BILLERICA MEMORIAL HIGH SCHOOL



PROGRAM OF STUDIES 2025-2026

Billerica School District Office

365 Boston Road Billerica, MA 01821 (978) 528-7900 Phone (978) 528-7909 Fax www.billericak12.com

Billerica School Committee

Chair	John Kleschinsky
Vice Chair	Annette Famolare
Secretary	Michael Domina
Board Member	Mark Efstratiou
Board Member	Marion Depierro

Billerica School Administration

Superintendent	Dr. Kerry Clery
Assistant Superintendent	Lori McDermott
Director of Finance and Operations	Michelle Clark
Director of Special Services	Dr. Robert Bergeron
Human Resources Director	Debra Vartanian
Director of Technology	Mark Bishop

Billerica Memorial High School

Principal	Thomas Murphy	tmurphy@billericak12.com
Assistant Principal	Steven Bottari	sbottari@billericak12.com
Assistant Principal	Matthew Flood	mflood@billericak12.com
Assistant Principal	Christopher Lordan	clordan@billericak12.com
Assistant Principal	Tinamarie Piscatelli	tpiscatelli@billericak12.com
Administrator of Athletics	John Magliozzi	jmagliozzi@billericak12.com
Director of School Counseling	Melinda Cripps	mcripps@billericak12.com
Visual & Performing Arts Coordinator	Christopher Dearbeck	cdearbeck@billericak12.com
STEM, Business. & Humanities Coordinator	Marian Dyer	mdyer@billericak12.com
Coordinator of Health Services and Wellness	Bernie McCann	bmccann@billericak12.com

Billerica Memorial High School Mission Statement

Excellence Through Community

Billerica Memorial High School is a community dedicated to preparing students for life in the 21st Century. We believe in the shared responsibility of students, parents, staff, and the Billerica community in developing lifelong learners. As such, we value individuality and recognize strength in unity to ensure an environment of respect and acceptance. Ultimately, we define success as maximizing the intellectual, emotional, physical, social, and civic development of each member of our school.

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Principal's Welcome

Dear Students,

The Program of Studies has been developed to offer a variety of offerings in an effort to individualize your educational experience for the upcoming academic year.

For both new and returning students, we have created a sample course load for each grade as a pathway to graduation. Over the course of your educational journey, we encourage you to explore courses that resonate with you, as well as courses that may kindle an interest that you may not have anticipated. Our teachers have crafted curricula that will inspire curiosity, challenge your thinking, and foster creativity. Whether your primary interest lies in the arts, humanities, business, music, mathematics, languages, science, technology, engineering, or physical education, there is a multitude of courses in each discipline that will provide insight into the subject matter while ensuring your competence in analyzing and interpreting data, evaluating and communicating, and planning and investigating.

The sage advice proffered by your teachers, counselors, and parents will be invaluable to you during the selection process. Always remember to seek input from those that have a vested interest in your success.

Billerica Memorial High School offers an array of co-curricular activities for you to enrich your high school experience. The friendships, challenges, and successes our athletic teams and clubs offer will enrich your life and establish lifelong memories that you will cherish long after you leave BMHS.

It is my hope that your high school experience will be rewarding, enriching, and fun. Your journey through the halls of Billerica Memorial High School will be brief; make it an experience you will reflect back upon with fond memories.

Sincerely,

Mr. Murphy

School Counseling Department

The School Counseling Department provides a multitude of services and resources to assist students in developing plans for the future. The school counseling program is committed to focusing on the needs, interests, and issues related to student growth as well as individual development in academic, career, and personal/social areas. Counselors provide direct services to students through individual conferences and both small group and grade-level presentations. These presentations include relevant career, college, and academic information. The School Counseling Department also offers a variety of parent programs throughout the school year, including college information nights, financial aid night, and a Program of Studies night. Parents are encouraged to call their child's counselor when they have a concern or question.

How to Use This Program of Studies

This Program of Studies contains information to provide students and parents with knowledge pertaining to school courses, programs, and graduation requirements. This catalog is intended to answer questions that may arise regarding these areas and to provide necessary material to make informed decisions in relation to courses, programs and opportunities. It is important to carefully read and comprehend course sequence and requirements for graduation.

Students are encouraged to contact administrators, counselors, or teachers with questions or concerns regarding course selection. We encourage parents and students to inform educational personnel of special situations or circumstances in order to obtain assistance to ensure student success.

Considerations during the planning process:

- What are the requirements for graduation?
- What courses are needed if I plan to attend a 4-year college? A 2-year college?
- What are my strengths? Interests?
- ·Class selection based on student goals
- •How will the courses I choose this year affect courses I may want to take in the future?
- •NCAA Course Requirements

Online Course Selection

Courses are selected online with the selection process being open for a one-week time period. Students must make their class selections during this open enrollment period. If you do not meet the prerequisites of a class or if you wish to take a course(s) not recommended by your current teacher(s), first obtain a course override sheet from your school counselor and then seek Curriculum Coordinator approval.

Course Change Procedure

Once the master schedule is completed, course changes are very limited. If a change is warranted, students must follow the procedure below. If all of the steps are not completed, the change will not be allowed.

- 1. Course changes can be requested for full year courses within ten calendar days of the beginning of the school year, or for semester courses, within five calendar days of the start of the semester. These changes can often be done directly through the student's school counselor.
- 2. Course changes (including level changes) beyond these time frames will be considered when there are special circumstances and students must complete the Course Change Form.
- 3. Students must obtain ALL necessary signatures and provide all requested information (including the reason for the request and comment from a parent/guardian) and return the completed form to their counselor, who will seek Coordinator approval for the course change.
- 4. Students must remain in the original course until they receive notification that the course change has been approved. Most course changes will take effect at the start of a term rather than in the middle of a term.

For courses that are dropped after the first quarter (for a semester 1 or full year course) or dropped after the third quarter (for a semester 2 course), a W(P) or W(F) will appear on the student's transcript. If a student is changing levels of the same course, a W will appear on the student's transcript. Additionally, when a student changes levels, all transcript grades from the sending course will be applied to the receiving course at the same GPA value as the sending course. The highest numerical score in the range of numerical grade values for the corresponding transcript grades will be transferred to the new course. By doing this, the integrity of the GPA is maintained.

For example, a student moves from an Honors course (where she earned a term 1 grade of 86%/B) to a CCR course. When her sending course's transcript grades are applied to the CCR class, the grade will be recorded as an 89%/B+. Through this adjustment, the GPA of 3.0 is preserved. Conversely, if a student moves up a level, the letter grade and corresponding numerical score will be adjusted to preserve the integrity of the GPA.

Requirements for Graduation Only courses in Grades 9-12 earn credit towards graduation.

Subject	Years	Required Courses	Credits
English	4.0 years	Grade 9 English Grade 10 English Grade 11 English Senior Literature Seminar	4.0
History/Social Science	3.0 years	US & The World I US & The World II US & The World III	3.0
Mathematics	3.0 years	Three years, including Algebra I (or equivalent), Geometry, and Algebra II	3.0
Science	3.0 years	Sample: Biology Chemistry Physics or PLTW or Science Elective	3.0
STEM, Computer Science or Engineering	1.0 year	Additional Math Course Additional Science Course Computer Science or PLTW Engineering Course	1.0
Arts	1.0 years		1.0
Wellness	4.0 years	Wellness I during Freshman Year Wellness II during Sophomore Year Wellness Elective during Junior Year Wellness Elective during Senior Year	1.5
World Language	2.0 years	Both years in the same language taken in Grades 9 - 12	2.0
Digital Literacy	0.5 years		0.5
Financial Literacy	0.5 years	Managing Your Money	0.5
Electives			4.5
Credits needed for Graduation			24

Credit

Promotion Credit Requirements

In order to attain the necessary credits to progress toward graduation, students must earn a minimum number of credits by the end of each academic year:

At the completion of 9th grade and to be considered a sophomore:	6 credits
At the completion of 10 th grade and to be considered a junior:	12 credits
At the completion of 11 th grade and to be considered a senior:	18 credits
At the completion of 12 th grade and to be considered a BMHS graduate:	24 credits

^{*}Please note that credit loss due to excessive absences may impact promotion and/or graduation.

Loss of Credit

All unexcused absences will count towards the unexcused absence limit per term. Any time a student is not physically present in class, the student will be considered absent unexcused per the school attendance policy. When a student has exceeded the unexcused absence limit during any quarter, the assistant principal will send written notice to the parents as notification of loss of credit and an opportunity to appeal for that course for the quarter. At this time, the parent will be informed of the appeal process noted below.

Unexcused Absences Per Quarter	Loss of Credit Per Quarter
5 – 6	0.0625 credits
7 – 8	0.125 credits
9 – 10	0.2 credits
11 or more	0.25 credits

Loss of Credit Appeal Process

- 1. Once the student exceeds the unexcused absence limit in a particular class, the student/parent will receive a Notice of Opportunity to Appeal letter and will have 7 days from the receipt of the letter to start the appeal process. Failure to do so within the five-day limit will deem the matter closed.
- 2. All appeals must be made in writing, via email, fax, or paper.
- 3. Students and/or parent may appeal an unexcused absence to the Assistant Principal. After hearing the appeal and reviewing attendance records, the Assistant Principal will make a decision regarding the unexcused absence and loss of credit.
- 4. Students and/or parents may appeal the decision of the Assistant Principal to the Principal. Parents will have 7 days from the receipt of the letter to start the appeal process. Failure to do so within the 7 day limit will deem the matter closed.
- 5. After hearing the appeal and reviewing attendance records, the Principal may extend the absence limit if he/she is satisfied that an unusual circumstance existed with an absence(s), tardy(s), or dismissal(s).
- 6. If the appeal is denied, the Principal will send an official Loss of Credit Notification to those students who exceeded the absence limit without documentation and/or approved justification.
- 7. The Loss of Credit letter will include information about Credit Recovery.

Credit Recovery

When a student exceeds an absence limit in a class and loses credit for a term, he or she will be directed to make an appointment to see his or her school counselor. The school counselor will discuss the three options to recover the credit. Student will declare their intentions on a Credit Recovery Form and submit the form to their school counselor. The following credit recovery options will be offered to students:

- 1. During the school year: Students are required to attend Testing/Credit Recovery Center, during the next academic quarter, for a designated number of sessions. This is based on the number of unexcused absences over the limit. Students with eleven or more unexcused absences will be required to complete additional coursework to ensure competency in the academic standards of the course. Students must complete this course work during the next academic quarter and must achieve a score of 75 or better to receive credit. (If a student receives unexcused absences in the fourth quarter, they must complete the work in summer school).
- 2. During the summer: Enroll in BHMS Summer School, which is an online, web-based instructional program that aligns with our curriculum. Students must complete this online work during summer school and must achieve a score of 65 or better to receive credit for his or her work. Please note that students must earn a grade of 55-64 in order to be eligible for summer school credit recovery. There is also a cost associated with summer school, which families will be responsible for.
- 3. Retake the course, or take an equivalent course: Complete the course again next school year, or if applicable, take an equivalent course.

Course Load

Students at Billerica Memorial High School are *required* to enroll in a minimum of seven courses per term during freshman, sophomore, junior, and senior years. It is expected that these courses will be taken during the traditional school day. Students may elect to take a maximum of eight courses. Note that BMHS will attempt to schedule all grade 8 students for 8 courses in a semester. Students in grades 8-12 are required to take and pass a minimum of six classes to participate in extracurricular activities, including but not limited to, clubs and athletics. Please note that students may not earn more than 8 credits per school year.

Transfer Students

When students transfer into BMHS, they will meet with their school counselor and discuss course placement. Courses from the previous school will be accepted on the BMHS transcript, awarded credit, and matched with our curriculum when planning for graduation requirements. When credit-bearing courses from a student's previous school do not align with courses offered at BMHS, the transcript will reflect elective credit. Students wishing to use such courses toward department requirements may have their requests reviewed by the appropriate curriculum coordinator. Please note that BMHS does not provide credit transfer for religious education courses.

Bell Schedule

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1 [7:25 - 8:55]	1 [7:25 - 8:55]	1 [7:25 - 8:45]	1 [7:25 - 8:45]	1 [7:25 - 8:55]
2 [9:00 - 10:25]	2 [9:00 - 10:25]	ADV [8:50 - 9:10]	ADV [8:50 - 9:10]	2 [9:00 - 10:25]
3 [10:30 - 12:25] [LUNCH]	3 [10:30 - 12:25] [LUNCH]	2 [9:15 - 10:35]	2 [9:15 - 10:35]	3 [10:30 - 12:25] [LUNCH]
4 [12:30 - 2:02]	4 [12:30 - 2:02]	3 [10:40 - 12:35] [LUNCH]	3 [10:40 - 12:35] [LUNCH]	4 [12:30 - 2:02]
		4 [12:40 - 2:02]	4 [12:40 - 2:02]	
	DAILY LUNCH SCHEDULE			
A [10:30 - 10:55]	A [10:30 - 10:55]	A [10:40 - 11:05]	A [10:40 - 11:05]	A [10:30 - 10:55]
B [11:00 - 11:25]	B [11:00 - 11:25]	B [11:10 - 11:35]	B [11:10 - 11:35]	B [11:00 - 11:25]
C [11:30 - 11:55]	C [11:30 - 11:55]	C [11:40 - 12:05]	C [11:40 - 12:05]	C [11:30 - 11:55]
D [12:00 - 12:25]	D [12:00 - 12:25]	D [12:10 - 12:35]	D [12:10 - 12:35]	D [12:00 - 12:25]

Alternative Credit Opportunities

Extended Learning Opportunities (ELO)

Opportunities for learning beyond the traditional classroom environment, driven by student interests, talents, and development, are expressly permitted by Billerica Memorial High School for students in Grades 11 and 12. ELOs may be available for independent study, private instruction, performing groups, internships, and community service not otherwise required by BMHS. An ELO may not be used to replace a class that BMHS currently offers. All ELOs are graded pass/fail and are not calculated into a student's GPA and rank. Students interested in participating in an ELO must submit an application with authorization in writing from a parent/guardian, faculty sponsor, school counselor, department coordinator, and ELO coordinator. Learning experiences already completed will not be retroactively considered as ELO credit. There is a 2 credit per year maximum. If a student wishes to participate in an ELO for credit, they will be required to present their ELO at a symposium in the spring of each academic school year.

Dual Enrollment

Students may choose to independently pursue dual enrollment opportunities at participating colleges. Students may enroll in either part-time or full-time coursework. Students must complete an application and receive prior authorization from a parent/guardian, school counselor, department coordinator, and Director of School Counseling in order to participate. All course costs are the responsibility of the student. Dual enrollment courses may be listed on a students' BMHS transcript for credit but will not be factored into rank/GPA. While courses are in progress, a grade of IP (In Progress) will be recorded for term grades; this grade does not impact student GPA. Any courses taken for enrichment over the summer will not be awarded credit or listed on the students' BMHS transcript.

Online Learning

In some instances, a student may choose to take an online course for high school credit, provided the course meets the state standards/requirements and the course is approved in advance by the coordinator of the respective department and principal. The course may be used to meet graduation requirements; however, the grade received will not be calculated into a student's rank/GPA. While courses are in progress, a grade of IP (In Progress) will be recorded for term grades; this grade does not impact student GPA. Students must meet with their school counselor prior to submitting a request for approval. Failure to obtain prior authorization shall render the course ineligible for graduation credit.

Academic Performance and Recognition Grade Point Average (GPA)*

Letter Grade	Range	CCR	Honors	AP
A+	97-100	4.00	4.33	4.67
A	94-96	3.67	4.00	4.33
A-	90-93	3.33	3.67	4.00
B+	87-89	3.00	3.33	3.67
В	84-86	2.67	3.00	3.33
В-	80-83	2.33	2.67	3.00
C+	77-79	2.00	2.33	2.67
С	74-76	1.67	2.00	2.33
C-	70-73	1.33	1.67	2.00
D+	68-69	1.00	1.33	1.67
D	65-67	0.67	1.00	1.33
F	0-64	0.00	0.00	0.00

Grade Point Average (GPA) is calculated by converting numerical grades to points based on the table. These points are added and then divided by the total number of credits attempted during a marking period. Billerica Memorial High School calculates GPA on a 4.0 weighted scale. Please see the section titled Course Change Procedure to learn how the integrity of the GPA is upheld when students change class levels during the academic year.

