the case of protection, a given injury, and/or emergency.

Visual and Performing Arts

Advanced Placement Studio Art (Grades 10-12)

1 credit

AP Studio Art can be taken for credit both junior and senior years. It is a year-long course for serious art students and any student who needs to develop a visual art portfolio for college applications. AP Studio Art offers the opportunity to focus on intense development of artistic skills and personal vision by completing a portfolio, which is submitted to AP. Typically, students do not submit a portfolio during their junior year, but are required to submit a portfolio in May of their senior year. Students will select from the following portfolio offerings: Drawing or 2D Design.

***Prerequisite: Art II**

Art Survey (Grades 9-12)

.5 credit

This is a one-semester course designed to introduce students to a variety of visual art concepts and techniques, including drawing, painting, printmaking, sculpture and design. Emphasis is on the exploration of various materials and ideas that may help increase student confidence and range of artistic experience. This course is not considered a prerequisite to advanced elective art courses: students wishing to take additional art courses in the future should opt for Art 1.

Art I (Grades 9-12)

1 credit

This year-long course builds on students' previous art experiences and explores the elements and principles of design through a variety of techniques and media. Students will have a chance to explore drawing, painting, sculpture, collage and printmaking. Students will study the history of art as well as its place in shaping our modern day society. This course is designed for students who have a curiosity for all aspects of art and wish to have the time to expand their knowledge and talent.

Art II (Grades 10-12)

1 credit

This year-long course builds on the experience acquired in Art I, with emphasis on further development and refinement of artistic skills, encouragement of a personal style and creative interpretation. Students are introduced to more advanced techniques in drawing, painting, design, sculpture, collage, printmaking and illustration. Art appreciation and critical evaluation are also included in the curriculum. This course is for self motivated students who truly enjoy art and are ready to delve in deeper. Students are encouraged to build a portfolio of work that may be used for future AP courses and/or college art programs. Art II serves as a prerequisite to AP Studio Art.

Ceramics (Grades 10-12)

.5 credit

This one-semester course is an opportunity for students to further develop their skills in clay and 3-D design. Projects will primarily focus on a variety of hand building techniques to produce functional and sculptural pieces. Students will have the chance to explore a variety of glazing and decorative techniques, to further enhance their designs. In addition to hand building, students will be introduced to creating vessels on a potter's wheel.

Creative Studio Arts (Grades 10-12)

1 credit

This eclectic class is an overview of crafts, 3-dimensional design and sculpture, and an exploration of painting techniques. Students may choose to focus more on a particular area, such as painting, or experiment with numerous approaches. This class introduces specialized art projects not offered in other art classes, which include metals, stained glass, fiber arts, ceramics, plaster, wood, and assemblage.

Guitar and Piano Keyboard Studies (Grades 9-12)

.5 credit

Guitar and Piano Studies is designed for students with an interest in the performance and study of acoustic guitar, bass guitar and piano. Students will learn to perform a selected repertory from a variety of styles and forms of music for their selected instrument such as: pop, jazz, modern, classical, and an array of other styles. Students will read and understand standard musical notation and tablature (for guitar). They will explore essential components of music theory, compositions, and experience exercises in musical sight-reading and interpretation. They will study the history of the classroom musical instrument, and their

importance and influence as a solo instrument, in ensembles, and in the musical world. Concert and musical performance is mandatory.

***This course may be repeated for credit.**

High School Band (Grades 9-12)

1 credit

The goal of the band program is to improve musical abilities and repertoire through performance and to reinforce and further musicianship through applied theory. Students are encouraged to extend their musical learning experiences by auditioning in statewide Band/Orchestra auditions and festivals. MARCHING BAND IS REQUIRED OF ALL BAND MEMBERS. All band performances are mandatory. Basic theory and history are assessed through performance, written tests and projects.

***Prerequisite: Ability to play a band instrument.**

High School Chorus (Grades 9-12)

1 credit

This course is designed to introduce a large, non-selective group of students to the fundamental principles of vocal production as well as the appreciation and enjoyment of music by means of participation. No voice testing is required. The chorus is trained in choral techniques, intonation, harmony singing, posture, breathing, diction, and stage deportment. Fundamentals of music reading and basic theory are also taught during rehearsals.

Jazz Ensemble (Grades 9-12)

1 credit

Jazz Ensemble is a select group of musicians who will study and perform all types of jazz, rock and popular literature. Some training will be given in technical and improvisational skills. An emphasis will be given to performance, with participation in concerts and festivals required. Instrumentation is limited and auditions may be used to determine membership. Concurrent membership in Concert Band is required. Jazz Ensemble meets weekly for 90 minutes beyond the school day throughout the school year.

Jewelry Making (Grades 10-12)

.5 credit

This course enables students to apply elements of art and principles of design to aesthetically challenge them to create visually pleasing, functional pieces of jewelry. Students learn basic techniques of fabrication in sterling silver and copper, setting semi-precious gems, exploring

enameling on copper, polymer clay and fiber-based jewelry methods. This class is for self-motivated students that are excited about designing jewelry to reflect their own personal style. Students may bring in their own metal, beads or gems if they so desire, however there will be a large selection of materials available to each student. There is NO fee associated with this class.

Music Theory (Grades 9-12)

.5 credit

This course is designed to develop a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. Students planning to major or minor in music in college are encouraged to take this course. There is no prerequisite for this course; however, the ability to read standard notation is highly encouraged.

***This course may be repeated for credit.**

Music Technology (Grades 9-12)

.5 credit

High School Music Technology is designed for students with an interest in exploring a variety of subjects relating to music technology which include audio engineering, the use of music composition software, and how to set up and run lighting systems for a theatrical production. In these studies, students will be introduced to the hardware and software relating to these fields and exploration of the technical, mathematical, and language of these systems. The class will be geared to "hands-on" activities that will focus on refining your listening skills while providing both the technical and artistic aspects of these subjects. Students will explore recording software, such as Pro Tools essentials, which relates to any of the other computer programs on the market while helping them better understand the concepts presented in "stand-alone" digital workstations, setting up and running a recording studio or a home recording system. Students will be exposed to music composition software (such as Sibelius and Finale) and learn about the field of music publication. Students will also explore the process of preparing, setting up and controlling lights for theatrical and other musical productions.