*Class of 2027 and beyond: Please note that only courses taken in Grades 9-12 will be applied to GPA and rank.

Valedictorian and Salutatorian

The valedictorian and salutatorian of the graduating class will be determined by calculating the cumulative GPA of all seniors at the conclusion of the 3rd quarter of senior year. The senior with the highest cumulative GPA in the graduating class will be named valedictorian. The senior with the second highest cumulative GPA in the graduating class will be named salutatorian. Calculation will be done to the ten-thousandth place.

To be eligible for the distinction of valedictorian or salutatorian, a student must be enrolled at Billerica Memorial High School for the four consecutive semesters immediately preceding graduation. Alternative credit opportunities are not factored into a student's GPA.

Honor Roll

Grade 8

High Honors

A student must maintain an average of 90 or above in all subjects listed on the report card.

Honors

A student must maintain an average of 80 or above in all subjects listed on the report card.

Grades 9-12

High Honors

Students earning the distinction of High Honors will have a GPA of **3.75 or above** and must be enrolled in a minimum of 6 courses at Billerica Memorial High School, not receive a grade below a C, nor receive an Incomplete (I) in any course. Calculation will be done to the hundredth place.

Honors

Students earning the distinction of Honors will have a GPA of **3.20-3.74** and must be enrolled in a minimum of 6 courses at Billerica Memorial High School, not receive a grade below a C, nor receive an Incomplete (I) in any course. Calculation will be done to the hundredth place

Academic Honor Societies

National Honor Society

Students who have a weighted cumulative grade point average, calculated to the hundredths place at the end of their sophomore or junior year, of a 3.75 or higher on a 4.0 weighted scale, and maintain a minimum course load of 6 credits, will meet the scholarship requirement for the Billerica Memorial High School Chapter of the National Honor Society. These students are then eligible for consideration on the basis of service, leadership, and character. A faculty council will review applications to determine acceptance. If the BMHS GPA 4.0 weighted scale is adjusted in the future, then the required minimum GPA will be adjusted accordingly.

Science National Honor Society

To be considered for membership, students must meet the following requirements: be a junior or senior student, have a 3.0 GPA across all classes and a 3.5 GPA across science classes, be actively enrolled in a science class, have been enrolled in at least one honors or AP science class before or during their junior year, have taken or been enrolled in at least two honors or AP science classes by their senior year, maintain behavior that is acceptable by the school's code of conduct, attend one local chapter officer's lecture annually, and annually complete four hours of community service. As a part of the Science National Honor Society, all members will complete a STEM research project and present at the school's science fair in February. Contact the honor society advisor for additional information.

La Sociedad Honoraria Hispánica - Esperanza (Spanish National Honor Society)

To be considered for membership, students must be a sophomore or higher, must be enrolled in at least their fourth credit-bearing semester of Spanish at the time of their application, must have completed at least three credit-bearing semesters of the language with an average grade of at least 90% in each of those classes semesters, must have an overall academic GPA of at least 3.5, and must never have failed any class. Additionally, students must demonstrate a pattern of academic integrity and character, leadership, seriousness of purpose, cooperation, honesty, service and commitment to others. Students meeting these criteria will be invited to complete an application, must obtain a teacher recommendation outside of the World Languages Department, and must have completed at least ten hours of community service before submitting the application. Leadership of the honor society will solicit faculty and administrative feedback on student applications, review applications, and notify students of their acceptance status. Contact the honor society advisor for additional information.

La Société Honoraire de Français (French National Honor Society)

To be considered for membership, students must be enrolled in at least their fourth credit-bearing semester of French at the time of their application, must have completed at least three credit-bearing semesters of French with an average grade of at least 90%, and must have an overall academic GPA of at least 3.5. Students meeting these criteria will be invited to complete an application. They must be of sound character, obtain a teacher recommendation outside of the World Languages Department, and must have completed at least ten hours of French activities or community service before submitting the application. Leadership of the honor society will review applications and notify students of their acceptance status. Contact the honor society advisor for additional information.

Società Onoraria Italica Leonardo Da Vinci (Italian National Honor Society)

To be considered for membership, students must be enrolled in at least their fourth credit-bearing semester of Italian at the time of their application, must have completed at least three credit-bearing semesters of Italian with an average grade of at least 90%, and must have an overall academic GPA of at least 3.5. Students meeting these criteria will be invited to complete an application. They must be of sound character, obtain a teacher recommendation outside of the World Languages Department, and must have completed at least ten hours of Italian activities or community service before submitting the application. Leadership of the honor society will review applications and notify students of their acceptance status. Contact the honor society advisor for additional information.

Seal of Biliteracy

Students in Billerica are invited to pursue achievement of the Massachusetts State Seal of Biliteracy (SOBL). The Seal is offered to any student who demonstrates proficiency in English and any other language, whether they speak or sign the language other than English at home or learned it at school or in the community. The State Seal of Biliteracy aims to:



- 1. Encourage students to study and master languages;
- 2. Certify attainment of biliteracy skills;
- 3. Recognize the value of language diversity;
- 4. Provide employers with a method of identifying people with language and biliteracy skills;
- 5. Provide universities with a method to recognize and give credit to applicants for attainment of high-level skills in languages;
- 6. Prepare students with skills that will benefit them in the labor market and the global society; and
- 7. Strengthen intergroup communication and honor the multiple cultures and languages in a community.

Student Criteria for the State Seal of Biliteracy	Student Criteria for the State Seal of Biliteracy with Distinction
Meet all graduation requirements	Meet all graduation requirements
472 or higher on Grade 10 ELA MCAS	501 or higher on Grade 10 ELA MCAS
A score equivalent to or higher than Intermediate High on an approved world language assessment	A score equivalent to or higher than Advanced Low on an approved world language assessment

*Students who earn a scaled score between 455 and 471 on the Grade 10 ELA MCAS test or retest may still satisfy the English language criteria for the State Seal of Biliteracy if they fulfill the requirements of an Educational Proficiency Plan and attain a minimum score or level on a nationally recognized and readily available English proficiency assessment approved by the Department, such as ACCESS for ELLs.

Most students will take the ELA MCAS in March of their sophomore year. Regular retake opportunities are available for students who have not yet achieved the required score. Alternative English proficiency testing takes place in January. We will administer the proficiency tests in languages other than English in the early spring of each year.

We look forward to honoring the language expertise and diversity in our district through this initiative. Information from DESE can be found online at https://www.doe.mass.edu/scholarships/biliteracy/. If you have any further questions, please contact the 8-12 Humanities Coordinator.

Academic Expectations

Advanced Placement (AP) Program

The Advanced Placement (AP) Program is a cooperative, educational endeavor of secondary schools and colleges. The College Board Advanced Placement courses give students the opportunity to take college-level courses while still enrolled in high school. The rigorous course material, classroom discussions, and demanding assignments allow students to develop the content mastery and critical thinking skills expected of college students. Many students report that they enjoy the challenge of advanced placement study, high school faculty find that AP courses greatly enhance students' confidence and academic interest, and college faculty find that these students are far better prepared for serious academic work.

Advanced Placement exams are an essential part of the AP experience and provide students and colleges with a standardized measure of mastery and achievement. Administered nationally in May, the exams are recognized by nearly 2,900 United States and foreign colleges and universities, which may grant credit, advanced placement, or both to students who have performed satisfactorily on AP examinations. Additionally, students may earn advanced standing depending upon the number of AP exams taken, performance on AP exam testing, and in accordance with the policies of each individual college. Students who choose to enroll in an AP course at Billerica Memorial High School are required to take the AP exam, and students and their families are responsible for the cost of the exam. If this is a financial hardship, please see your teacher or school counselor at the start of the course. For additional information, please see the College Board website: apstudent.collegeboard.org

Honors Courses (H)

Aligned with descriptions accepted by the Massachusetts Department of Higher Education, Honors level courses at Billerica Memorial High School "contain highly challenging material, presented at an accelerated and more intensive pace than the standard college preparatory courses taken by a majority of four-year college-bound students. They require advanced reading, writing, verbal, conceptual, mathematical, and study abilities, as well as extensive outside preparation."

Recommendation into honors courses requires demonstrated academic habits of independence, curiosity, and perseverance. Honors students demonstrate voluntary class participation and engagement, think critically, interpret data and draw inferences, use evidence to support claims, and exceed grade-level expectations for reading and writing, particularly in the subject area of the honors course.

College/Career Readiness Courses (CCR)

Aligned with descriptions accepted by the Massachusetts Department of Higher Education, College/Career Readiness courses at Billerica Memorial High School "require well-developed reading, writing, verbal, conceptual, mathematical, and study abilities, as well as substantial outside preparation" to prepare students for future success in college or a career.

Commonwealth Collegiate Academy (CCA)

In partnership with the University of Massachusetts Lowell (UML), BMHS is pleased to offer juniors and seniors the opportunity to earn UML credits by taking classes at BMHS. There is no cost to students to participate in this program and up to 25 students in Grade 11 and 25 students in Grade 12 can participate.

The goals of the Commonwealth Collegiate Academy are to:

- increase early college opportunities, especially for ethnically diverse, first-generation, and underserved students
- provide an intensive introduction to university level work
- support student transition to higher education
- increase awareness of career opportunities and college majors

Exploratory coursework is planned within Science, Technology, Engineering, and Math (STEM), Business, and Humanities, to include College Writing. Courses are co-taught by an in-person BMHS teacher and an online UML professor, earning UML credits that will transfer back to BMHS. The courses are intended to provide an authentic college experience and to award credit for foundational courses applicable in many different majors. At times, UML professors will teach at BMHS.

Interested students will take a short online course module to prepare them for college-level work. Once accepted into the program, students will take two CCA courses each semester and can expect to earn credit for up to ten courses, which may also include summer classes between the junior and senior years. There may be opportunities for students to enroll in courses individually as space allows. While courses are in progress, a grade of IP (In Progress) will be recorded for term grades; this grade does not impact student GPA. Students will also be invited to access UML resources, attend on-campus events, and receive assistance with applying to UMass Lowell's degree programs. See your school counselor to register for this program.

Two-Year CCA Plan (Specific Courses Subject to Change)

Class of 2027 (Juniors)

Fall 2025	Spring 2026
Environmental Science	Intro to Literature
Financial Accounting	Intro to Entrepreneurship

Class of 2026 (Seniors)

Fall 2025	Spring 2026
College Writing I	Intro to Exercise Science
Precalculus I	Forensic Chemistry

^{*}Students who have completed Precalculus would enroll in another math class during a different block.

Project Lead the Way (PLTW)

Project Lead the Way (PLTW) prepares students to be the most innovative and productive leaders in science, technology, engineering, and mathematics (STEM), and to make meaningful, pioneering contributions to our world. STEM education is at the heart of today's high-tech, high-skill global economy. The PLTW Pathway is a curriculum that is designed to encompass all four years of high school. Using an engaging, hands-on approach, PLTW courses encourage the development of problem-solving skills, critical thinking, creative and innovative reasoning, and a love for learning. The PLTW education programs give students a brighter future by providing them with a foundation and proven path to college and career success in STEM-related fields. With qualifying scores on PLTW End-Of-Course Assessments, students may also be eligible for college credits through PLTW partners.

Academic Supports

Academic Success

In Grade 8 and 9, students may be recommended by a Counselor for enrollment in an Academic Success class. This course has been created to lead students through the steps for academic success and self-management skills in preparation for their high school years. It will review and teach each student how to organize, plan, prioritize, manage time, maintain focus, self-assess, and study efficiently. Students will also have directed study time each class period where they will receive support from the teacher to complete schoolwork. The course will be graded on a Pass/Fail scale.

Advisory

Advisory personalizes each student's high school experience through guided small group discussions. Topics addressed in advisory include community service, equity, conflict resolution, career and college planning. All students will be assigned to an advisor.

Math Tutoring

When recommended by their 8th Grade math teacher, students may be recommended for math tutoring during the school day. The tutoring will take the place of a study hall in the student's schedule, but students do not earn credits. Tutors will support students to develop strategies for effective learning, fill learning gaps, support homework, assist with advanced topics, while evaluating their own progress.

Library Media Center

Library Learning Commons

The BMHS Library Learning Commons is an active and essential hub of our school. It provides an innovative learning center that supports academic goals, the joy of reading, and resources for creating and learning. Our library staff collaborates with teachers to create lessons and guides to assist students on their research projects. Students acquire a deeper understanding of problem solving and communication skills, and develop vital critical thinking skills necessary to enable them to become effective and ethical users of information resources.

The BMHS Library Learning Commons offers curriculum-related online resources, including comprehensive databases, encyclopedias, and eBooks. The library catalog is online through Follett Destiny software. All of these resources are available through our BMHS virtual Learning Commons. The library offers multiple print periodicals and approximately 13,500 books. There are DVDs, videos and multimedia equipment available for checkout. All eighth and ninth grade students attend an orientation in the fall to introduce them to these resources. Staff and students also have access to printers, a copier, and group meeting and work spaces that accommodate groups of many sizes.

Extended Learning Opportunities (ELO) are available to students as Library Student Assistants or Student Tech Support Team members. Individual Learning projects must be pre-approved before signing up for this opportunity.

The Learning Commons at BMHS provides students with a dynamic alternative to the traditional study hall experience by allowing them to sign up in advance for dedicated study time. This innovative space not only fosters an academic environment but also offers personalized one-on-one sessions with the librarian. These sessions are invaluable for students seeking guidance on research topics and project development, ensuring they receive tailored support to navigate their academic challenges effectively.

In addition to its focus on academic assistance, the Learning Commons is equipped with a state-of-the-art TV studio and editing room, making it an ideal hub for video and media projects. Students are encouraged to take advantage of these resources, allowing for the exploration of creative skills and collaboration on multimedia projects. The combination of academic support and technological resources positions the Learning Commons as a pivotal space for enhancing both learning and creativity at BMHS.

Special Services

Consultation and Training

In accordance with documented needs, teachers and other professionals or support staff members will be provided with specialized consultation or training that will allow them to understand the unique educational needs of a student. Consultation and training enable educators to plan and deliver specialized instructional strategies within the context of the classroom or other school-based learning environments.

Classroom Accommodations

In accordance with a student's IEP, 504, for a student to access and progress in the general curriculum will be provided. Accommodations do not fundamentally change the content of a course or the expectations for student learning, unless indicated within the IEP. Rather, accommodations are adjustments to the methods of instructional delivery, the assessment or demonstration of learning, and/or other aspects of the regular classroom setting. If you would like to discuss applying for accommodations on PSAT, SAT, ACT, or AP testing, please talk with your child's school counselor and they will be able to assist students and parents in this process.

Classroom Supports

In accordance with a written agreement, students will be provided with in-classroom supports that will afford them access to the general curriculum and advance progress toward specific educational goals. Based on the unique educational needs of each student, classroom supports can be delivered in a myriad of ways including, but not limited to: co-teaching, specialized or paraprofessional assistance, or assistive technology devices.

Curriculum Modifications

In accordance with a written Individualized Education Plan and based on the unique needs of a student, modifications may be made to the general curriculum in one or more courses. Modifications are changes to the curriculum of a course that do fundamentally alter the targeted outcomes, learning expectations, or grading of the course. Modified courses will be indicated as such on report cards and transcripts.

Planning a Course of Study

College Admission Requirements

College entrance requirements vary greatly and students should carefully review individual college requirements. In order to best prepare for the highly competitive college admissions process, students are strongly encouraged to take as demanding a schedule as possible during their years at Billerica Memorial High School. Although a few select courses taken in Grade 8 do earn credits and count toward graduation requirements, college admission requirements are based on courses taken during grades 9-12 only. Colleges carefully review the following criteria during the admissions process; this is not an exhaustive list:

- Grades in college preparatory courses taken in grades 9-12
- Strength of the curriculum
- Overall Grade Point Average (GPA)
- Class rank
- School counselor and teacher recommendations
- Standardized test scores (SAT I/ACT test)
- Application essay
- Extracurricular activities, including but not limited to: clubs, sports, activities, employment, volunteer experiences, etc.