***This course may be repeated for credit.**

Paint and Print (Grades 10-12)

1 credit

This class will explore the world of Painting and Printmaking as a means of creating playful, colorful art. We will work with all sorts of paint, including acrylic, oil and watercolor. The

paint will be applied to a variety of surfaces including canvas. Along with painting, we will divide our time discovering printmaking. Students will learn the art of relief, monotype and intaglio printmaking to create bold posters and expressive designs. We will be making prints on a variety of surfaces such as paper, clay and fabric.

Theater Arts (Grades 9-12)

1 credit

Students will focus on building acting skills and techniques involving the body, voice and mind by utilizing improvisational tools, and by participating in dramatic games and scene work. Work will include creating characters, developing sense and emotional memory, understanding the notion of subtext, exploring stage directions and using critique. Students will also employ production skills, including those related to technical theater and design. Specific attention will be given to the role of a director in developing scenes, and in production. No prior theater arts course is required.

***This course may be repeated for credit.**

Social Studies

Abnormal Psychology (Grades 11-12)

.5 credit

The curriculum will start with a basic understanding of what abnormal psychology is and the symptoms of a mental disorder. Students will review and investigate psychological conditions and disorders from the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition. The topics included in this curriculum are anxiety disorders, obsessive compulsive and related disorders, dissociative disorders, somatic symptom disorders, mood disorders, schizophrenia, personality disorders, trauma and stress disorders, and substance related and addictive disorders. Students will identify and examine the criteria for these disorders through notes, case studies, videos, and published articles. Students will also learn about treatment options for these disorders and how they can interfere with a person's ability to function in daily life. Some units will involve discussing the relationship between various mental disorders and criminology in addition to other relevant social issues. The course will discuss sensitive and sometimes traumatic content, such as suicide, self-harm, physical and sexual abuse, and other mature topics.

Prerequisite: Psychology

AP European History (Grades 10-12)

1 credit

The AP European History course focuses on developing students' understanding of European history from approximately 1450 to the present. The course has students investigate the content of European history for significant events, individuals, developments, and processes in four historical periods, and develop and use the same thinking skills and methods (analyzing primary and secondary sources, making historical comparisons, chronological reasoning, and argumentation) employed by historians when they study the past. The course also provides five themes (interaction of Europe and the world, poverty and prosperity, objective knowledge and subjective visions, states and other institutions of power, and individual and society) that students explore throughout the course in order to make connections among historical developments in different times and places.

AP United States History (Grade 11)

1 credit

Advanced Placement US History is intended to be representative of college history classes. This course will encompass the post-Civil War era through current history stressing concepts and process. Ideas that have shaped our country, social and cultural developments, and political evolution, and cause and effect relationships will structure this course. A required summer reading list may be included. This course will also stress high level study and research skills and will introduce students to college-level writing assignments. Students will be required to do additional reading during the year which will include primary and secondary sources. In addition, students need to look at sources in an analytical way and be encouraged to become critical thinkers. Students will also be introduced to historiography during the year. The course is designed to prepare students for the Advanced Placement U.S. History examination.

Civics (Grade 12)

.5 credit

Civics is a non-leveled required class for all students at MRHS. The course emphasizes the basis and inner workings of our Federal Government; including the major branches of government, voting and elections, and basis and responsibilities of citizenship. It will encourage students to develop the ability to think critically, to articulate their opinions in written and oral form, and to identify and understand both the nation's strengths and shortcomings. Pursuant to NH state graduation requirements, in addition to passing a Civics course students must also pass the US Citizenship test. This course will focus on the content of this test, and it will be administered over the course of the semester.

***Required credit for graduation. Students must pass the Civics final exam and naturalization exam in order to graduate in the state of NH.**

Criminal Justice (Grades 10-12)

.5 credit

This class is designed to introduce students to the study of crime. The curriculum will cover criminal theory, individual rights, law enforcement and detective work, forensics, the criminal mind, the court system, and the American system of incarceration and rehabilitation. The course work will require a great deal of reading and writing as well as daily open class discussion.

Economics (Grade 12)

.5 credit

This course will enable students to better understand the significance of economics in their daily lives, and the basic economic problems that all societies face. Topics include basic economic concepts, supply and demand, market structures, fiscal policy and taxation, financial markets, international trade, economic cycles and comparative economic systems. Students will learn to make reasoned decisions on economic issues as citizens, workers, consumers, business owners, managers and members of civic groups.

Forensic Science and the Law (Grades 11-12)

.5 credit

This course is designed to provide students with the basics of forensic science and its application to law and criminal justice. The course will be taught in a multidisciplinary format and will be student-driven. There is a high expectation of reading and writing using a wide variety of resources. There will be ample labs and real crime case studies. The class includes a variety of professional guest speakers and participation in a total processing of a mock crime scene as a final assessment.

History of Western Society (Grade 9)

1 credit

In this course students will examine the history of world civilizations beginning with the Agricultural Revolution and ending with the Enlightenment. The focus will be on the important people, major events, and contributions from several prominent civilizations and time periods, including but not limited to early river civilizations, ancient Greece and Rome, the Middle Ages, and Renaissance thinkers. Throughout the course, students will make

connections between these historical peoples and their impact on the development of the United States of America and on their modern day impact on our society."

Love of the Game (Grades 11-12)

.5 credit

In this course students will examine the development of sports through various historical perspectives. There will be an emphasis on helping students gain a better understanding of the inner relationship that sport has on social, economic, cultural, and political forces that are at work in the United States as well as the world. Students will examine the historical context as well as the significance of gender, race, ethnicity and social class through readings, primary sources, audio and visual materials, and class discussions.