Suggested course of study if you are considering: * Taken in grades 9-12

4-Year College	Taken in grades 7-12
English	4 years
History/Social Science	3-4 years depending on college/major
Math	4 years
Science	4-5 years depending on college/major
World Languages	2-4 years in the same language*
Electives	2 or more years, depending on personal interests and educational goals
2 – Year College and Technical Schools	
English	4 years
History/Social Science	3 years
Math	3 years
Science	3-4 years
World Languages	2-4 years in the same language*
Electives	2 or more years, depending on personal interest and educational goals

NCAA Initial Eligibility Standards

Students who plan to participate in Division I or Division II college athletics must register with the NCAA Eligibility Center. Once all materials have been submitted, the NCAA Eligibility Center issues a preliminary certification report to the college. At the end of your junior year and after you graduate, the NCAA Eligibility Center reviews your transcript to make a final certification decision according to NCAA standards. Students must also complete the amateurism questionnaire through the Eligibility Center website.

To be certified by the NCAA Eligibility Center, students must complete a specific number of approved core classes, attain a minimum score on the SAT or ACT, and achieve a minimum GPA:

DIVISION I 16 Core-Course Rule

16 Core Courses

4 years of English

3 years of mathematics (Algebra I or higher)

2 years of natural/physical science (1 year of lab, if offered by high school)

1 year of additional English, mathematics, or natural/physical science

2 years of social science

4 years of additional courses (from any area above or world language

DIVISION II 16 Core-Course Rule

16 Core Courses

3 years of English

2 years of mathematics (Algebra I or higher)

2 years of natural/physical science (1 year of lab, if offered by high school)

3 years of additional English, mathematics, or natural/physical science

2 years of social science

4 years of additional courses (from any area above or world language)

Grade Point Average (GPA)

Only core courses are used in the calculation of GPA for NCAA purposes. Make sure the courses you are taking are approved as core courses on the NCAA Eligibility Center website.

• The Division I GPA requirement is a minimum of 2.3. Division II requires a minimum GPA of 2.2.

Students seeking eligibility should frequently check the NCAA Eligibility Center website (https://web3.ncaa.org/ecwr3/) for any updates or changes to the rules and to view the complete approved core course list for Billerica Memorial High School.

List of Course Offerings

AIR FORCE JROTC

COURSE NO.	COURSE NAME	LEVEL	GRAD	ЭE				CREDIT	PAGES
163	Air Force JROTC I	CCR		9				1.0	40-41
175	Air Force JROTC II	CCR			10	11		1.0	40-41
183	Air Force JROTC III	CCR				11	12	1.0	40-41
820	Air Force JROTC IV	CCR				11	12	1.0	40-41
821	Air Force JROTC Leadership	CCR					12	1.0	40-41

JROTC credits are applied towards graduation requirements for Electives in Wellness in 11th and 12th grade

BUSINESS EDUCATION & INFORMATION COMMUNICATION TECHNOLOGY

COURSE NO.	COURSE NAME	LEVEL	GRAD					CREDIT	PAGES
516	Exploring the World of Business	CCR	8	9	10	11	12	0.5	42 – 46
515	Social and Digital Media	CCR		9	10	11	12	0.5	42 – 46
523/522	Accounting I	CCR/H			10	11	12	0.5	42 – 46
540	Managing Your Money*	CCR				11	12	0.5	42 – 46
553/552	Marketing I	CCR/H			10	11	12	0.5	42 – 46
554	Advanced Strategic Marketing	Н				11	12	1.0	42 – 46
557	Sports Management	CCR		9	10	11	12	0.5	42 – 46
581	Project Design and Leadership	Н					12	1.0	42 – 46
551	Advanced Accounting w/ Quickbooks	Н				11	12	0.5	42 – 46
591	AP Macroeconomics	AP			10	11	12	1.0	42 – 46
592	AP Microeconomics	AP			10	11	12	1.0	42 – 46
564/563	Entrepreneurship	CCR/H			10	11	12	0.5	42 – 46

*Managing Your Money is the ONLY course that meets the Financial Literacy graduation requirement

ENGLISH

COURSE NO.	COURSE NAME	LEVEL	GRAD	ÞΕ		CREDIT	PAGES	
008	Grade 8 English	X	8			X	46-52	

	1	ı	1		1		1		
010/011	Grade 9 English	H/CCR		9				1.0	46-52
020/021	Grade 10 English	H/CCR			10			1.0	46-52
030/031	Grade 11 English	H/CCR				11		1.0	46-52
034	AP Language and Composition	AP				11	12	1.0	46-52
054	AP Literature and Composition	AP				11	12	1.0	46-52
046/047	Archetypal Literature	H/CCR					12	1.0	46-52
040/041	The Adolescent in Literature	H/CCR					12	1.0	46-52
042/043	Creative and Expository Writing	H/CCR					12	1.0	46-52
050/051	Writing/Rhetoric in the Digital Age	H/CCR					12	1.0	46-52
059	Public Speaking and the Media	CCR			10	11	12	0.5	46-52
055/056	Academic Success	X	8	9				0.0 - 1.0	46-52
089	ESL English (Newcomer)	X	8	9	10	11	12	2.0	46-52
090	ESL English (Beginner)	X	8	9	10	11	12	1.0	46-52
091	ESL English (Intermediate)	X	8	9	10	11	12	1.0	46-52
ESL	ESL Support	X	8	9	10	11	12	X	46-52

FAMILY AND CONSUMER SCIENCES

COURSE NO.	COURSE NAME	LEVEL	GRAD	ЭE				CREDIT	PAGES
602	Introduction to Cooking	CCR		9	10	11	12	0.5	52-54
603	Food Choices for Good Health	CCR			10	11	12	0.5	52-54
616	World of Foods	CCR			10	11	12	0.5	52-54
621	Child Growth and Development – Pt 1	CCR			10	11	12	0.5	52-54
627	Child Growth and Development – Pt 2	CCR				11	12	0.5	52-54
622	Advanced Child Development	CCR					12	1.0	52-54
625	Educators Rising Internship	CCR					12	1.0	52-54

FCS credits count towards the Wellness Graduation Requirement

HISTORY AND SOCIAL SCIENCE

COURSE NO.	COURSE NAME	LEVEL	GRAD	ÞΕ		CREDIT	PAGES
109	Civics	X	8			X	54-59

110/111	US & The World I	H/CCR	9				1.0	54-59
120/121	US & The World II	H/CCR		10			1.0	54-59
130/131	US & The World III	H/CCR			11		1.0	54-59
139	AP US History	AP			11	12	1.0	54-59
061	Film Studies	CCR	9	10	11	12	0.5	54-59
154	American Legal System I	CCR			11	12	1.0	54-59
170	American Legal System II	Н				12	1.0	54-59
155	Sociology	CCR			11	12	0.5	54-59
159	AP European History	AP		10	11	12	1.0	54-59
162	Local History and Government	CCR			11	12	0.5	54-59
191	AP US Government	AP		10	11	12	1.0	54-59
179	Psychology – An Introduction	CCR			11	12	0.5	54-59
176	Exploring Mental Illness and Theories of Personality	CCR			11	12	0.5	54-59
177	AP Psychology	AP			11	12	1.0	54-59
182	Topics in Global Studies	CCR			11	12	1.0	54-59
160	History of Gender-based Rights and Protections in the United States	CCR		10	11	12	1.0	54-59
294	Video Production	CCR		10	11	12	0.5	54-59

MATHEMATICS

COURSE	IIIEMATICS								
NO.	COURSE NAME	LEVEL	GRAD	GRADE					PAGES
203	Grade 8 Math	X	8					X	60-64
202	Grade 8 Accelerated Math	X	8					X	60-64
201	Algebra I	CCR		9				1.0	60-64
210/211	Geometry	H/CCR		9	10			1.0	60-64
220/221	Algebra II	H/CCR			10	11		1.0	60-64
222	Algebra IIA	CCR				11		1.0	60-64
223	Algebra IIB	CCR					12	1.0	60-64
232	AP Precalculus	AP				11	12	1.0	60-64
230/231	Precalculus	H/CCR				11	12	1.0	60-64

242	Calculus	CCR			12	1.0	60-64
249	AP Calculus AB	AP			12	1.0	60-64
250	AP Calculus BC	AP			12	1.0	60-64
266	AP Statistics	AP		11	12	1.0	60-64
262	Statistics	CCR			12	1.0	60-64

SCIENCE

COURSE	IENCE								
NO.	COURSE NAME	LEVEL	GRAE	ÞΕ				CREDIT	PAGES
300	Grade 8 Science	X	8					X	64-70
310/311	Biology	H/CCR		9				1.0	64-70
319	AP Biology	AP			10	11	12	1.0	64-70
320/321	Chemistry	H/CCR			10	11	12	1.0	64-70
328	AP Environmental Science	AP				11	12	1.0	64-70
329	AP Chemistry	AP				11	12	1.0	64-70
330/331	Physics	H/CCR				11	12	1.0	64-70
333	AP Physics 1	AP				11	12	1.0	64-70
334	AP Physics 2	AP					12	1.0	64-70
339	AP Physics C	AP					12	1.0	64-70
381	PLTW Principles of Biomedical Science (PBS)	Н			10	11	12	1.0	64-70
382	PLTW Human Body Systems (HBS)	Н				11	12	1.0	64-70
385	PLTW Medical Interventions (MI)	Н					12	1.0	64-70
237	PLTW Capstone	Н					12	0.5	64-70
374	Environmental Science	CCR				11	12	0.5	64-70
393	Forensics	CCR					12	0.5	64-70
394	Meteorology	CCR				11	12	0.5	64-70
395	Astronomy	CCR				11	12	0.5	64-70

STEM - Computer Science and Engineering

COURSE					
NO.	COURSE NAME	LEVEL	GRADE	CREDIT	PAGES

383	PLTW Gateway CS - App Creators and CS for Innovators and Makers *	X/CCR	8	9				Semester	70-73
384	PLTW Gateway ENG - Design and Modeling *	X/CCR	8	9				Semester	70-73
298	PLTW Computer Science Essentials *	CCR			10	11	12	0.5	70-73
271	Computer Design and Animation *	Н		9	10	11	12	0.5	70-73
296	AP PLTW Computer Science Principles* (AP CSP)	AP			10	11	12	1.0	70-73
270	AP Computer Science A* (AP CSA)	AP			10	11	12	1.0	70-73
292	PLTW Introduction to Engineering Design* (IED)	CCR/H		9	10	11	12	1.0	70-73
293	PLTW Principles of Engineering* (POE)	Н			10	11	12	1.0	70-73
237	PLTW Capstone	Н					12	0.5	70-73
291	PLTW Engineering Essentials* (EE)	CCR		9	10			1.0	70-73

^{*}All classes marked with an asterisk and taken in grades 9-12 apply towards the DLCS - Digital Literacy/Computer Science Graduation requirement

SPECIALIZED COURSES

COURSE NO.	COURSE NAME	LEVEL	GRAD	ÞΕ			CREDIT	PAGES	
860	Academic Support Reading	X		9	10	11	12	0.5	74-75
861	Academic Support Reading	X		9	10	11	12	1.0	74-75
858	Academic Support I	X		9	10			1.0	74-75
859	Academic Support I	X		9	10			0.5	74-75
828	Academic Support II	X				11	12	1.0	74-75
829	Academic Support II	X				11	12	0.5	74-75

ACCESS PROGRAM

COURSE NO.	COURSE NAME	LEVEL	GRAD	D E				CREDIT	PAGES
804	Math Skills I	X	8	9				Full Year	75-79
805	Math Skills II	X			10			Full Year	75-79
853	Money Skills	X				11	12	Full Year	75-79
806	English Language Arts I	X	8	9	10			Full Year	75-79
807	English Language Arts II	X				11	12	Full Year	75-79
855	Science	X	8	9	10			Full Year	75-79
841	Living on Your Own	X	8	9	10	11	12	Full Year	75-79
801	Community-Based Training	X	8	9	10	11	12	Full Year	75-79
802	Vocational Skills	X	8	9	10	11	12	Full Year	75-79
857	Civics	X	8	9	10	11	12	Full Year	75-79
831	SPOT	X	8	9	10	11	12	Full Year	75-79
973	Academic Support	X	8	9	10	11	12	Full Year	75-79
856	Academic Support Reading	X	8	9	10	11	12	Full Year	75-79
817	Application of Technology	X	8	9	10	11	12	Semester	75-79
989	Unified Physical Education	X	8	9	10	11	12	Semester	75-79
851	Transition Skills	X	8	9	10	11	12	Full Year	75-79

MSS PROGRAM

COURSE NO.	COURSE NAME	LEVEL	GRAE	ЭE		LENGTH	PAGES		
831	SPOT	X	8	9	10	11	12	Full Year	79-82
805	Math Skills II	X	8	9	10			Full Year	79-82
853	Money Skills	X				11	12	Full Year	79-82
855	Science	X	8	9	10			Full Year	79-82
806	English Language Arts I	X	8	9	10			Full Year	79-82
807	English Language Arts II	X				11	12	Full Year	79-82
841	Living on Your Own	X	8	9	10	11	12	Full Year	79-82

802	Vocational Skills	X	8	9	10	11	12	Full Year	79-82
803	Functional Kitchen Skills for Everyday Life	X	8	9	10	11	12	Full Year	79-82
801	Community-Based Training	X	8	9	10	11	12	Full Year	79-82
989	Unified Physical Education	X	8	9	10	11	12	Semester	79-82
851	Transition Skills	X	8	9	10	11	12	Full Year	79-82

PATHWAYS

COURSE NO.	COURSE NAME	LEVEL	GRAD	ÞΕ		LENGTH	PAGES	
X	Pathways	X				Full Year	82-83	

8th GRADE SPECIALIZED COURSES

COURSE NO.	COURSE NAME	LEVEL	GRAD	ÞΕ		LENGTH	PAGES	
808	Math	X	8				Full Year	83-84
809	English Language Arts	X	8				Full Year	83-84
810	Social Studies	X	8				Full Year	83-84
811	Science	X	8				Full Year	83-84
812	Academic Support	X	8				Full Year	83-84

8th GRADE SPECIAL EDUCATION SUB-SEPARATE PROGRAMMING

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COURSE NO.	COURSE NAME	LEVEL	GRAD	ÞΕ		LENGTH	PAGES					
813	Math I	X	8					Full Year	84			
814	English Language Arts I	X	8					Full Year	84			
815	Science I	X	8					Full Year	84			
816	Social Studies	X	8					Full Year	84			

MUSIC

COURSE NO.	COURSE NAME	LEVEL	GRAD	ÞΕ				CREDIT	PAGES
919	Musical Theater (co-taught with Theater Department)	CCR		9	10	11	12	0.5	85-89
921	Concert Choir (Full Year)	CCR	8	9	10	11	12	1.0	85-89

928	Treble Chorus (Soprano/Alto) - Full Year Treble Chorus (Soprano/Alto) - 2nd	Н	8						<u> </u>
	Treble Chorus (Soprano/Alto) - 2nd			9	10	11	12	1.0	85-89
	Semester Only	Н		9	10	11	12	0.5	85-89
941	Chamber Singers - Honors	Н		9	10	11	12	1.0	85-89
950 8	8th Grade Band	X	8					Full Year	85-89
951 I	Band	CCR		9	10	11	12	1.0	85-89
955	Concert Band (2nd Semester Only)	CCR		9	10	11	12	0.5	85-89
957 8	8-9 String Orchestra	CCR	8	9				1.0	85-89
956 I	HS String Orchestra	CCR			10	11	12	1.0	85-89
956H - 01	HS Honors String Orchestra	Н			10	11	12	1.0	85-89
958 I	Digital Music	CCR	8	9	10	11	12	0.5	85-89
935 I	Beginning Piano (Semester)	CCR	8	9	10	11	12	0.5	85-89
936 A	Advanced Piano - Honors	Н	8	9	10	11	12	0.5	85-89
917 A	AP Music Theory	AP			10	11	12	1.0	85-89