Psychology (Grades 10-12)

.5 credit

Psychology is the study of human behavior. The purpose of this course is to develop an understanding of how individuals develop and why they exhibit the behaviors that they do. The topics included in this curriculum include the history of psychology, psychological research methods, the parts of the brain, memory and learning, and personality. Students will also learn about the various professions related to psychology, and how the study of psychology is relevant to our world today. Students will be required to keep an organized notebook, complete relevant readings, and demonstrate their mastery of the topics through projects, tests, and class discussions.

Sociology (Grades 10-12)

.5 credit

This is a college preparatory class designed to introduce students who are interested in the field of sociology. Sociology is the study of society and its institutions. This course will develop an understanding of group relationships and how group behavior affects the patterns of behavior and thinking of people in all societies. Instruction will involve note-driven discussion, multimedia, and other in-class activities.

Sociology of Deviance (Grades 11-12)

.5 credit

This college preparatory course will examine how deviant behavior can influence society. The basic aspects and root causes of deviance will be covered, including some of the most commonly accepted social theories regarding deviance. Students will look at the differences between low level deviance and more severe cases of criminal deviance. The course will cover

the means that our society uses to exert some control over deviant behavior. Students will be expected to read, write, and participate in class discussions.

United States History Part I (Grade 10)

1 credit

This course will emphasize the political, economic, intellectual, and social trends in early American history. Areas of study begin with the European colonization of North America, the American Revolution and development of the American system of government. Examining the presidencies of Washington through Lincoln, students will gain an understanding of western expansion, the industrial revolution, and the sectional differences leading to the Civil War. As all the past is prologue, historical parallels will be drawn with current events as they apply. Core areas include social, cultural, economic, military, and political topics. An understanding of the past and recurring themes will prepare students for current and future global situations. Core skills stressed will include reading, writing, public speaking, group work skills, note taking, research, problem solving, critical thinking, and personal initiative. We will incorporate projects, internet, films, media, periodicals, primary and secondary sources, and higher level writing assignments in our examination of American history.

United States History Part II (Grade 11)

1 credit

This course will emphasize the political, economic, intellectual, and social trends in America from the postCivil War era until the present. Topics include industrialization, the global conflicts of the 20th century, and the expansion of civil rights. This course is designed to heighten a student's awareness and appreciation of history as well as the role of America in the scheme of global History. Emphasis is placed on drawing historical parallels with current events as they apply. Knowledge of current events and staying current on what is happening is a vital part of our curriculum. Core areas include social, cultural, economic, military, and political topics. An understanding of the past and recurring themes will prepare students for current and future global situations. Core skills stressed will include reading, writing, public speaking, group work skills, note taking, research, problem solving, critical thinking, and personal initiative. We will incorporate projects, internet, films, media, periodicals, primary and secondary sources, and higher level writing assignments in our examination of American history.

Advanced Placement European History (Grade 10-12)

1 credit

The AP European History course focuses on developing students' understanding of European history from approximately 1450 to the present. Students will investigate the content of European history for significant events, individuals, developments, and processes in four historical periods, and develop and use the same thinking skills and methods (analyzing primary and secondary sources, making historical comparisons, chronological reasoning, and argumentation) employed by historians when they study the past. The course also provides five themes (interaction of Europe and the world, poverty and prosperity, objective knowledge and subjective visions, states and other institutions of power, and individual and society) that students explore throughout the course in order to make connections among historical developments in different times and places.

World Language

Spanish I

1 credit

Spanish I students begin to develop communicative competence in Spanish and to expand their understanding of the culture of the Spanish-speaking people. They learn to communicate in real-life contexts about topics that are meaningful to them, such as themselves, their preferences, activities, and their family. Students develop interpersonal communicative skills by exchanging simple spoken and written information in Spanish. They develop interpretive communication skills by listening to, viewing, and reading simple Spanish materials presented through a variety of media and based on familiar topics. They develop presentational communication skills by presenting basic information in Spanish orally and in writing, using a variety of familiar vocabulary, phrases, and structural patterns. Students also develop an awareness of the perspectives, practices, and products of Spanish-speaking cultures.

Spanish II

1 credit

Spanish II students continue to develop their proficiency in the 3 modes of communication (interpersonal, interpretive, and presentational). They focus on communicating in real-life contexts about their immediate world, such as their leisure and sports activities, daily routine, and possible medical issues. They begin to show a greater level of accuracy when using basic language structures, and are exposed to more complex features of the language, such as communicating about past events. They practice listening to and reading authentic materials in Spanish on familiar topics and make short, directed oral and written presentations in

Spanish. Emphasis continues to be placed on the use of Spanish in the classroom as well as the use of authentic materials about the Spanish-speaking culture. Students demonstrate an understanding of the perspectives, practices, and products of Spanish-speaking cultures and the ways in which these cultural aspects are interrelated.

Spanish III

1 credit

Spanish III students continue to strengthen their communicative skills by interacting orally and in writing with other Spanish speakers, in listening to and reading messages in Spanish, and in making oral and written presentations in Spanish. They are able to communicate on a variety of topics at a level commensurate with their study, using more complex structures in Spanish, such as talking about the future and what they would do, and moving from concrete to more abstract concepts. They are able to comprehend the main ideas of culturally authentic materials on new topics in familiar and unfamiliar contexts and are able to identify significant details when the topics are familiar. Students will examine in Spanish the interrelationships among the perspectives, practices, and products of Spanish-speaking cultures.

Spanish IV

1 credit

In Spanish IV students continue to strengthen their communicative skills by interacting orally and in writing with other Spanish speakers, by listening to and reading texts in Spanish, and by making oral and written presentations in Spanish. They are able to exchange and support opinions on a variety of topics related to contemporary and historical events and issues at a proficiency level commensurate with their study. They comprehend spoken and written texts from a variety of authentic sources as well as produce compositions containing well-developed ideas on various topics. Students use the target language to access information to analyze how various perspectives reflect the practices and products of Spanish-speaking cultures.

Business Technology

Accounting I (Grades 9–12)

1 credit

This class is part of the “Running Start” College Credit Program and may be taken for 3 college credits. Forms of business studied will be single proprietorship, partnerships, and corporations organized as service, merchandising, and manufacturing businesses. The class

will cover topics such as journalizing, posting, financial statements, taxes, payroll, business ethics, concepts, accounting as a career, and legal issues facing accountants. The use of computer software and several business simulations supplemented by college materials will be used to enhance the student's educational experience.

Advanced Placement Computer Science Principles (Grades 11-12)

1 credit

Offered during alternate years. This college-level course offers a multidisciplinary approach to teaching the underlying principles of computation. The 'project-based' course will introduce students to the creative aspects of programming, as well as covering abstractions, algorithms, data sets, the Internet, cybersecurity concerns, and computing impacts on society. Students will have the opportunity to use current technologies to create individually designed artifacts for both self-expression and problem solving.

Prerequisites: One other computer course

Introduction to Business Management (Grades 9-12)

.5 credit

This course provides a framework for understanding business organizations and the relationships that exist for an owner in the areas of accounting, management, marketing, human resources, and production and distribution. The course focuses on the inter-relationship of the components and their role in the business process. This course is part of the College Credit Running Start Program and may be taken for 3 college credits. It is strongly recommended for students that are planning on attending a post-secondary school for studies in general business, economics, accounting or management administration. All four areas will be covered in this course.

Computers for College and Career (Grades 9-12)

.5 credit

This one-semester course is intended as a practical, hands-on guide to help you understand the basic computer skills required during your college education and/or when pursuing a career. Each lesson contains one or more lesson activities. We will cover basic computer hardware and software and study the history of the Internet to use its capabilities more effectively. Students will explore some of today's most powerful tools and computer applications. Students will acquire the kinds of essential skills needed for success after high school graduation.

Computer Game Design (Grades 10-12)

.5 credit

This course will give you the chance to create multiple computer based games of your own design. Your creativity and passion for games will come together with your new coding skills to create new game prototypes. You will analyze, brainstorm and create solutions using the design process and learn through a media-rich learning environment. No previous experience in coding is required. Just your excitement for creating games and a willingness to learn the coding to do it.

Exploring Computer Science (Grades 9-12)

.5 credit

This course provides a broad introduction to computer science, focusing on the fundamental concepts of computer science, rather than a specific programming language. The goal of this course is to develop the computational thinking skills of problem solving and computing through the exploration and study of a wide range of computer science topics: human computer interaction, problem solving, algorithmic thinking, social and ethical issues regarding the internet, security, privacy, web design, and programming.

Independent Living (Grades 11-12)

.5 credit

This course provides information to help students live on their own after high school. Topics include basic economic systems, money management, and credit, renting and furnishing an apartment, transportation, insurance and food shopping.

Introduction to Business (Grades 9-10)

.5 credit

This course will introduce students to the fundamental structure of business within the American economy and the free enterprise system to increase skills as consumers, workers, and citizens. Small business management and entrepreneurship topics, including business plans, will be studied. Various consumer topics such as consumerism, credit, investments options and money management will be covered to prepare students for the 21st century job market and global economy. The use of technology and internet-based resources will be implemented throughout the course.

Introduction to Programming (Grades 9-10)

.5 credit

Explore programming methods and algorithms. Learn why Java is the vehicle for implementing computer based solutions to enhance dynamic web pages, modern day business problems and video game production. Class exercises will further develop your ability to problem solve and your understanding of creative uses of a GUI (Graphical User Interface) and will focus on proper programming techniques that incorporate manipulating images, sounds and objects.

Personal Finance (Grades 9-12)

.5 credit

This course will help students to better understand how to manage personal and family finances and increase awareness of workplace related issues. Students will be exposed to real-life applications of consumerism in the 21st century economy and workplace. The course will focus on consumer topics that include; money management, credit, investments, workplace topics, tax preparation, housing options and insurance. Technology will be integrated in the curriculum to allow students to see real-world connections.

Sports Management (Grades 9-12)

.5 credit

Sports management is a course that is designed to introduce the field of sport management to prospective business students in high school. This course will prepare students who want to go into the field of sports management or study business management. This course will help prepare students for college level business programs and introduce them to an area of business with which they may not be familiar.

Family and Consumer Science

Apartment Cooking (Grades 11-12)

.5 credit

Apartment Cooking is designed for juniors and seniors beginning life on their own emphasizing flexibility, time-management and independent living. The course will concentrate on life readiness skills including healthy meal preparation for one or two people, budgeting, grocery shopping, recycling, food sanitation, and equipping a kitchen. Students will develop a portfolio of recipes using the “speed-scratch” cooking method- the use of convenience foods along with basic ingredients for easier meal preparation. There will be written assignments in addition to the lab work. A quarterly project will be required (example- the planning and preparation of foods to entertain a themed gathering).

Early Childhood Education (Grades 10-12)

.5 credit

This course prepares high school students to become competent in the full spectrum of childhood education, from birth to age 8. History, curriculum, program development, unit plans, appropriate learning environments, principles of child development, and trends and issues in early childhood education will be discussed.

First Aid and Safety (Grades 11-12)

.5 credit

Students in First Aid and Safety will study the techniques of emergency first aid, CPR, AED and various first aid topics including, but not limited to: knowledge of body functions, assessing a victim, weather safety, workplace safety, fire safety and travel safety. Students will have the opportunity to earn American Red Cross First Aid, CPR/ AED certification.

Prerequisite: Life Choices and Biology.