PERFORMING ARTS

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
926	Introduction to the Theater	CCR	8	9	10	11	12	0.5	90-93
927	Acting I	CCR	8	9	10	11	12	0.5	90-93
931	Playwriting	CCR		9	10	11	12	0.5	90-93
916	Directing for the Stage	CCR		9	10	11	12	0.5	90-93
929	Acting II	CCR		9	10	11	12	0.5	90-93
919	Musical Theater (co-taught with the Choral Department)	CCR		9	10	11	12	0.5	90-93
930	Advanced Theater Workshop- Honors	Н			10	11	12	1.0	90-93
276	Construction Technology/Arts	X	8					Quarter	90-93
277	Construction Technology/Set Design II	CCR		9	10	11	12	0.5	90-93

VISUAL ARTS

COURSE NO.	COURSE NAME	LEVEL	GRAD) E				CREDIT	PAGES
705	Foundations of Art	CCR	8	9	10	11	12	0.5	93-96
709	3D Studio Art (Sculpture)	CCR		9	10	11	12	0.5	93-96
713	Digital Photography	CCR		9	10	11	12	0.5	93-96
716	Advanced Digital Photography	CCR			10	11	12	0.5	93-96
707	Illustration	CCR		9	10	11	12	0.5	93-96
710	Digital Art & Design	CCR		9	10	11	12	0.5	93-96
711	Color & Design	CCR		9	10	11	12	0.5	93-96
714	Art as Therapy	CCR		9	10	11	12	0.5	93-96
735	Ceramics (Clay) I	CCR			10	11	12	1.0	93-96
736	Ceramics (Clay) II - Honors	Н			10	11	12	1.0	93-96
740	Fine Arts: Drawing & Painting I	CCR			10	11	12	1.0	93-96
748	Fine Arts: Drawing & Painting II Honors	Н				11	12	1.0	93-96
749	Fine Arts: Drawing & Painting III Honors	Н					12	1.0	93-96

^{**}All classes above apply towards Arts graduation requirement ONLY during grade 9-12 enrollment

WELLNESS

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
9901	Health	X	8					Semester	96-100
9902	Physical Education	X	8					Full Year	96-100
9962	Wellness I	CCR		9				0.5	96-100
9963	Wellness II	CCR			10			0.5	96-100
968	Ice Skating	CCR				11	12	0.25	96-100
967	Beginner Ice Skating	CCR			10	11	12	0.25	96-100
993	Net and Racquet Sports	CCR			10	11	12	0.25	96-100
997	Exercise Physiology	CCR			10	11	12	0.5	96-100

998	Sports Injury Management	CCR		10	11	12	0.5	96-100
995	Wellness Independent Study	CCR				12	0.5	96-100
994	Women's Health	CCR		10	11	12	0.5	96-100
9964	Team Sports	CCR		10	11	12	0.25	96-100
9966	Leisure Games	CCR		10	11	12	0.25	96-100
9968	Yoga/Cardio Dance	CCR		10	11	12	0.25	96-100
9969	Stress Management	CCR		10	11	12	0.25	96-100
989	Unified Physical Education	CCR			11	12	0.5	96-100

WORLD LANGUAGE

COURSE NO.	COURSE NAME	LEVEL	GRAD	ЭE				CREDIT	PAGES
401	French I	CCR	8	9	10	11	12	X/1.0	100-104
406	French II	CCR		9	10	11	12	1.0	100-104
412	French III	CCR			10	11	12	1.0	100-104
413	French IV	CCR				11	12	1.0	100-104
416	French IV Pre-AP	Н				11	12	1.0	100-104
419	AP French Language and Culture	AP					12	1.0	100-104
431	Italian I	CCR	8	9	10	11	12	X/1.0	100-104
436	Italian II	CCR		9	10	11	12	1.0	100-104
442	Italian III	CCR			10	11	12	1.0	100-104
444	Italian IV	CCR				11	12	1.0	100-104
446	Italian IV Pre-AP	Н				11	12	1.0	100-104
448	Italian V	Н					12	1.0	100-104
447	AP Italian Language and Culture	AP					12	1.0	100-104
461	Spanish I	CCR	8	9	10	11	12	X/1.0	100-104
464	Spanish II	CCR		9	10	11	12	1.0	100-104
470	Spanish III	CCR			10	11	12	1.0	100-104
472	Spanish IV	CCR				11	12	1.0	100-104

473	Spanish IV Pre-AP	Н		11	12	1.0	100-104
475	Spanish V	Н			12	1.0	100-104
476	AP Spanish Language and Culture	AP			12	1.0	100-104
477	AP Spanish Literature and Culture	AP			12	1.0	100-104
484	Mandarin Chinese IV	Н		11	12	1.0	100-104
485	Mandarin Chinese V	Н			12	1.0	100-104

Air Force JROTC

Air Force Junior Reserve Officer Training Corps (AFJROTC) offers a blend of aerospace science and history along with the development of one's leadership abilities. It is linked in concept with the Air Force Officers Training program. Students study aviation and its impact on society. Leadership skills and qualities such as enhanced sense of self-reliance, self-discipline and commitment are taught. There is no obligation to serve in the military.

Courses Offered

Course Offering	Credit	Length	Grade
Air Force JROTC I	1.0	Full Year	9
Air Force JROTC II	1.0	Full Year	10, 11
Air Force JROTC III	1.0	Full Year	11, 12
Air Force JROTC IV	1.0	Full Year	11, 12
Air Force JROTC Leadership	1.0	Full Year	12

Course Descriptions

163 Air Force JROTC I Grade 9

1.0 Credit

Air Force JROTC I cover the History, Principles, and Purpose of Flight. Students will develop an understanding of aviation evolution, the basic physics and principles of flight, and the purpose and use of the various types of aircraft employed by the military and civil aviation. The students will also become familiar with basic theories of meteorology and the technology of rocketry and spaceflight. Leadership training emphasizes Life Skills: preparing budgets, performing basic banking transactions, understanding credit, and helping students identify their near-term career goals as well as life-long professional development.

175 Air Force JROTC II
Grades 10, 11

1.0 Credit

Air Force JROTC II will be spent researching and discussing Global and Cultural Studies. The course delves into history, geography, religions, languages, culture, political systems, economics, social issues, environmental concerns, and human rights. Leadership units cover Good Followership, Personal Development Skills, and Health Awareness. Skills will be honed through commanding flights via drill, teaching basic facing movements, and the development of orderliness and precision.

Prerequisite: Completed Air Force JROTC I or approval of Instructor.

183 Air Force JROTC III Grades 11, 12 1.0 Credit

Air Force JROTC III covers in-depth the Space Environment, Space Programs, and Manned Space flight. Leadership training covers Effective Communication, Understanding Individual and Group Behavior, and Leadership Skills. Students will exercise these skills by leading basic daily flight operations, such as teaching younger students how to lead flights in squadron drill. Leadership III cadets will also study Geography or Survival.

Prerequisite: Completed Air Force JROTC II or approval of Instructor.

820 Air Force JROTC IV Grades 11, 12 1.0 Credit

Air Force JROTC IV covers the Future of Space and focuses upon topics involving missions to Mars, Venus, and beyond, propulsion of space vehicles, maneuvering in space, robots in space, and private industry in space. Leadership courses cover Introduction to Management, Managing Things and Ideas, Citizenship, and Ethics.

Prerequisite: Completed Air Force JROTC III or approval of Instructor.

821 Air Force JROTC Leadership Grades 12

1.0 Credit

Air Force JROTC Leadership is designed for the cadets that have senior leadership positions with the Corp of Cadets. These students will run most of the day-to-day operations of the AFJROTC group. Examples include teaching younger cadets: how to drill, how to wear the USAF JROTC uniform correctly, and be examples to the younger students. This class is reserved for senior cadets in leadership positions and replaces the aerospace (AS) portion of the Air Force JROTC I through IV classes. These students will continue to join the AFJROTC group in the current year's leadership, drill, and wellness classes.

Prerequisite: Recommendation of Instructor.

Business Education and Information Communication Technology

The goal of the Billerica Memorial High School Business Program is to prepare students for advanced study of, and careers in, business and technology related fields. Business course offerings will provide students with the opportunity to learn critical thinking and professional etiquette skills necessary for productive and successful contribution to the business community as well as making informed financial decisions throughout life. Students will learn written and verbal communication skills, business practices, mathematics, technologies, and social and emotional skills through technology simulations and real-world collaborative projects designed to build character, leadership, and experience.

Courses Offered

Course Offering	Credit	Length	Grade
Exploring the World of Business	0.5	Semester	8, 9, 10, 11, 12
Social and Digital Media	0.5	Semester	9, 10, 11, 12
Accounting I	0.5	Semester	10, 11, 12
Advanced Accounting w/ QuickBooks	0.5	Semester	11, 12
Managing Your Money*	0.5	Semester	11, 12
Introduction to Marketing (Spring only)	0.5	Semester	9, 10, 11, 12
Integrated Marketing Campaigns (Fall only)	0.5	Semester	10, 11, 12
Foundations of Business Operations	1.0	Full Year	11, 12
Project Design and Leadership	1.0	Full Year	12
Sports Management	0.5	Semester	9, 10, 11, 12
AP Macroeconomics	1.0	Full Year	10, 11, 12
AP Microeconomics	1.0	Full Year	10, 11, 12

^{*} Managing Your Money is the only course that meets the Financial Literacy graduation requirement

Course Descriptions

516 Exploring the World of Business - CCR Credit Grades 8, 9, 10, 11, 12

X/0.5

Exploring the World of Business is a hands-on learning experience designed to introduce students to business in the United States. No matter what a student's plans are after high school, an understanding of the US business environment is a critical piece of college and career readiness. During this class, students are introduced to the major concepts important to understanding and participating in the business world. Using a learning-by-doing approach, students explore economics, business ownership, business management, accounting, marketing, leadership, and more. Students also explore the many rewarding careers offered by the field of business. In addition, students will be introduced to the business department, its faculty, and other courses offered.

515 Social and Digital Media - CCR Grades 9, 10, 11, 12

0.5 Credit

Social and Digital Media is designed to look at the rise of social media and how marketers are integrating social media tools in their overall marketing strategy. The course will investigate how the marketing community measures success in the new world of social media. Students will gain the skills and knowledge to manage a successful social media presence for an organization, understand techniques for gaining customer and consumer buy-in to achieve marketing goals, and carefully select social media platforms to engage consumers and monitor and measure the results of these efforts.

522/523 Accounting I – Honors/CCR Grades 10, 11, 12

0.5 Credit

This program provides excellent preparation for college-bound students planning to major in business as well as entry-level accounting jobs. The course will teach you accounting concepts and practices used in every business arena – from small business ownership to large corporations. Students will understand the full range of journals, ledgers, payroll, tax, depreciation, interest, and accrual concepts. Students will be able to review accounting in an interactive environment through the use of automated accounting software. The automated simulations provide students with several opportunities for real-world accounting practice.

551 Advanced Accounting w/QuickBooks - Honors Grades 11, 12

0.5 Credit

Advanced Accounting w/QuickBooks is a semester course open to all students who have successfully completed Accounting I. (or with permission from Curriculum Coordinator) This course will prepare the student for further study in college or for an entry-level position. The course will continue the accounting principles learned and implement it with payroll, income tax preparation, more advanced spreadsheet applications, utilizing QuickBooks, and an introduction to advanced accounting problems.

Prerequisite: At least an 84 in Accounting I. Please see the section "Honors Courses" under Academic Expectations for additional information.

540 Managing Your Money - CCR Grades 11, 12

0.5 Credit

Your money is a huge part of your life. It can determine what you do, where you go, and what you own. Learning how to manage your money is an important step toward taking control. This course will help you understand where your money is coming from, where it's going, and how to achieve financial success. Lessons include Budgeting & Saving, Checking Accounts, Managing a Credit Card, Fixing Your Credit, Education & Advancement, Online Banking, Paying Your Taxes, Investing, Time Management, Finding a Job, Finding an Apartment, Buying a Car and Shopping. Students will take part in realistic financial literacy experiences throughout the semester including the H&R Block Virtual Business Personal Finance Simulation. Credit for this course satisfies the Financial Literacy graduation

requirement.

553 Introduction to Marketing – CCR (Spring Only) Grades 9, 10, 11, 12

0.5 Credit

The Introduction to Marketing course is designed to provide students with a foundational understanding of the principles and practices that drive marketing in today's business world. Students will explore key marketing concepts, including the 4 Ps of marketing, market research, consumer behavior, product development, branding, advertising, and digital marketing strategies. Through interactive lessons, case studies, and real-world projects, students will learn how businesses identify target audiences, develop marketing strategies, and communicate value to consumers.

Prerequisite(s): None.

554 Foundations of Business Operations - Honors Grades 11, 12

1.0 Credit

This course in Business Operations provides students with a comprehensive understanding of how businesses function on a day-to-day basis. The course explores the essential aspects of managing and operating a business, including supply chain management, production, marketing, human resources, and financial planning. Students will gain practical skills in problem-solving, process improvement, and operational efficiency. They will develop the critical thinking skills necessary to succeed in future business studies or careers in management, entrepreneurship, or operations. Students enrolled in this course are eligible to participate in DECA, an international business club which provides opportunities for leadership development, civic consciousness, social intelligence, and vocational understanding. *Prerequisite(s): At least a 90 in Integrated Marketing Campaigns or a recommendation from a Marketing teacher. See the section "Honors Courses" under Academic Expectations for additional information.*

566 Integrated Marketing Campaigns (Fall Only) - Honors Grades 10.11, 12

The course also emphasizes creativity and critical thinking, helping students design effective marketing campaigns and evaluate their success. Building upon foundational marketing principles, this course delves into advanced concepts, frameworks, and techniques essential for developing and implementing effective marketing strategies in today's dynamic business landscape. Students will have a well-rounded understanding of how marketing connects businesses to customers and drives growth, preparing them for further studies or careers in marketing, advertising, or business. *Prerequisite(s): At least an 84 in Introduction to Marketing or a recommendation from a Marketing teacher*.

581 Project Design and Leadership - Honors Grade 12

1.0 Credit

In this honors level course, students will work on approved projects in the areas of Operations, Franchise, Entrepreneurship, International Business, Project Management, and others. Students will conduct research, prepare written proposals, and present their findings. Students in the class are expected to be members of DECA and possess strong leadership potential. Students are also encouraged to participate in competitions and other activities throughout the year.

Prerequisite: At least a 90 in Completion of Business Operations or approval of the DECA advisor. See the section "Honors Courses" under Academic Expectations for additional information.

557 Sports Management - CCR Grades 9, 10, 11, 12

0.5 Credit

This course will provide the students an opportunity to analyze a combination of elements essential to the effective operation of a business in the occupational area of sports management. The essential elements include management functions, financial management, management strategies, personnel management, operations management, marketing and managing with information technology. The students will learn

and understand the role of marketing and management as it applies to sports and entertainment occupations. The skills to be developed include communication, analytical, critical thinking, production, teamwork, and time management. To complement this course, students can also enroll in Marketing I or Entrepreneurship: Starting and Operating Your Own business, but these are not required.

591 AP Macroeconomics 1.0 Credit Grades 10, 11, 12

This course prepares students for the Advanced Placement exam in Macroeconomics. Macroeconomics is the study of the broader economy and how it affects us as individuals. Many colleges and college programs require all students to take at least one semester of Economics, so successfully passing the AP Macro exam could save you time and money in college. Exposure to the topic in high school will help ensure success even if your college doesn't take AP credits.

During this course, you develop the skills needed to answer questions like these:

- · Is international trade good for US citizens?
- Why are apartments so hard to find in New York City?
- · How does the banking system create money?
- · How important is the US government's budget deficit?
- What is the best way to get people and businesses to protect the environment?
- Is immigration good for our country? Or is it a problem?

In AP Macro, you will learn about models that you can use to analyze the economy. You will then be able to use your analysis to answer these questions and many more.

Prerequisite: At least an 84 in CCR History or an 84 in CCR Algebra 1. Students who want to take this class in their sophomore year must have permission from the instructor. See the section "Advanced Placement" under Academic Expectations for additional information.

592 AP Microeconomics 1.0 Credit Grades 10, 11, 12

This course prepares students for the Advanced Placement exam in Microeconomics. Microeconomics is the study of the interaction between the Household and the Firm. Many college programs require students to take at least one semester of either Microeconomics or Macroeconomics. So, successfully passing the AP Micro exam could save you time and money in college. Exposure to the topic in high school will help ensure success even if your college doesn't take AP credits. During this course, you develop the skills needed to answer questions like these:

- Why would two criminals confess to a crime even though they know they can get a lighter prison sentence if they both keep silent?
- *What is the fairest way for a government to tax its citizens?*
- How do ice cream stores decide when to open for the summer? And when to close for the winter?
- · Is immigration good for our country?
- Why do many movie stars and professional athletes earn so much more than accountants, engineers, and other workers?
- *How unequal is income in the US? And what can be done to help the poor?*

In AP Microeconomics, you will learn about models that you can use to analyze the interactions that take place in a market economy. You will then be able to use your analysis to answer these questions and many more. Prerequisite: At least an 84 in CCR Algebra I or an 84 in CCR Algebra 2. Students who want to take this class in their sophomore year must have permission from the instructor. See the section "Advanced Placement" under Academic Expectations for additional information.

Description of DECA

DECA prepares emerging leaders and entrepreneurs for careers in marketing, finance, hospitality and management in high schools and colleges around the globe.

DECA enhances the preparation for college and careers by providing co-curricular programs that integrate into classroom instruction, applying learning in the context of business, connecting to business and the community and promoting competition. Our student members leverage their DECA experience to become *academically prepared*, *community oriented*, *professionally responsible*, *experienced leaders*.

Students love DECA because of the unique educational experiences that it offers to them. Students enjoy traveling, networking with other students from across the globe, exploring personal career interests, and being competitive. The program allows students to become responsible, mature, and independent young men and women.

Participation in DECA is optional.

	Ideal DECA Student Path								
8th Grade	9th Grade	10th	11th	12th					
Exploring the World of Business Fall or Spring	Introduction to Marketing Spring	Integrated Marketing Campaigns Fall	Business Operations Full Year	Project & Leadership Development Full Year					

English

The English program at Billerica Memorial High School teaches students to appreciate literature and become more competent readers and writers, listeners, and speakers. The skills learned in English class help students become independent critical thinkers who are able to rationalize decision making confidently in situations, both in their academic and personal life. The curriculum develops confidence and versatility in the use of the English language so that students will read and write, for pleasure, enrichment, and practical use, long after high school.

English courses are provided at levels appropriate to meet the continuously developing literacy needs of all students. All courses are designed to challenge students to reach beyond their present proficiency in reading and writing, speaking and listening, critical viewing and presenting, with the ultimate goal of preparing students to be career and college ready in the modern world. Placement in distinct English course levels is based on teacher recommendation, past classroom performance, written work, and standardized test grades. Students should work with their teachers to determine the most appropriate course recommendation for the upcoming year, taking into consideration demonstrated academic performance and future academic plans. Students who wish to take an honors level English course must possess genuine interest in reading and writing and must be self-motivated to read for pleasure and to read course material independently.

Courses Offered

Course Offering	Credit	Length	Grade
Grade 8 English	X	Full Year	8
Grade 9 English	1.0	Full Year	9
Grade 10 English	1.0	Full Year	10
Grade 11 English	1.0	Full Year	11
AP Language and Composition	1.0	Full Year	11, 12
AP Literature and Composition	1.0	Full Year	11, 12
Archetypal Literature	1.0	Full Year	12
The Adolescent in Literature	1.0	Full Year	12
Creative and Expository Writing	1.0	Full Year	12
Writing/Rhetoric in the Digital Age	1.0	Full Year	12
Public Speaking and the Media	0.5	Semester	10, 11, 12
Academic Success	0 – 1.0	Quarter – Full Year	8, 9
English as a Second Language	X	Full Year	8
English as a Second Language	1.0	Full Year	9, 10, 11, 12
ESL Support	X	Full Year	8, 9, 10, 11, 12

Course Descriptions

008 Grade 8 English Language Arts Required for Grade 8

Full Year

Aligned with the Massachusetts Curriculum Framework, students in Grade 8 English Language Arts will continue to develop their skills in reading, writing, speaking, listening, and language. In reading and analysis of appropriate literature, both fiction and nonfiction, students will develop reading comprehension skills and write in a variety of styles and for a variety of audiences. Speaking and listening skills will be developed through group and individual activities.

010/011 Grade 9 English – Honors or CCR Required for Grade 9

1.0 Credit

The 9th-grade curriculum emphasizes genre as an introduction to the study of literature and features analytical and creative activities designed to enhance student learning. Students will focus on both critical reading and writing skills throughout the year. Independent reading assignments are given several times a week and students respond to literature through frequent writing assignments and assessments. Students will master literary terms and concepts presented during short story and poetry units. Vocabulary units are part of each unit of study. Additionally, the Grade

9 ELA course will include an intensive writer's workshop component designed to assist students as they develop analytical writing skills that will also be needed for completion of standardized testing and writing assignments. In addition to other writing assignments throughout the year, all freshmen English students will be required to successfully complete a research project. Two levels of the grade nine curriculum are offered to ensure that students are placed in a course that challenges them to meet the literacy expectations of college or a career. Students who wish to pursue an honors level in Grade 9 English should possess genuine interest in reading and writing, and should read independently outside of class, both for pleasure and assigned course material. Reading selections will be drawn from: Of Mice and Men, Persepolis, Romeo and Juliet, To Kill a Mockingbird, Lord of the Flies, and other selections. Additional reading selections may complement topics from US & The World I, the Grade 9 history course.

Prerequisite CCR: Successful completion of Grade 8 English Prerequisite Honors: At least a 90 in Grade 8 English. See the section "Honors Courses" under Academic Expectations for additional details.

020/021 Grade 10 English – Honors or CCR Required for Grade 10

1.0 Credit

The 10th-grade curriculum emphasizes reading a survey of American and world literature in the context of analytical and creative activities designed to practice learned skills and expand the student's knowledge base. Students will cultivate critical reading and writing skills through the context of a variety of literature. Students engage with diverse literary genres and complex themes that echo individual and socio-political issues. Likewise, in each Honors and CCR class, teachers enrich course units with resources and assignments which support students as they prepare for college and career. In addition to analytical and creative writing assignments, students undertake the research process, which culminates in a research project at the end of their sophomore year. Students who wish to pursue an honors level in Grade 10 English should possess genuine interest in reading and writing, and should read independently outside of class, both for pleasure and assigned course material. This course features some American literary classics, selected from: *The Crucible, The Scarlet Letter, The Great Gatsby, Death of a Salesman, Copper Sun*, as well as a variety of essays, short stories, and poems. Other reading selections may complement topics from US & The World II, the Grade 10 history course.

Prerequisite CCR: Successful completion of Grade 9 CCR English.

Prerequisite Honors: At least an 84 in Grade 9 Honors English, or a 90 in Grade 9 CCR English. See the section "Honors Courses" under Academic Expectations for additional details.

030/031 Grade 11 English – Honors or CCR Required for Grade 11

1.0 Credit

The 11th-grade curriculum emphasizes reading a survey of American and world literature in the context of analytical and creative activities designed to encourage students to employ their developing critical reading and writing skills in increasingly challenging literary contexts. Critical reading and writing skills are taught and practiced throughout the junior year and utilizes literature both as the context for skills development and as the vehicle for exploring the role of literature in the development of culture. Both levels of the grade eleven curriculum help the student achieve the goals common to all grade eleven English students as preparation for college or career following completion of high school. In addition to other writing assignments throughout the year, all junior English students will be required to successfully complete a research project. Students who wish to pursue an honors level in Grade 11 English should possess genuine interest in reading and writing, and should read independently outside of class, both for pleasure and assigned course material. The course features reading selections that may include: *Macbeth*, *Nineteen Eighty-Four, Warriors Don't Cry, Frankenstein, Slaughterhouse Five, The Hate U Give*, and others, along with a variety of essays, short stories, and poems. Reading selections are chosen to support the development of critical reading and thinking and may complement topics from US & The World III, the Grade 11 history course.

Prerequisite CCR: Successful completion of Grade 10 CCR English.

Prerequisite Honors: At least an 84 in Grade 10 English, or a 90 in Grade 10 CCR English. See the section "Honors Courses" under Academic Expectations for additional details.

034 AP English Language and Composition Grade 11 or 12

1.0 Credit

Students in this introductory college-level course read and carefully analyze a variety of challenging nonfiction prose selections. These selections are chosen to deepen students' awareness of rhetoric and how language works. Through close reading and frequent writing, students develop their ability to work with language and text with a greater awareness of purpose and strategy, while strengthening their own composing abilities. Course readings feature expository, analytical, personal, and argumentative texts from a variety of authors and historical contexts. Students examine and work with essays, letters, speeches, images, and imaginative literature.

Prerequisite(s): At least a 90 in Sophomore or Junior Honors English, OR an 84 in AP English Literature and Composition, and permission of the AP English Language instructor. Students who anticipate selecting AP English Language and Composition will be asked to submit a letter of intent, and their current English teacher will be asked for feedback about their academic efforts and abilities. See the section "Advanced Placement" under Academic Expectations for additional details.

054 AP English Literature and Composition Grade 11 or 12

1.0 Credit

Students in this introductory college-level course read and carefully analyze representative works of literature. These texts are chosen to deepen students' understanding of literary devices and themes. Through close reading of selected texts, seminar-based discussions, and extensive writing, students will hone their critical thinking and writing skills in preparation for the AP English Literature and Composition Examination in May. Course readings feature works of drama, novels, poetry, and short stories from a variety of authors, genres, and literary time periods.

Prerequisite(s): At least a 90 in Sophomore or Junior Honors English, OR an 84 in AP English Language and Composition, and permission of the AP English Literature instructor. Students who anticipate selecting AP English Literature and Composition will be asked to submit a letter of intent, and their current English teacher will be asked for feedback about their academic efforts and abilities. See the section "Advanced Placement" under Academic Expectations for additional details.

Senior Literature Seminars

Students in Grade 12 who do not choose one of the AP English options will be offered the opportunity to choose their course of literary study for their final year of high school. All of the courses offered have been designed with the goal of improving literacy skills with a focus on complex reading and college and career level writing. All students in these courses will be required to read one core text per term in addition to a variety of supplementary print and digital selections. A minimum of one writing assessment will be required each term, with an emphasis on persuasive, expository and narrative writing. All seniors will also be provided with the necessary instruction and guidance to complete their college application essay or personal statements for employment in the first term of the senior year. The Senior Literature Seminars will be offered at two levels: Honors and CCR. Students who wish to pursue an honors level in Grade 12 English should possess genuine interest in reading and writing, and should read independently outside of class, both for pleasure and assigned course material. Seniors have one year left in their K-12 academic experience and are rapidly approaching college or career readiness. As a result of their experience in these seminars, students will be better prepared to face the diversity that exists in both

college and career settings and the demands of the tasks that they soon will experience. All courses are full year, one-credit courses and are only offered to seniors. All seniors are required to take English class. Prerequisite CCR: Successful completion of Grade 11 CCR English.

Prerequisite Honors: At least an 84 in Grade 11 English, or 90 in Grade 11 CCR English and the recommendation of the student's grade 11 English teacher. See the section "Honors Courses" under Academic Expectations for additional details.

040/041 The Adolescent in Literature



1.0 Credit

Grade 12

This course will focus on the adolescent as protagonist or narrator in contemporary fiction. Students will explore the unique challenges that adolescents face as they strive for independence. This course will explore the conflicts in both peer and family relationships that arise as they develop and change over time, the rites of passage adolescents must go through in the process of transforming from a child to an adult, redemption after suffering and loss, and the struggle to reconcile traditional cultural values with those of a changing, modern world. This exploration will allow students to reflect on themselves and what it means to be an adolescent in today's society. Students will develop strong critical analysis, writing, and reading comprehension skills. Finally, students will explore literary techniques of contemporary authors, with a particular focus on the structure of narrative and the development of a unique voice. Readings may include: Speak, The Glass Castle, The Book Thief, Patron Saints of Nothing, Monster, Little Fires Everywhere, and The Lovely Bones.

046/047 Archetypal Literature



1.0 Credit

Grade 12

This course will be based upon the work of Joseph Campbell and his theory of monomyth. We will look at the call to action that characters who are seen as heroes receive and the journey that ensues from this call. Through this course, students will have an understanding of one of the universal themes in our culture, the hero's quest. The purpose of this class will be to present a coherent approach to the study of quest literature. The course will provide a structure for viewing literature that is dynamic in form, but concentrated in focus with a structure that will permit students to see the linkages that tie one work of literature to another. To see literature as a whole, to see the interrelatedness of one work to another, to acquire a sense of continuity—of one step leading to another, of details gradually fitting into a larger design—is essential to an understanding of the literary experience.

042/043 Creative and Expository Writing Grade 12

1.0 Credit

This course is intended for seniors who have a compelling interest in learning to write poetry, description and narration for an audience of both peers and the public. It includes an intensive study of the qualities of good writing, including figurative language, content, focus, organization and style as well as the reading and interpretation of various types of poetry and prose that are considered models of good writing. The students will also read pieces meant to instruct and offer advice about the writing craft. The course combines the writing of original works with critical analysis of contemporary short fiction, poetry and essay forms. The inter-relationship of writing and reading is emphasized throughout the course. By examining the work of professional writers, by engaging in constructive criticism through workshops and by producing a considerable amount of creative writing, students will gain valuable insights into the art and craft of writing. The creative aim is to produce imaginative writing that is aesthetically effective. Emphasis will be given to self-improvement and the ability to access the necessary tools to continue this improvement throughout their lives.

050/051 Writing/Rhetoric in the Digital Age Grade 12



1.0 Credit

Rhetoric: /'redarik/ n., The art of manipulating thought using words and images. In the 21st Century, the same technologies - smartphones, Snapchat, TikTok and more - that allow high school sweethearts to communicate also enable cyberbullying, terrorism, and the perpetuation of misinformation. Writing and Rhetoric in the Digital Age takes a look at how communication in a digital world has evolved and how that evolution has affected America and the world at large. Combining modern analytical books such as Outliers with classic dystopian novels such as Brave New World, the class uses hands-on activities and contemporary topics to examine how people are becoming increasingly manipulated and incapable of recognizing truth. Topics covered include the foundations of rhetoric and its many forms; social media; video; and photography. Projects completed include the college essay, PSA and documentary films, propaganda media, and oral options such as podcasts and TED Talks, all of which provide opportunities to communicate in unique and relevant ways while learning to be intelligent consumers of information.

English Electives

059 Public Speaking and the Media Grades 10, 11, 12

0.5 Credit

This course prepares students to deliver persuasive and informative speeches by building confidence with speaking in front of an audience. This confidence and skill will carry over to other areas in life beyond high school. To develop speech presentation skills, students will practice audience eye contact, voice projection, and articulation. Students will also explore and apply the speech techniques required for radio and television and will be given the opportunity to use these media for maximum effect.

Prerequisite: Completion of Grade 9 English and current English teacher's recommendation and approval.

055/056 Academic Success Grade 8/9

X/0.25 - 1.0 Credit

This course leads students through the steps for academic success and self-management skills in preparation for their high school years. It reviews and teaches each student how to organize, plan, prioritize, manage time, maintain focus, self-assess, and study efficiently. Students will also participate in a directed study where they will receive support to complete schoolwork.

ELL (English Language Learners)

Direct English instruction is provided for students who have met the requirements for ESL services according to the state of Massachusetts guidelines. A placement test is given to each student whose Home Language Survey indicates a language other than English is used in the home. Services can be in the form of direct English instruction or assistance during a student's regularly scheduled study hall. Such supports are offered until the student tests proficient in English on the ACCESS for ELLs test.

089/090/091 ESL English (089 Newcomer) (090 Beginner) (091 Intermediate) 1.0 Credit Grades 9, 10, 11, 12

English instruction is provided for students whose first language is not English and who have met the requirements for ESL services according to the state of Massachusetts guidelines. Students in the ESL class will learn to use both social/instructional and academic vocabulary in the domains of speaking, listening, reading, and writing. Such supports are offered until the student tests proficient in English on the ACCESS for ELLs test. Additional assistance can be provided during the student's regularly

scheduled study hall in the ESL Support class. This support course is available to both English Learners and Former English Learners.

Students in Grade 8 will not receive credit for this course.