Food and Nutrition I (Grades 9-12)

.5 credit

This course is designed for students who are interested in understanding the principles of nutrition as a basic human need, and its link to wellness in maintaining a healthy lifestyle, as related to individuals and families, across the lifespan. Students will develop life skills needed in a wide variety of Food and Nutrition related careers. Emphasis will be given to the economic, cultural, scientific, health and local agricultural connections to food, using 21st Century learning skills. Students will demonstrate various food selection, safety, sanitation, and preparation skills; terminology, principles, and techniques. Knowledge of kitchen equipment and accurate measurement will be applied, when designing delicious, nutritious, and aesthetically pleasing food presentations.

Food and Nutrition II (Grades 10-12)

.5 credit

Food & Nutrition II is designed for students who would like to continue their studies of nutrition and food preparation skills. Students are given the opportunity to gain knowledge of and apply skills in organizing and planning, time management and consumer applications. Topics include technology in food science, protein foods, fast foods, kitchen design and equipment as well as regional foods of the United States and other countries. Careers in the food industry will be discussed. There will be written assignments with projects and buffets with guests in addition to the lab work.

Prerequisite: Successful completion of Food & Nutrition I

Life Choices (Grade 10)

.5 credit

This course uses the 21st century learning skills of writing, reading, viewing, and listening to explore the positive and negative consequences of personal health decisions. Topics will include respect for oneself and others, nutrition, various relationships and communication skills, current health issues, stress, personal care, physical activity, reproduction, maintaining good mental health and environmental health concerns. The topics are covered using a problem solving approach in relation to the impact they have on the health triangle, which includes the domains of physical, mental and social health.

Textiles, Fashion and Apparel (Grades 9-12)

.5 credit

This is an introductory course that will familiarize students with careers in the textile, fashion, and apparel industries and will help them understand personal suitability for success. Students will identify and obtain a working knowledge of fibers, methods of textile construction, and finishing through technology, instruction, discussion, and experimentation. Students will explore past history and current trends. Students will creatively utilize the elements and principles of design to recognize well-designed and constructed textiles as well as explore reasons, identify methods, and demonstrate skills needed for altering, repairing, recycling, and redesigning apparel and/or textile products. This course will also provide opportunities for students to apply communication, leadership, management, and critical thinking skills to all areas of textile development and merchandising. By coordinating classroom theory with hands-on experiences, students develop and enhance their creativity, critical thinking and problem solving skills necessary to be innovative and productive members of society.

Mathematics

Advanced Placement Statistics (Grades 11-12)

1 credit

An introduction to the basic ideas and techniques of probability and statistics. Topics may include numerical and graphical descriptive measures, probability, random variables, the normal distribution, sampling theory, estimation, hypothesis testing, correlation and

regression. The curriculum is aligned with the expectations of the College Board AP Statistics course.

Algebra I (Grade 9)

1 credit

An introduction to the structure of Algebra as applied to the real number system. Students will develop a variety of problem solving techniques and apply them to problems within and outside the field of mathematics. Mathematical modeling will be stressed. Topics covered will include single variable equations and inequalities, linear and quadratic functions, polynomial expressions and more.

Algebra II (Grade 10)

1 credit

This course provides a thorough introduction to the standard topics of the second year Algebra curriculum. Topics include quadratic and other nonlinear functions, irrational and complex numbers and more. The concepts of functions and graphic solutions will be emphasized as well as problem solving and critical thinking. Utilizing technology will be involved whenever appropriate.

Business Math

1 credit (Grades 10-12)

This course will concentrate on applications of mathematics. Solving problems that deal with banking, interest, depreciation, mortgages, taxes, and statistics will be the majority of the topics covered along with a review of basic math concepts.

Math for Life

1 credit (Grades 10-12)

Want more experience with math before heading to college or trade school? Math for Life is designed to help improve problem solving skills and mathematical communication. This course will improve your math skills by developing solid conceptual foundations that could alleviate the need for remediation in college. During the course, students will look at real-world applications and problem-solving tasks. Students will leave the course prepared to engage in college-level math or apply essential skills in the workplace. This course serves as a review for concepts covered in Algebra I, Geometry, and Algebra II.

STEM Mathematics

1 credit (Grades 10–12)

STEM represents blended learning that provides students an opportunity to apply their knowledge using project based experiences that actively engage students in hands-on activities. This course will utilize STEM resources related to math and is designed to help students develop skills and techniques to identify and create solutions to problems through project-based learning. Analytic skills and the use of scientific and engineering methods will be used to investigate problems. Small group projects and varied instructional techniques involving technology will be emphasized. Students must be comfortable working independently and in groups to complete in-class activities and projects, including an end-of-project presentation consisting of a written essay and a presentation of the data collected.

Geometry (Grade 10)

1 credit

This course is an introduction to academic geometry. Both inductive and deductive reasoning will be utilized in the development and understanding of geometric concepts and proofs. Theoretic and practical applications of geometry will be studied as well as basic ideas on trigonometry.

Pre-Calculus

1 credit

This course deals with advanced algebraic and trigonometric concepts with significant emphasis on the theory of functions. The solution of advanced equations is pursued using both technologic and algebraic methods. A broad variety of topics are presented, building a strong foundation for the future study of Calculus and Analysis.

Prerequisite: Algebra II

Research Methods (Grades 11–12)

1 credit

Explore the principles of research methods and their direct application to the behavioral and social sciences like psychology, sociology, and economics. Students will master various statistical analyses, learn experimental research methodology, employ ethical research practices, and learn to understand, analyze, and synthesize information from existing research articles published in scholarly journals. Students will utilize this information to investigate a topic of their choice, design their own experiments, collect and analyze data, and write an original scholarly article to contribute to current literature.