ESL8 ESL Support Grade 8

ESL Support Grades 9, 10, 11,12

Family and Consumer Sciences

Family and Consumer Science courses offer all students opportunities to develop basic skills needed for everyday living now and for the future. The curriculum addresses individual and family concerns. Our program strives to encourage you to develop to your fullest potential by acquiring the attitudes, knowledge, and skills needed for responsible and effective management of your daily lives. Some of the skills taught in our courses include: problem solving, decision making, goal setting, resource management, communication, cooperative learning, and critical thinking skills. The basic skills of language arts, social studies, mathematics, and science are intertwined throughout our program, helping you to become aware of the connections between the knowledge and skills of different subjects. Learning for real life through hands-on experiences will empower you to address the life changes that you will experience, and to cope with the challenges of balancing work, family and community life. Credit for courses is earned through successful demonstrations of mastery of the essential skills and concepts identified in each course.

Courses Offered

Course Offering	Credit	Length	Grade
Introduction to Cooking	0.5	Semester	9, 10, 11, 12
Food Choices for Good Health	0.5	Semester	10, 11, 12
World of Foods	0.5	Semester	10, 11, 12
Child Growth & Development* Part 1	0.5	Semester	10, 11, 12
Child Growth & Development* Part 2	0.5	Semester	11, 12
Advanced Child Development*	1.0	Full Year	12
Educators Rising Internship	1.0	Full Year	12

CREDITS EARNED IN ALL ABOVE CLASSES APPLY TOWARDS WELLNESS GRADUATION REQUIREMENT

Course Descriptions

602 Introduction to Cooking Grade 9, 10, 11, 12

0.5 Credit

This course will look at different food groups and focus on food preparation techniques in the food lab. The course includes an overview of safety and sanitation guidelines for food prep and offers all students the opportunity to develop general knowledge of purchasing, storage, and preparation of foods. Lab practice will include the following: Fruits and vegetables, grains and legumes, meat and fish, dairy products and poultry. Students are required to work cooperatively in small kitchen groups as part of this class.

603 Food Choices for Good Health

0.5 Credit

Grade 10, 11, 12

The class will focus on Kitchen Safety and Sanitation and an introduction to kitchen labs. The course involves food preparation techniques and focuses on making healthy meals and snacks. The course also includes information on essential nutrients, U.S. Dietary Guidelines for Americans, food safety, advertising, and eating disorders. Students are required to work cooperatively in small kitchen groups as part of this class.

Prerequisite: At least an 80 in Introduction to Cooking.

616 World of Foods

0.5 Credit

Grade 10, 11, 12 2nd Semester only

This course offers students the opportunity to develop general knowledge of purchasing, storage, and preparation of food. Students will begin with an overview of Safety and Sanitation Guidelines. Topics to be covered will include baking basics, regional foods of the United States and foods from other countries, cultures and customs, geography pertaining to farming and agriculture, and equipment and cooking methods that are used in making popular food dishes. Students are required to work cooperatively in small kitchen groups as part of this class. *Prerequisite: At least an 80 in Intro to Cooking.*

621 Child Growth and Development - Part 1 Grades 10, 11, 12

0.5 Credit

(1st semester course)

This course is a comprehensive study of the physical, mental, and social development of humans beginning from the fetal development through the toddler stage. The course includes an interactive learning opportunity with monthly visits with community children. This course is designed for students interested in prenatal development, infancy, or child related career paths.

627 Child Growth and Development - Part 2 Grades 11, 12

0.5 Credit

(2nd semester course)

This course is a continuation of Child Growth & Development Part 1 and examines the physical, mental, and social development of the growing child. This course is designated for those interested in pursuing early childhood or child related careers and includes a six-week internship placement at a preschool, daycare, or elementary school. Internship transportation is the responsibility of the student.

Prerequisites: Completing Child Growth & Development – Part 1 with at least a 90 and approved by Instructor.

622 Advanced Child Development Grade 12 (Full Year)

1.0 Credit

This course is designed for students on the pathway to pursue careers in early childhood or other child

related occupations. Students will examine child development theories and develop skills necessary to work with children. Students will participate in an internship at a daycare, preschool, elementary, or middle school within the district. Internship transportation is the responsibility of the student.

Prerequisites: Child Growth and Development Part 1 & 2 with at least a 90 and approved by Instructor.

625 Educators Rising Internship Grade 12

1.0 Credit

This course is designed for those students on the pathway to pursue a career in the education field. Students will examine various teaching & learning styles, understand professional teaching roles, examine curriculum and develop lesson plans throughout the course. Students will develop a portfolio that identifies their personal career goals, as well as documents their learning experiences through the internship practicum. Students will intern at a preschool, elementary, or middle school within the district. Internship transportation is the responsibility of the student.

Prerequisites: At least a 90 in both Child Development 1 & 2, active member of Ed Rising Club and approval by Instructor.

History & Social Science

The Department of History & Social Science offers a number of courses to acquaint students with a variety of the social sciences. The courses help students develop modes of inquiry, study skills, and the important concepts which help them to think critically and creatively about the world. Students will develop an understanding of government, political process, and political decision-making, and will also become aware of the fact that all nations of the modern world are part of a global, interdependent system of economic, social, cultural, and political life.

Courses Offered

Course Offering	Credit	Length	Grade
Civics	X	Full Year	8
The US and the World I	1.0	Full Year	9
The US and the World II	1.0	Full Year	10
The US and the World III	1.0	Full Year	11
AP US History	1.0	Full Year	11, 12
American Legal System I	1.0	Full Year	11, 12
American Legal System II	1.0	Full Year	12
AP European History	1.0	Full Year	10, 11, 12
AP Psychology	1.0	Full Year	11, 12
AP US Government	1.0	Full Year	10, 11, 12
Local History & Government	0.5	Semester	11, 12

Psychology – An Introduction	0.5	Semester	11, 12
Sociology	0.5	Semester	11, 12
Exploring Mental Illness and Theories of Personality	0.5	Semester	11, 12
Topics in Global Studies	1.0	Full Year	11, 12
Film Studies	0.5	Semester	9, 10, 11, 12
Video Production	0.5	Semester	10, 11, 12
History of Gender-based Rights and Protections in the United States	1.0	Full Year	10, 11, 12

Course Descriptions

109 Civics Full Year

Required for Grade 8

The recent revision of the Massachusetts Curriculum Framework in History/Social Science calls for grade 8 students to study civics. At BMHS, this course will introduce students to the history of our government and will help them develop important skills of active citizenship. Students will learn to exercise their rights, meet their responsibilities, and use their political power to be active participants in civic life now and as adults in the future. Students will actively pursue and evaluate information from a variety of sources as they investigate important issues, both historical and current.

110/111 The United States & The World – Honors/CCR Required for Grade 9

1.0 Credit

In this first course in the US & The World sequence, students are engaged with a fresh look at the academic tools of historians and an examination of world religions and their impact on history. Students learn the histories of kingdoms and empires in Europe, Asia, Africa, and South America along with the cause, course, and consequences of global exploration, conquest, and colonization. This year of study ends with the emergence of the United States as an independent nation and the early challenges of the new republic. Throughout, students will learn and develop literacy skills and the practices of history and social science. *Prerequisites: At least a 90 in Civics. See the section "Honors Courses" under Academic Expectations for additional details.*

120/121 The United States & The World II – Honors/CCR Required for Grade 10

1.0 Credit

Recognizing that the history of the United States is inseparable from the history of the rest of the world, this course continues the holistic approach of the previous course. Students learn how important revolutions in transportation, agriculture, and industry changed the world. The impacts of economic concerns on political action are explored in the contexts of conflict and rebuilding. Throughout, students will learn about the arts and culture emerging from the societies being studied. As with the earlier course, students will learn and develop literacy skills and the practices of history and social science.

Prerequisites: Honors – At least an 84 in US & The World I Honors, or 90 in US & The World I CCR. See the section "Honors Courses" under Academic Expectations for additional details.

130/131 The United States & The World III - Honors/CCR Required for Grade 11

1.0 Credit

In the post-WWI era, the history of the United States is largely inseparable from that of the world.

Students explore WWII, the Cold War and Civil Rights, analyze threats to American democracy at home and abroad, and learn about the impact the politics of difference had, and continues to have, around the world. Through these historical examinations, students will continue to develop their skills in the History/Social Science practices. Students will engage in a civic action project as part of this course, working toward civic action on an issue important to them.

Prerequisites: Honors - At least an 84 in US & The World II Honors, or 90 in US & The World II CCR. See the section "Honors Courses" under Academic Expectations for additional details.

139 AP United States History



1.0 Credit

Grade 11, 12

The purpose of this course is to offer instruction in U.S. History at an academic level commensurate with the survey course in United States History taught at accredited colleges and universities.

Prerequisites: US & The World II and teacher recommendation. See the section "Advanced Placement" under Academic Expectations for additional details.

OBJ Electives

061 Film Studies Grades 9, 10, 11, 12

0.5 Credit

This course is designed to equip students with the tools necessary to critically "read" films and polish their analytical writing, speaking, and thinking skills. Response essays, visual analyses, case studies, and class discussions will be at the center of this course. Parental permission will be required for any films featuring mature themes or content.

154 American Legal System I



1.0 Credit

Grades 11, 12

This course is concerned with the practical applications of various bodies of law within the American legal system. The class will focus primarily on criminal law and procedure, with the incorporation of topics such as civil law, the legal profession, American judicial structure, judicial decision making, and legal reasoning. Students will study specific legal cases, The U.S. Constitution, state statutes and their impact. The course utilizes classroom discussion, mock trials, and hypothetical analysis as learning tools.

Prerequisite: Successful completion of US & The World I.

170 American Legal System II – Honors Grade 12



1.0 Credit

This course builds on the basic concepts established in the American Legal System course. The class will focus primarily on advanced applications of criminal law and procedure, with the incorporation of topics such as civil law, the legal profession, American judicial structure, judicial decision making, and legal reasoning. Students will study specific legal cases, the U.S. Constitution, state statutes and their impact. The course utilizes classroom discussion, mock trials, and hypothetical analysis as learning tools.

Prerequisite: Successful completion of American Legal System I and permission of the instructor.

155 Sociology NCAA



0.5 Credit

Grades 11, 12

Sociology is the study of human behavior and society. This course has been developed to show the complexity of social life with its interconnections between social events and conditions. Special effort will be placed on understanding various points of view, sharing opinions and feelings, and presenting ideas clearly and persuasively. Students are introduced to new ways to observe, interpret, and understand themselves, other people, and the diversity in the world around them. Prerequisites: None.

159 AP European History



1.0 Credit

Grade 10, 11, 12

AP European History is designed by the College Board to be the equivalent of a college or university European history course, with a focus on reading, writing, and class discussion in a seminar type format. In AP European History students investigate significant events, individuals, and processes from approximately 1450 during the Renaissance to the present day. Students develop and use the same skills and methods employed by historians: analyzing primary and secondary sources, and developing historical arguments. The course also provides six themes that students explore throughout the course including the interaction of Europe and the world; poverty and prosperity; states and other institutions of power; and individual and society.

Prerequisites: US & the World I and teacher recommendation. See the section "Advanced Placement" under Academic Expectations for additional details.

162 Local History and Government



0.5 Credit

Grades 11, 12

This course is designed to give students an understanding of the roles and structures of the government of Massachusetts and the government of the Town of Billerica. This will include how and why laws are created, what services are provided and how they are financed at the state and the local level of government. It will also deal with the history of Billerica and how it has been impacted over the years by the historical events of Massachusetts, the U.S. and the world.

191 AP US Government

1.0 Credit

Grades 10, 11, 12

Aligned with course guidelines from the College Board, "AP U.S. Government and Politics provides a college-level, nonpartisan introduction to key political concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States.

Students will study U.S. foundational documents, Supreme Court decisions, and other texts and visuals to gain an understanding of the relationships and interactions among political institutions, processes, and behaviors. They will also engage in disciplinary practices that require them to read and interpret data, make comparisons and applications, and develop evidence-based arguments. In addition, they will complete a political science research or applied civics project."

Prerequisite: At least an 84 in your current history class and the recommendation of your history teacher. See the section "Advanced Placement" under Academic Expectations for additional details.

179 Psychology – An Introduction



0.5 Credit

Grades 11, 12

This course is designed to prepare you for further study in psychology and to assist in better understanding yourself and others. Some major areas of study are the history of psychology, experimentation and research, learning and memory, body and mind, and motivation and emotion.

176 Exploring Mental Illness and Theories of Personality **Grades 11, 12**



0.5 Credit

Students in this class will build on their understanding of the human mind to explore the various theories of personality development and the symptoms, course, consequences, and treatments of various psychological disorders, such as depression, bipolar disorder, schizophrenia, dissociative identity disorder, etc.. Using case studies, various research methods, and self-reflection, students will apply what is learned to their own lives with the goal of understanding their own personalities and mental health.

177 AP Psychology



1.0 Credit

Grade 11. 12

From the College Board: "The AP course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to

the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice." Prerequisite: Permission of the AP Psychology instructor or teacher recommendation. It is strongly recommended that students complete Psychology: An Introduction and Special Topics in Psychology before enrolling in AP Psychology. See the section "Advanced Placement" under Academic Expectations for additional details.

182 Topics in Global Studies Grades 11, 12

1.0 Credit

The goal of this class is for students to become more informed global citizens. We will begin the year by studying different regions of the world such as Europe, Africa, the Middle East, India, and China. In the second half of the year we will examine complex global issues such as nuclear weapons, women's rights, poverty, scarcity of natural resources, and our growing population. Throughout the year we will follow important current events from around the world. In order to study these topics we will read current events, watch news clips, watch movies, make presentations, have discussions, and hold debates. We will also take a field trip to New York City, do a fundraiser for a cause that we choose as a class, and convene a mock meeting of the United Nations. Now that you will be graduating soon, it is important to understand what is going on in the world today *and how it relates to you*.

160 History of Gender-based Rights and Protections in the United States Grades 10, 11, 12 1.0 Credit

This course examines the history of gender-based legal rights and protections in America. After establishing the role that common law, tradition, and religion played in perpetuating gender divisions, students learn the role of the judiciary in shaping the status of women and women's role in reshaping American law in the 19th and 20th centuries through civic action. Students will investigate the fundamental legal questions of citizenship, the right to vote, equality, and discrimination. This course will also explore the rise of the feminist movement and its role in redefining the legal status of women in society. Finally, students will examine the current trajectory of gender-based rights and protections to explore how civic action can ensure important rights and protections are extended to all, regardless of gender. Students will learn from court cases, news articles, cartoons, social media, and film.

294 Video Production 0.5 Credit Grades 10, 11, 12

Video Production is a hands-on course focusing on the technical and aesthetic concepts of the visual medium, from screenwriting to editing. Students will write, rehearse, shoot, and edit short video projects with the goal of improving their communication and technical skills throughout the course. Projects may include documentaries, music videos, public service announcements, and short fiction pieces.

Prerequisite: Successful completion of Film Studies

Mathematics

Mathematics, by its very nature, lends itself to applications in many different disciplines. As such, a basic working knowledge of mathematics is a necessity for the general welfare of everyone. The Mathematics Department will try to fulfill the needs of all students in today's ever-changing world.

Placement in eighth grade math classes will be determined by a combination of factors, including but not limited to teacher recommendation based on grade 7 performance, Habits of Mind rubric, and results from MCAS and iReady assessments. Options for incoming freshmen include Geometry Honors or Algebra I CCR. Students in the tenth, eleventh, and twelfth grades will be offered full-year courses to allow them to continue their study of mathematics. In addition, a variety of electives are offered to allow students to further enhance their mathematical knowledge. Students should consult their mathematics teachers for assistance in formulating a mathematical program that will address their specific career or academic direction.