Prerequisite: Algebra II

Sports Analytics (Grades 11-12)

1 credit

Sports analytics refers to the use of data and quantitative methods to measure performance and make decisions to gain advantage in the competitive sports arena. This course will cover researching, storing, and analyzing statistical information used in various sports. Skills students will be using include critical thinking, mathematical modeling, statistical analysis, predictive analytics, game theory, optimization and simulation. These skills will be applied to sports in this course, but are equally useful in many other areas.

Statistics (Grades 11-12)

1 credit

Statistics acquaints students with the major concepts and tools for collecting, analyzing, and drawing conclusions from data. This course will emphasize techniques and applications that are useful in future careers.

Physical Education

HOPE (Healthy Options for Physical Education) (Grades 9-12)

.5 credit

Students may earn .5 PE credit by participating in a self-guided program while participating in athletics or a pre-approved out of school athletic activity. Requirements include weekly logs and reflection, with specific focus on meeting the 6 state physical education standards. Students are supported and guided by the physical education teachers but the work is intended to be student driven and individualized. Upon conclusion of their season or semester students present their experience to a group and complete a written paper on the experience. The focus is on meeting the state standards in an out of the classroom experience. **Approval from the PE teacher is required as well as .5 credits of PE taken in-person.**

Physical Education I (Grades 9-12)

.5 credit

The purpose of physical education is to expose students to a variety of physical activities. The course will promote an appreciation for, and an understanding of, the various physical, mental, and emotional benefits derived from physical exercise as it relates to a healthy lifestyle. Additionally, the physical education program will assist in developing an

understanding of teamwork, the discovery of individual talents and capabilities, a respect for others, and a healthy appreciation for athletic competition.

Physical Education II (Grades 10-12)

.5 credit

P.E. II offers students the opportunity to participate in a program designed to meet the needs of the advanced physical education student. This class provides students with the chance to develop a personal fitness program designed to improve strength and cardiovascular conditioning. The class will also provide the opportunity to participate in and research fitness in terms of training, improving performance, and maintaining health. This course is designed for 10th - 12th grade students that have completed P.E. I demonstrated above average performance.

Weight Training

.5 credit

Weight Training Class will provide students the opportunity to explore the benefits, types, and science behind training. Students will explore different apparatuses that can include machines, dumbbells, barbells, kettlebells, and other types of equipment. Students will try and research various training principles and study strength training anatomy along with the science of exercise.

Prerequisites: Complete at least 1 credit of High School Physical Education I.

Science

Advanced Placement Chemistry

1 credit

AP Chemistry is a second year chemistry course that is designed to be the equivalent of an introductory college level chemistry course. It is for the motivated learner who is conscientious and self-directed. The course material and labs are based on the prescribed Advanced Placement curriculum and provide an in-depth study of these topics: atomic structure, chemical reactions, thermodynamics, chemical bonding and molecular structure, gasses, kinetics, equilibrium, acid-base chemistry, and electrochemistry. Problem solving and application of chemical principles will be stressed; students will also engage in some self-instruction through study groups and independent work. The course is designed to prepare students for the Advanced Placement Chemistry examination.

Advanced Placement Physics

1 credit

AP Physics 1 is equivalent to a first-semester college course in algebra-based physics. Units covered include kinematics, dynamics, circular motion and gravitation, energy, momentum, simple harmonic motion, torque and rotational motion, electric charge and force, DC circuits, and mechanical waves and sound. Students will take the AP Physics I exam, which may earn college credit with a score of 3 or higher. This class follows a modeling methodology, where students plan investigations to answer questions and support claims with data and graphical relationships. Students will do lab reports, problem sets, and assessments using AP multiple choice and free response questions, as well as an individual research project. Students should be fluent in algebra and right triangle trigonometry.

Astronomy (Grades 11-12)

1 credit

This is an elective course designed to explore the major topics in introductory astronomy. Using an inquiry based approach, students will investigate motions of the sky, the sun-earth-moon system, the planets, stars, and the universe as a whole. Not only will students learn about the universe and the objects within it, but they will also learn how scientists investigate phenomena and build scientific knowledge. Course requirements will be met through simulations and laboratory activities, research and presentations, and reading and writing about current events in astronomy. Evening sky-gazing sessions with telescopes will be offered as well. This is an elective course designed to explore the major topics in introductory astronomy. Using an inquiry based approach, students will investigate motions of the sky, the sun-earth-moon system, the planets, stars, and the universe as a whole. Not only will students learn about the universe and the objects within it, but they will also learn how scientists investigate phenomena and build scientific knowledge.

Biology (Grade 10)

1 credit

This course is designed to provide students with a general background in the study of living organisms and the things that affect their success. It includes a survey of the kingdoms of life and basic anatomy and physiology of organisms from the simplest cells to more complex life forms. Other topics will include cell structure and function, classification, plant and animal reproduction, heredity, biochemistry and ecology. Hands-on individual and small group tasks will be favored as an instructional strategy.

Chemistry (Grade 11-12)

1 credit

Chemistry is the study of the structure, composition, and behavior of matter. Students study a variety of topics that include: characteristics of matter; energy transformations during physical and chemical changes; atomic structure; periodic table of elements; behavior of gasses; bonding; stoichiometry; chemical equations; properties of solutions; acids and bases; and chemical reactions. Student investigations emphasize accurate observations, collection of data, data analysis, and the safe manipulation of scientific apparatus and materials during field and in the laboratory. This course is a qualitative and quantitative course in chemistry and is recommended for college bound students as preparation for entry into engineering, health, environmental and applied science programs.

Survey of Physics (Grade 11-12)

1 credit

This course is designed for students who are interested in the laws of nature but who may not have a strong mathematical background. The course will cover motion and forces, energy, momentum, rotation, waves and sound, and electricity. The course emphasizes conceptual understanding but also requires some applications of basic math and algebra. All topics are introduced with laboratory experiences from which conclusions can be drawn and general relationships derived. In addition, students will experience simulations, demonstrations and classroom discussions, small-group problem-solving, and engineering-design projects.