Courses Offered

Course Offering	Credit	Length	Grade
Grade 8 Math	X	Full Year	8
Grade 8 Accelerated Math	X	Full Year	8
Algebra CCR	1.0	Full Year	9
Geometry – Honors / CCR	1.0	Full Year	9, 10
Algebra II – Honors / CCR	1.0	Full Year	10, 11
Algebra IIA	1.0	Full Year	11
Algebra IIB	1.0	Full Year	12
Precalculus – AP / Honors / CCR	1.0	Full Year	11, 12
Calculus – CCR	1.0	Full Year	12
AP Calculus AB	1.0	Full Year	12
AP Calculus BC	1.0	Full Year	12
AP Statistics	1.0	Full Year	11, 12
Statistics - CCR	1.0	Full Year	11, 12

Course Descriptions

203 Grade 8 Math
Grade 8

This class will cover the Massachusetts Frameworks for 8th grade mathematics. Students will be expected to understand basic operations with integers, rational numbers, irrational numbers, and real numbers. Topics covered will include the use of properties of numbers and equality, solving equations and inequalities, relations and functions, geometry, statistics and probability. Problem solving, critical thinking, and reasoning skills will be reinforced throughout the curriculum. This course allows students to build a strong mathematical foundation to prepare for a formal course sequence in Algebra 1, Geometry, and Algebra II.

Prerequisite: Teacher recommendation based on grade 7 performance, Habits of Mind rubric, and iReady assessment data.

202 Grade 8 Math Accelerated Grade 8

Full Year

This class will cover the Massachusetts Frameworks for 8th grade mathematics and Algebra 1. Students entering this course have demonstrated mastery of the skills taught in grade 7 math. Students are expected to have strong problem solving and reasoning skills, as new concepts will be introduced at a rigorous pace. Topics covered include solving, graphing, and writing linear equations and inequalities, systems of linear equations and inequalities, exponents and radicals, exponential and quadratic functions, factoring, and geometry. Modeling of real world situations will be incorporated throughout the curriculum. This course will allow students to develop strong algebraic and critical thinking skills to prepare for a formal course sequence to either Algebra 1 Honors or Geometry Honors, followed by Algebra 2 Honors.

Prerequisite: Teacher recommendation based on grade 7 performance, Habits of Mind rubric, and iReady assessment data.

201 Algebra 1 CCR 1.0 Credit Grade 9

This class will cover the Massachusetts Frameworks for Algebra 1. This course allows students to build a strong algebraic foundation to prepare for a formal course in geometry and algebra II. Topics covered include solving, graphing and writing linear equations and inequalities, systems of linear equations and inequalities, exponents and radicals, quadratic functions, polynomials, and factoring. Modeling of real world situations will be incorporated throughout the curriculum to encourage the development of critical thinking, reasoning, and problem solving skills.

Prerequisite: Completion of Grade 8 Math

210/211 Geometry – Honors / CCR Grades 9, 10

1.0 Credit

This rigorous and challenging course involves the study of Euclidean geometry. The process of logical thinking will be developed by incorporation of postulates, theorems, definitions, and algebraic properties through the use of deductive reasoning. Topics included are congruence, similarity, trigonometry, circles, and measurement.

Prerequisite Honors: At least an 80 in Algebra 1 Honors or 97 in Algebra 1 CCR. See the section "Honors Courses" under Academic Expectations for additional details.

Prerequisite CCR: Completion of Algebra 1 CCR

220/221 Algebra II – Honors / CCR Grades 10, 11

1.0 Credit

This rigorous and challenging course will provide a thorough development of the structure of the real and complex number system. Topics covered include a complete study of the key features of quadratic, polynomial and rational functions, irrational and complex numbers, exponential and logarithmic

functions. Modeling of real world situations will be incorporated throughout the curriculum to encourage the development of critical thinking, reasoning, and problem solving skills. Students will be introduced to the TI-84 graphing calculator and will use this tool to study function behavior.

Prerequisite Honors: At least a 75 in Geometry Honors or 97 in both Geometry CCR and Algebra 1 CCR. See the section "Honors Courses" under Academic Expectations for additional details. Prerequisite CCR: Completion Geometry and Algebra I

222 Algebra IIA – CCR

1.0 Credit

Grades 11

This course provides a sound development of the structure of the real and complex number system. Topics covered include factoring quadratics, a complete study of the key features of quadratic, polynomials, and rational function graphs, followed by a statistics and probability unit that will include interpreting data and making inferences, as well as hypothesis testing. This class must be followed by Algebra IIB.

Prerequisite: Completion of Geometry CCR and teacher recommendation

223 Algebra IIB – CCR

1.0 Credit

Grade 12

This course is the continuation of the curriculum covered in Algebra IIA. Topics covered will include making comparisons to linear, quadratic, and exponential models, a complete study of the key features of polynomials, exponential and logarithmic functions while making connections to real world applications. An introduction to trigonometric functions and the unit circle will be covered as well. The course will conclude with statistics where students will learn about the randomization process as it pertains to experiments and how to make conclusions based off their findings.

Prerequisite: Completion of Algebra IIA

232/230/231 Precalculus – AP / Honors / CCR

1.0 Credit

Grade 11, 12

This rigorous and challenging course is designed to connect the concepts covered in Algebra and Geometry to prepare students for Calculus. Topics covered include trigonometric functions and their graphs, vectors, polar coordinates, inverse functions, and a complete study of the key features of exponential and logarithmic functions. At the honors and AP level, these rigorous and challenging courses will also include an introduction to differential calculus (limits, continuity, and derivatives).

Prerequisite AP: At least an 85 or higher in Algebra II. See the section "Advanced Placement" under Academic Expectations for additional details.

Prerequisite Honors: At least an 85 in Algebra II Honors or a 97 in Algebra 2 CCR. See the section "Honors Courses" under Academic Expectations for additional details.

Prerequisite CCR: Completion of Algebra II

242 Calculus – CCR 1.0 Credit

Grade 12

This course will include a discussion of the theory and applications of differential calculus and the basic forms and methods of integral calculus. Topics covered will include limits, techniques of differentiation, approximation, related rates, graphing techniques, optimization, particle motion, indefinite and definite integrals, and simple applications of the integral.

Prerequisite: Completion of Precalculus

249 AP Calculus AB 1.0 Credit

Grade 12

As students in this course have satisfactorily completed AP Precalculus or Precalculus Honors, they are now prepared for an in-depth study of integral calculus and its applications; i.e., methods of integration, areas, volumes, applications of the definite integral, and improper integrals. Students enrolling in this course will be required to participate in the AP testing at their expense in order to receive credit for an AP

course on their transcripts.

Prerequisite: At least an 80 in Precalculus Honors or AP Precalculus. See the section "Advanced Placement" under Academic Expectations for additional details.

250 AP Calculus BC 1.0 Credit Grade 12

AP Calculus BC is designed to be the equivalent to both first and second semester college calculus courses. AP Calculus BC first focuses on content and skills learned in the first semester college calculus course (differential and integral calculus) and then applies those to parametrically defined curves, polar curves, and vector-valued functions; develops additional integration techniques and applications; and introduces the topics of sequences and series. The course features a multi-representational approach to calculus, with concepts, results, and problems expressed graphically, numerically, analytically, and verbally. The course will require students to use definitions and theorems to build arguments and justify conclusions.

Prerequisite: Completion of AP Precalculus or at least a 97 in Precalculus Honors. See the section "Advanced Placement" under Academic Expectations for additional details.

266 AP Statistics
1.0 Credit
Grades 11, 12

The three big ideas for this rigorous course are I. Variation and Distribution, II. Patterns and Uncertainty, and III. Data-Based Predictions. Topics include exploring one- and two-variable data, collecting data, probability, random variables, probability distributions, sampling distributions and inference. To develop effective statistical communication skills, students are frequently required to prepare written and oral analyses of real data. Technological tools will be used throughout the course and an investigative approach to learning will be emphasized. *Prerequisite: At least a 90 in Algebra II Honors or 97 Algebra II CCR. See the section "Advanced Placement" under Academic Expectations for additional details.*

262 Statistics - CCR
1.0 Credit
Grade 11, 12

This course is an introduction to the major concepts used in the field of applied statistics and probability. Statistical fundamentals and concepts are combined with interesting real-world examples to engage the students in specific areas of study (i.e., business, engineering, sports, and psychology). Topics will include identifying tools for collecting and analyzing data, survey methods, and basics of experimental design. Students will apply the probability of events based on probability rules, combinations and permutations. At the conclusion of this course students will have the skill set to interpret data, make inferences, resulting in hypothesis testing.

Prerequisite: Completion of Algebra II

Science

The Billerica Memorial High School Science Department offers an array of courses that have been aligned with the latest revision of the Massachusetts Curriculum Frameworks. Students will be given the tools to meet the MCAS competency determination through our Freshman Biology program. Each course in the department is presented in terms of modern learning concepts and theories, stressing scientific inquiry. This approach encourages students to develop an understanding of main ideas and concepts rather than memorizing facts and formulas. Emphasis is placed upon experimentation and discovery using the tools of the scientist. Science education in the department is geared to the continuous changes taking place, and the curriculum provides for the identification and incorporation of exciting new developments.

Courses Offered

Course Offering	Credit	Length	Grade
Grade 8 Science	X	Full Year	8
Biology – Honors / CCR	1.0	Full Year	9
AP Biology	1.0	Full Year	10, 11, 12
Chemistry – Honors / CCR	1.0	Full Year	10
AP Environmental Science	1.0	Full Year	11, 12
AP Chemistry	1.0	Full Year	11, 12
Physics – Honors / CCR	1.0	Full Year	11, 12
AP Physics 1	1.0	Full Year	11, 12
AP Physics 2	1.0	Full Year	12
AP Physics C	1.0	Full Year	12
PLTW Principles of Biomedical Science	1.0	Full Year	10, 11, 12
PLTW Human Body Systems	1.0	Full Year	11, 12
PLTW Capstone	0.5	Semester	12
Environmental Science	0.5	Semester	11, 12
Forensics	0.5	Semester	12
Meteorology	0.5	Semester	11, 12
Astronomy	0.5	Semester	11, 12

Course Descriptions

300 Grade 8 Science Required for Grade 8

Full Year

This is a survey class that will follow the Massachusetts Frameworks for 8th grade science. It will cover topics in Earth & Space Science, Life Science, and Physical Science.

310/311 Biology – Honors / CCR

1.0 Credit

Grade 9

Honors level is designed for those students who excel in science and math and might wish to major in science. A molecular approach will provide an accurate, modern background to aid you in comprehending biological issues. You will have an opportunity to investigate basic theories and examine the data, while learning how to develop and evaluate hypotheses. This very fast-paced course provides you with the skills that you will use in future biological sciences and to continue your education in science. Animal dissection, lab reports and research projects are an integral part of the course. Homework will be assigned nightly. **Prerequisite:** At least a 90 in 8th grade science and reference to the Habits of MindRubricSee the section "Honors Courses" under Academic Expectations for additional details.

CCR level is our introductory biology course that will provide the background for more specialized science courses. Topics include biochemistry, the cell, micro-organisms, animal kingdoms, and the environment. Animal dissection and lab reports are required. Homework will be assigned nightly. This class will prepare students to take the high school biology MCAS exam.

319 AP Biology

1.0 Credit

Grades 10, 11, 12

This second-year Biology course seeks to meet the objectives of a first-year college-level Biology course and to prepare students for the AP Biology exam. It is designed to allow juniors and seniors interested in the Biological Sciences an in-depth preparation in various biological topics to better enable future career direction choices within the field. Molecular and Cellular Biology, Plant and Animal Anatomy and Physiology, Biochemical and Population Genetics, and Ecology are emphasized topic areas. The lab portion incorporates current biotechnology techniques, including electrophoresis, spectrophotometry, and microorganism culturing. Students selecting this course are required to complete summer work and are expected to take the AP Biology exam in May.

Prerequisite: At least a 90 in Honors Biology or 94 in Biology CCR and approval from the Advanced Biology teacher or Curriculum Coordinator. Sophomores may take this concurrently with Honors Chemistry. See the section "Advanced Placement" under Academic Expectations for additional details.

320/321 Chemistry – Honors / CCR

1.0 Credit

Honors level is designed for students who excel in science and math. A principles approach will provide insight into such areas as stoichiometry, chemical bonding, atomic structure, thermochemistry, free energy, kinetics and equilibrium. A new topic is covered every day. Each unit is accompanied by handson experiences. Training on laboratory report writing, and participation in a research project are required. Homework will be assigned nightly.

CCR level is designed for the college-bound student who has good mathematical skills. A new topic will be covered every 2 weeks. Topics will include, matter and its changes, classification of matter, atomic structure, electron configuration, periodic law, chemical bonding, chemical formulas, chemical equations, gas laws, aqueous solution process, acids and bases, and salts will be covered. Each major unit carries a parallel hands-on laboratory experience with a laboratory assignment. The student should be aware that current events in the field of chemistry will be addressed through term research papers. An emphasis on problem solving will be stressed via inquiry laboratory experiments. Homework will be assigned nightly. Prerequisite for Honors: At least enrolled in Algebra 2, completed Algebra 1 Honors with 84 or higher, 85 or higher in Honors Biology, or 90 or higher in CCR Biology along with Biology teacher

recommendation. See the section "Honors Courses" under Academic Expectations for additional details.

Prerequisite for CCR Chemistry: C in Algebra I CCR.

328 AP Environmental Science Grades 11, 12

1.0 Credit

This interdisciplinary course is designed to fulfill the requirements of an introductory college level environmental science course, and to prepare students for the AP Environmental Science exam. Students will utilize scientific principles, concepts, and methodologies to understand the interrelationships between human populations and the natural world. Students will identify and analyze natural and human-made environmental problems in socio-cultural contexts, evaluate the relative risks associated with them and examine alternative solutions for resolving and/or preventing them. Units of study will include energy resources and consumption, Earth's systems, the living world, population, land and water use, pollution and global change. Students successfully completing service projects will earn recognition on their AP transcript. Library and online research, field work and laboratory explorations will be required. Students selecting this course are required to complete summer work and are expected to take the AP Environmental Science exam in May. *Prerequisite: At least an 84 in Honors Biology and Honors Chemistry, or 90 in Biology CCR, and Chemistry CCR, and approval from the Advanced Environmental Science teacher or Curriculum Coordinator. See the section "Advanced Placement" under Academic Expectations for additional details.*

329 AP Chemistry Grades 11, 12

1.0 Credit

AP Chemistry is designed as an equivalent to a college freshman general chemistry course. This course is fast paced and in-depth covering advanced chemistry topics such as stoichiometry of mixtures,

electrochemistry, reaction kinetics, thermochemistry, equilibrium, acid-base equilibrium. Students must be self-motivated. Extensive homework assignments will be given each day including holiday/vacation periods. A summer assignment covering the foundation units, that includes some laboratory skills from the student's previous Honors Chemistry course must be satisfactorily completed and passed into the Advanced Chemistry teacher on the first full class period day in September. Each student must obtain his/her paper copy textbook and summer assignment prior to leaving school for summer vacation. In order for students to remain enrolled in this course, students must complete the summer assignment on time and satisfactorily pass a test on the summer assignment materials during the first week of school. Students enrolling in this course will be required to participate in the AP testing at their expense in order to receive credit for an AP course on their transcripts.

Prerequisite: At least an 85 in Honors Chemistry, with permission of AP Chemistry teacher. See the section "Advanced Placement" under Academic Expectations for additional details.

330/331 Physics – Honors / CCR Grades 11, 12

1.0 Credit

Honors level is a fast-paced course that emphasizes the combination of conceptual understanding and mathematical analysis of fundamental Physics principles, particularly as they apply to real-life situations. A high degree of self-motivation and the ability to seek out and make use of available resources is expected. Algebra II skills such as trigonometry, systems of equations, and quadratics are used heavily. There will be regular homework and lab assignments.

CCR level will look at fundamental concepts in Physics and their application to the outside world are developed in this course. Through labs, various activities, and projects, you will learn the basic principles of Physics and the use of Mathematics to solve real-life problems. This is a challenging academic course requiring well-developed study habits. Developing the ability to draw well-reasoned conclusions and provide a clear and organized written analysis is a central theme of the course.

Prerequisite for Honors Physics: At least an 84 in Honors Algebra II or a 94 Algebra II. CCR. See the section "Honors Courses" under Academic

Expectations for additional details. Prerequisite for CCR Physics: C in Algebra I CCR.

333 AP Physics 1

1.0 Credit

Grades 11, 12

This course is equivalent to a first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; and mechanical waves and sound. It also introduces electric circuits. Students enrolling in this course will be required to participate in the AP testing at their expense in order to receive credit for an AP course on their transcripts.