Environmental Science (Grade 11-12)

1 credit

Environmental Science is a full year one credit course intended provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them.

Earth Science (Grade 9)

1 credit

Earth Science is a course focusing on the study of space, geologic structures and forces, the waters on our planet, and the atmospheric forces that shape our world. Students will learn about scientific inquiry, Measurement and Mapping, Oceanography, Geology, Meteorology, Astronomy, and the geologic time scale.

Human Anatomy and Physiology (Grade 11-12)

1 credit

This elective course is designed for students who enjoy biology and/or who plan to continue the study of biology beyond high school. It offers an in-depth study of the body's structures and their functions with special attention given to comparing and contrasting the cellular, tissue, and systemic levels organization. Emphasis is placed on how the body maintains a steady state and how diseases occur when homeostasis breaks down. Systems to be studied include the integumentary, muscle, skeletal, nervous, endocrine, circulatory, immune, respiratory, digestive, urinary, and reproductive systems. Students will undertake a number of classroom and laboratory activities which include a study of tissues and organ dissections. Students will develop the organizational and study skills required to be college and career ready.

Physics (Grades 11-12)

1 credit

This course is designed for motivated students who are interested in the laws of nature. Specific topics include one- and two-dimensional motion, forces and Newton's laws, work, energy, and power, impulse and momentum, circular motion and gravitation, and torque and rotation. Using a modified modeling method, students will collect data and derive equations with graphs and class discussions, as well as apply these equations to subsequent lab challenges. Problem-solving is emphasized and practiced both in and out of the classroom. Physics requires that students are fluent in algebra and are willing to apply those skills to new situations. In addition to laboratory investigations, students will experience simulations, demonstrations and classroom discussions, small-group problem-solving, and engineering-design projects. This physics course will benefit anyone who might major in science in college.

Topics in Science (Grades 11-12)

1 credit

This one credit introductory general level course provides students with the opportunity to explore current events in science. The class is project based and examines themes across multiple science disciplines to allow students to develop an understanding of the nature of science and how science impacts our lives. Students will increase their science literacy while developing critical thinking, problem solving, and technology skills. Upon completion of this course, students will be capable of investigating, analyzing, and evaluating scientific data and claims. These skills will allow them to be informed citizens and voters in a complex world.

There are no course prerequisites but students will be expected to be engaged, capable of self-advocacy and direction, and have a willingness to approach ideas with an open mind.

Survey of Chemistry (Grades 11-12)

.5 credit

Chemistry is the study of matter and the interactions of matter. This course is designed for students needing exposure to chemistry prior to attending a technical college, a vocational school or entering an allied health field. The course is designed to expose the student to the way chemistry relates to practical situations and current scientific issues. The emphasis will be on problem solving and investigation. Topics may include metric measurement, basic atomic structure, chemical reactions, and applications of chemical principles to common substances (food, water etc.), forensics, and nuclear chemistry.

Survey of Physics (Grade 11-12)

.5 credit

This course is designed for students who are interested in the laws of nature but who may not have a strong mathematical background. The course will cover motion and forces, energy, momentum, rotation, waves and sound, and electricity. The course emphasizes conceptual understanding but also requires some applications of basic math and algebra. All topics are introduced with laboratory experiences from which conclusions can be drawn and general relationships derived. In addition, students will experience simulations, demonstrations and classroom discussions, small-group problem-solving, and engineering-design projects.

Engineering and Technology

Advanced Technical Drawing (Grades 10-12)

1 credit

Advanced Technical Drawing is an independent study course that will enable the student, through a series of guided exercises and individual projects, to further develop problem-solving and communications competencies first learned in the Technical Drawing courses. This course may be used to complete the study of the Technical Drawing continuum, and/or to introduce students to an in-depth exploration of topics covered in Technical Drawing. These topics can include advanced dimensioning techniques, advanced mechanical drawing techniques, or an introduction to civil, electrical or electronics drafting. While topics chosen will be covered with a goal at introducing the student to the vocabulary, tools and

techniques of the given subject, the ultimate aim will be the achievement of competency in each subject.

Prerequisite: Technical Drawing

CAD / Architectural Design (Grades 11-12)

1 credit

Architectural Design class is an independent study course that will enable the student, through a series of guided exercises and individual projects, to further develop problem solving and communications competencies. At the same time, they will develop creativity and innovation skills through independent projects focused on residential construction, and architectural styles. This course will focus on the basic concepts and methods used to design the human environment, and students will research local architecture, design a single family residence and build a model of their design. This class is highly recommended for students interested in a career in Architecture, Interior Design or Civil Engineering, retail sales, or general homeowners.

CAD / Engineering Graphics (Grades 11-12)

1 credit

Computer Assisted Drawing/ Engineering Graphics is an independent study course that will enable the student, through a series of guided exercises and individual projects, to further develop and focus the problem-solving and communications competencies they first learned in the Technical Drawing continuum. At the same time, they will develop creativity and innovation skills through independent design projects. This course will focus on the basic concepts and methods needed to use the computer to create geometry which can then be used as output for graphic designs, engineering drawings, or manufacturing processes. This class is highly recommended for students interested in a career in Engineering. Class size is limited to classroom workstations.

Graphic Design (Grades 9-12)

.5 credit

This course will introduce students to the elements and principles of Graphic Communication and Design through different processes and media. These processes will include hand building and digital techniques including the use of color theory, typography, desktop publishing, illustration, digital photography and photo editing. The goal of this class is to develop students' problem-solving, creativity and communications competencies while increasing the students' visual and technological literacy.

Yearbook Publication (Grades 9-12)

1 credit

The course "Yearbook Graphics" is designed to provide an opportunity for students to learn about the publishing process by designing, building and marketing "The Pandorian", the school's annual historical document. Students will work on developing skills in: graphics, desktop publishing, computer design, photography, and marketing. They will be challenged to graphically capture important moments in the school year. They will research, organize, and verify information for accuracy and relevancy. They will develop creative ideas to present this information, and organize their work to meet deadlines. They will also market their publication in the school and in the larger community. Potential students should be aware that this course requires out of class work during and after school, some weekends and during special events throughout the school year, including the possibility of some summer work. Selection of students should be based on a demonstration of proficiency in communication, problem solving and creativity, organization and self management, and an ability to work with others in a team environment.

Technical Drawing (Grades 9-12)

.5 or 1 credit

The Technical Drawing classes will enable the student to develop competencies that will allow them to solve visualization challenges and effectively model and communicate technical information. This will be accomplished through a graded series of guided exercises and individual projects. The Technical Drawing classes will introduce students to the visual language used by engineers and other designers throughout history, both as a problem solving tool and as a means of communication. Students will use a variety of tools, including both traditional tools and the computer, to produce technical graphics and models demonstrating the different methods of visualization.

Manufacturing Technologies

Advanced Metals (Grades 10-12)

1 credit

This course is offered to students who wish to continue their studies of manufacturing technologies centered on metals as a design material. The focus in this class will be on developing the student's workplace skills as well as their abilities in the processes studied previously. (E.g. sheet metal, machine tool processes, computer-aided manufacturing). Life and career skills will be emphasized as this course blends with 21st century core courses in

critical thinking and problem solving. Students will need to recall skills learned in the Metals class and expand on that knowledge.

Advanced Woodworking, I (Grades 10-12)

1 credit

The Advanced Woodworking I course builds on the competencies developed in Woodworking. Students will develop competency with more sophisticated manufacturing systems, processes and techniques as they advance their skills in woodworking, cabinetry and design. Students will be introduced to a Computer Numeric Control (CNC) machine. These skills will be developed through the construction of guided assignments.

Prerequisite: Woodworking

Advanced Woodworking, II (Grades 11-12)

1 credit

The Advanced Woodworking II course builds on the competencies developed in Woodworking I. Students will develop competency with more sophisticated manufacturing systems, processes and techniques as they advance their skills in woodworking, cabinetry and design. Students will select, design and construct personalized projects with a focus on cabinetmaking and furniture production. Students will perform community service projects within the district and SAU.

Prerequisite: Advanced Woodworking I

Building Construction (Grades 9-12)

.5 credit (2nd semester)

This course focus is on residential building technique and application. Students learn how to use a transit, what building codes are, skills with shop equipment, as well as identify and understand architectural structure. Safety will be stressed throughout the process and expected outcome before students are able to build. Students will gain professional experience through this project which can be used throughout life. Note: Students enrolling in this class recognize they are required to participate in the on-site assembly of the structures constructed in class. These field trips are treated as final exams, and attendance is mandatory.

Home Maintenance (Grades 9-12)

.5 credit (1st semester)

Students will become familiar with the varied roles and responsibilities associated with repairing and maintaining a home or apartment. Short term goals and objectives are set for the students while they work in a laboratory environment. A hands-on approach will focus on

varied activities ranging from framing to drywall. Students will work in a collaborative work environment with specific responsibilities and schedules.

Introduction to Electricity (Grades 9-12)

.5 credit

Introduction to Electricity/Electronics; designed for the hands-on student. Students work on individual and group projects. Assignments provide opportunities for students to further develop problem solving skills. Students will be introduced to both residential wiring and electronic circuit building. This course is recommended for students who are considering Electronic Communications at Cheshire Career Center, Construction, or in Engineering.

Introduction to Welding (Grades 9-12)

.5 credit

This course introduces the student to the principles and practical application and methods of welding. The student will demonstrate a basic working knowledge of torch brazing, oxy-acetylene welding, gas metal arc welding, shielded metal arc welding and oxy-fuel cutting through individual laboratory usage with goal oriented outcomes. Students will be introduced to the process of plasma arc and tungsten inert gas welding and identification of the appropriate use of metal. This course is recommended for those students who are interested in careers that include Metal Fabrication, 3 dimensional art or Automotive Body Technology.

Metals (Grades 9-12)

.5 credit

The Metals course will develop student competencies in technology, critical thinking and problem solving by introducing them to various manufacturing systems and processes used to safely work with metals. Life and career skills will be emphasized through a series of guided projects that include working in sheet metal fabrication, machine tool processes, and manufacturing. Teamwork and personal responsibility will be emphasized as students work with others to fabricate projects.

Small Gas Engines (Grades 9-12)

.5 credit

Small Gas Engines is designed to be both classroom and hands on with small engines, engine theory and service are covered on L-head, overhead valve, and overhead cam engine design. The course begins with shop safety, and the foundation of basic engine theory. Various systems are covered that are required to make an engine function; the mechanical, ignition, fuel and air induction, lubrication, and cooling systems. Students will learn how to apply that

knowledge in the maintenance, diagnosis, repair, and rebuilding of engines. It is recommended for students interested in taking the automotive course at either the Cheshire Center, or a career in engineering.

Welding II (Grades 10-12)

.5 credit

Welding II allows the student to practice the principles of welding with a more in depth approach. The student can excel their skills with their prior working knowledge of torch brazing, oxy-acetylene welding, shielded metal arc welding, oxy-fuel cutting and tungsten inert gas welding for non-ferrous metals and the process of gas metal arc welding, and plasma arc. This will be encouraged to broaden their knowledge of different metal applications. Students will gain a background knowledge in identifying and selecting metals for a given application.

Woodworking (Grades 9-12)

.5 credit

Woodworking helps students develop competencies in design, problem-solving, communications and technology by introducing them to the principal, tools and practices of general woodworking. The class will cover an introduction to the safe and appropriate use of hand and machine tools and the application of technological processes and systems. Students will demonstrate competency of basic hand and power tools and processes through the construction of a series of guided assignments.