Prerequisite: At least an 84 in Honors Geometry & Algebra II, 84 in Honors Chemistry, and permission of AP Teacher. See the section "Advanced Placement" under Academic Expectations for additional details.

334 AP Physics 2



1.0 Credit

Grades 12

This course is equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics, thermodynamics, electricity and magnetism, optics, and atomic and nuclear physics. Students enrolling in this course will be required to participate in the AP testing at their expense in order to receive credit for an AP course on their transcripts.

Prerequisite: At least an 84 in Honors Physics, or 90 in Physics CCR and permission of AP teacher. See the section "Advanced Placement" under Academic Expectations for additional details.

339 AP Physics C Grade 12



1.0 Credit

This is a calculus-based physics course equivalent to a first year college-level physics course for physics majors. For the first part of the year, concepts from AP Physics I are developed in much greater depth with emphasis on the integration of all concepts in the solution of complex problems. Both content and pace are extremely demanding, and several calculus concepts are taught and used in this class before

students see them in AP Calculus. Students enrolling in this course will be required to participate in the AP testing at their expense in order to receive credit for an AP course on their transcripts. *Prerequisites:* Concurrent enrollment in AP Calculus; 90 in Honors Physics or 90 in AP Physics I; permission of AP Physics C teacher. See the section "Advanced Placement" under Academic Expectations for additional details.

381 PLTW Principles of Biomedical Science - Honors Grades 10, 11, 12

1.0 Credit

This fast-paced course introduces students to knowledge and skills in fields such as biology, anatomy and physiology, genetics, microbiology, and epidemiology. In this activity, problem, and project-based course, students will work both individually and collaboratively to solve real-world problems while they assume the role of different biomedical professionals. Students learn how to run routine medical tests using the same tools and equipment found in hospitals and labs, and evaluate the results in order to form a diagnosis. Students will also gain experience in experimental design and analysis, as well as synthesizing multiple forms of data in order to draw conclusions, and in communicating experimental findings and solutions to problems. Students will learn that understanding and solving current medical problems requires using concepts from science, technology, math, and engineering simultaneously.

Prerequisite: At least an 85 in CCR Biology; 80 in Honors Biology. See the section "Honors Courses" under Academic Expectations for additional details.

382 PLTW Human Body Systems – Honors Grades 11, 12

1.0 Credit

This fast-paced course builds on the skills and knowledge of Principles of Biomedical Science. This course will help prepare students for a career in medicine or health care, challenging them to solve real-world problems. Students will practice how to think creatively and critically to innovate in science and gain practical experience tackling challenges that biomedical professionals face in the field. Students will explore science in action as they build organs and tissues on a skeletal Maniken®; use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. As students work through real-world situations, cases and problems they will design rehabilitation plans for patients and helping travelers navigate extreme adventures.

Prerequisite: Successful completion of PLTW Principles of Biomedical Science or approval from instructor and Curriculum Coordinator. See the section "Honors Courses" under Academic Expectations for additional details.

237 PLTW Capstone – Honors Grades 12

0.5 Credit

PLTW Capstone is a capstone course for students who are completing any of PLTW's high school programs. It is an open-ended research course in which students work in teams to design and develop an original solution to a well-defined and justified open-ended problem. Teams draw on the knowledge, skills, and interests of each member, as they perform research to select, define, and justify a problem. Given this collaboration, team members leave the course with a broadened skillset and an appreciation for learning from their peers. After carefully defining the design requirements and creating multiple solution approaches, student teams select an approach, create, and test or model their solution prototype. As they progress through the problem-solving process, students work closely with experts and continually hone their organizational, communication, and interpersonal skills, creative and problem-solving abilities, and their understanding of the integration of processes such as the design process, experimental design, and the software development process. At the conclusion of the course, teams present and defend their original solution to an outside panel. PLTW Capstone is appropriate for 12th grade students who are interested in any technical career path because the projects students work on can vary with student interest, and the curriculum focuses on collaborative problem solving and project management. Students should take PLTW Capstone as the final PLTW course, because it requires application of the knowledge and skills introduced during the PLTW foundation courses. This course is not designed to teach additional content, but to empower students to find resources—mentors, subject matter experts, research articles, peers, and teachers—to meet their needs, bolster their skills, and solve the problem they have selected. Prerequisite: Successful completion of PLTW Courses. See the section "Honors Courses" under Academic Expectations for additional details.

Students engaged in yearlong projects under the Capstone course can opt to take the course for a full year.

374 Environmental Science Grades 11, 12

0.5 Credit

This course is designed to provide students with a comprehensive understanding of earth and biological processes and the impacts that human populations have on these systems. Many topics will probe the different areas that encompass environmental science. The units of Earth's structure, ecosystems and energy flow, land and aquatic biomes, animal population growth, water quality, air quality, climate

change, nonrenewable/renewable resources, and pollution will be the major areas of concentration. Students will learn how to become an integral part of a push toward a sustainable society.

Prerequisite: Successful completion of Biology; already met MCAS science requirement.

393 Forensics NCA

0.5 Credit

Grades 12

This is an introductory course in Forensic Science. Through hands-on activities, project based learning, and inquiry based labs, students will explore the science behind fingerprints, bloodstain pattern analysis and decomposition as well as forensic applications of science such as entomology, anthropology, and much more. Students will also explore the various types of evidence that could be collected at a crime scene to piece together a crime, such as bullets, bloodstains, DNA, gunshot residue, etc. In addition students will learn about specific protocols that must be followed during the investigation of the crime scene and the legal process that follows a crime.

Prerequisite: Successful completion of Geometry, Biology and Chemistry; already met MCAS science requirement.

394 Meteorology Grades 11, 12

0.5 Credit

This course is designated to introduce students to introductory topics in Meteorology, (the study of the weather). Students will learn about basic concepts involved in the analysis of weather phenomena on a global and local scale. Major topics include satellite meteorology, Radar, precipitation processes, cyclonic activity, severe weather, weather analysis, and very basic weather forecasting techniques. The course will also address the impact of severe weather and natural disasters on society and the environment.

Prerequisite: Successful completion of Algebra I and Chemistry; already met MCAS science requirement.

395 Astronomy Grades 10, 11, 12

0.5 Credit

In this course the students will get an introduction to the cosmos. Major topics addressed will be Earth's relation to the universe, our solar system (planets, moons, asteroids and comets), the sun and how it works, stars, black holes, galaxies, exoplanets, alien life, and cosmology. The students will also be introduced to the nature of light and radiation, telescopes, and spectra. Although real astronomy is mathbased, we will use little math in this course, instead focusing on content. The course will be based much more heavily on written homework, activities, essays, and projects. However, basic Algebra 1 skills are still necessary.

Prerequisite: Successful completion of Algebra I and Enrollment in Algebra II. Can be taken for honors; communicated with teacher upon completion of math diagnostic

STEM - Computer Science and Engineering

The goal of the Billerica Memorial High School STEM - Computer Science and Engineering Program is to offer students opportunities to explore modern technology while solving real world problems. STEM is an acronym for science, technology, engineering, and math. Not every STEM-related graduate job is this obvious though. For example, a STEM degree could lead to a career working on special effects in Hollywood, helping to design new sportswear, or revolutionizing the farming industry. This is in addition to roles in areas such as finance and accountancy, construction, telecoms, and the energy sector. Students develop collaboration skills, gain leadership experience, and explore careers in materials science, engineering, and media. Students will learn to apply general techniques and specific skills using computers, equipment, materials, and tools through hands-on, virtual activities, and laboratory exercises.

As one of our goals is to ensure that students studying computer science and engineering are representative of the diversity of our student population, we encourage students of all backgrounds to explore what these courses have to offer.

Courses Offered

Course Offering	Credit	Length	Grade
PLTW Gateway CS	X/0.5	Semester	8,9
PLTW Gateway ENG	X/0.5	Semester	8,9
PLTW Computer Science Essentials (CSE)*	0.5	Semester	11, 12
Computer Design and Animation – Honors*	0.5	Semester	9, 10, 11, 12
AP PLTW Computer Science Principles (CSP)*	1.0	Full Year	10, 11, 12
AP Computer Science A (CSA)*	1.0	Full Year	10, 11, 12
PLTW Introduction to Engineering Design (IED)*	1.0	Full Year	9, 10, 11, 12
PLTW Principles of Engineering (POE)*	1.0	Full Year	10, 11, 12
PLTW Capstone	0.5	Semester	12
PLTW Engineering Essentials (EE)*	1.0	Full Year	9, 10

^{*}All classes marked with an asterisk apply towards the Digital Literacy / Computer Science grad requirement

Course Descriptions

383 PLTW Gateway CS - App Creators and CS for Innovators and Makers CCR Semester Grade 8 or 9

Gateway CS = Computer Science

[Students can take 1 or both Gateway classes (CS or ENG) – order does not matter]

App Creators introduces students to computer science and computational thinking, through mobile apps. Students are challenged to be creative and innovative, as they collaboratively design and develop mobile solutions to engaging, authentic problems. Students experience the positive impact of computer science application to society and other disciplines, particularly biomedical science.

Computer Science for Innovators and Makers teaches students that programming goes beyond the virtual world into the physical world. Students are challenged to creatively use sensors and actuators to develop systems that interact with their environment. Designing algorithms and using computational thinking practices, they code and upload programs to microcontrollers that perform a variety of authentic tasks. The unit broadens students' understanding of computer science concepts through meaningful applications. Teams select and solve a personally relevant problem related to wearable technology, interactive art, or mechanical devices.

384 PLTW Gateway ENG - Design and Modeling CCR Grade 8 or 9

Semester

Gateway ENG = Engineering

[Students can take 1 or both Gateway classes (CS or ENG) – order does not matter]

Design and Modeling (DM) provides students opportunities to apply the design process to creatively solve problems. Students are introduced to the unit problem in the first activity and are asked to make connections to the problem throughout the lessons in the unit. Students learn and utilize methods for communicating design ideas through sketches, solid models, and mathematical models. Students will understand how models can be simulated to represent an authentic situation and generate data for further analysis and observations. Students work in teams to identify design requirements, research the topic, and engage stakeholders. Teams design a toy or game for a child with cerebral palsy, fabricate and test it, and make necessary modifications to optimize the design solution

298 PLTW Computer Science Essentials (CSE) Grades 11, 12

0.5 Credit

Students will learn visual, block-based coding fundamentals to create mobile apps and programs for self-driving vehicles. Students will apply computational thinking practices, build their vocabulary, and collaborate just as computing professionals do to create products that address topics and problems important to them. With emphasis on computational thinking and collaboration, this semester-long course helps students create a strong foundation to advance to other computer programming courses. Students will be exposed to a diverse set of computational thinking concepts, fundamentals, and tools, allowing them to gain understanding and build confidence.

271 Computer Design and Animation – Honors Grades 9, 10, 11, 12

0.5 Credit

Learn how to create computer programs, games and animations using the Python programming language. Content includes input and output techniques, common constructs such as statements, loops, conditionals, and functions. Also includes use of Visual Python, a 3D graphics package and graphical user interfaces. **Prerequisite:** 85+ in Algebra I or 75+ in Honors Algebra 1

296 AP PLTW Computer Science Principles (AP CSP) Grades 10, 11, 12

1.0 Credit

This course teaches computing skills vital for all disciplines of study. There is emphasis on both creative self-expression and problem solving. Students will work individually and collaboratively to solve problems and discuss and write about how their work will impact society. The major areas of study include Creativity, Abstraction, Data and Information, Algorithms, Programming, The Internet, and Global Impact. Projects and problems include programming in Python using Turtle graphics, visualization of data, cybersecurity, the internet and simulation.

Prerequisite: At least an 85 in Algebra I or 75 in Honors Algebra 1. See the section "Advanced Placement" under Academic Expectations for additional details.

270 AP Computer Science A (AP CSA) Grades 10, 11, 12

1.0 Credit

The course emphasizes object-oriented programming methodology with a concentration on problem solving and algorithm development, and is meant to be the equivalent of a first-semester college-level course in computer science. It also includes the study of data structures, design, and abstraction.

Prerequisite: At least an 85 in Algebra II or 75 in Algebra II Honors or permission from instructor.

See the section "Advanced Placement" under Academic Expectations for additional details.

292 PLTW Introduction to Engineering Design – Honors/CCR (IED) 1.0 Credit Grades 9, 10, 11, 12

The major focus of Introduction to Engineering Design is the design process and its application. Through hands-on projects, students apply engineering standards and document their work. Students use industry standard 3D modeling software to help them design solutions to solve proposed problems, document their work using an engineer's notebook, and communicate solutions to peers and members of the professional community.

Prerequisite: Successful completion of Algebra I

293 PLTW Principles of Engineering - Honors (POE) Grades 10, 11, 12

1.0 Credit

This survey course exposes students to major concepts they will encounter in a post-secondary engineering course of study. Topics include mechanisms, energy, statics, materials, and kinematics. Students develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, document their work and communicate solutions.

Prerequisite: At least a 70 in 291 PLTW Engineering Essentials or 292 PLTW Introduction to Engineering Design or consent of the instructor

237 PLTW Capstone – Honors Grades 12

0.5 Credit

PLTW Capstone is a capstone course for students who are completing any of PLTW's high school programs. It is an open-ended research course in which students work in teams to design and develop an original solution to a well-defined and justified open-ended problem. Teams draw on the knowledge, skills, and interests of each member, as they perform research to select, define, and justify a problem. Given this collaboration, team members leave the course with a broadened skillset and an appreciation for learning from their peers. After carefully defining the design requirements and creating multiple solution approaches, student teams select an approach, create, and test or model their solution prototype. As they progress through the problem-solving process, students work closely with experts and continually hone their organizational, communication, and interpersonal skills, creative and problem-solving abilities, and their understanding of the integration of processes such as the design process, experimental design, and the software development process. At the conclusion of the course, teams present and defend their original solution to an outside panel. PLTW Capstone is appropriate for 12th grade students who are interested in any technical career path because the projects students work on can vary with student interest, and the curriculum focuses on collaborative problem solving and project management. Students should take PLTW Capstone as the final PLTW course, because it requires application of the knowledge and skills introduced during the PLTW foundation courses. This course is not designed to teach additional content, but to empower students to find resources—mentors, subject matter experts, research articles, peers, and teachers—to meet their needs, bolster their skills, and solve the problem they have selected.

Prerequisite: Successful completion of PLTW Courses and Curriculum Coordinator. See the section "Honors Courses" under Academic Expectations for additional details.

^{*}Students engaged in yearlong projects under the Capstone course can opt to take the course for

a full year.*

291 PLTW Engineering Essentials - CCR Grades 9, 10

1.0 Credit

Engineering Essentials is a full-year course designed to be BMHS's first exposure to the PLTW Engineering program. Project Lead The Way (PLTW) is a national curriculum developed by an American nonprofit organization. In Engineering Essentials, students learn about:

- Fundamental computer competencies needed to succeed at any modern workplace
- Presentation, collaboration, organization, and other in-demand transferable skills
- Different types of engineering
- Engineering concepts
- Technical skills such as geographic information systems (GIS), 3D modeling software, 3D printing, and prototyping equipment
- Application of engineering concepts in a variety of industries, including health care, public service, and product development and manufacturing

Prerequisite: Successful completion of Algebra I

Specialized Courses

The Special Education Department of Billerica Memorial High School provides a wide range of educational services for students identified through Chapter 766 Regulations, the regulatory guidelines of the IDEA Act, and the No Child Left Behind Act. The department consists of a Team Evaluation

Chairperson, school psychologist, special education teachers, and paraprofessionals. Support services such as counseling, speech and language, adaptive physical education, occupational and physical therapy, reading, and hearing and vision-impaired services are provided by licensed professionals, as identified in a student's Individualized Education Program (IEP). Through the TEAM process, an IEP is developed to provide each student access to the general curriculum in the least restrictive environment.

INCLUSION CLASSES

Inclusion classes provide special education students access to the general curriculum through support and collaboration in the general education setting. Inclusion classes are taught by general education teachers and special education staff as required by the Individualized Education Program (IEP). Inclusion classes provide differentiated instruction, curriculum, and assessment through a team-teaching model within the standard classroom.

Courses Offered

Course Offering	Credit	Length	Grade
Academic Support Reading	0.5	Semester	9, 10, 11, 12
Academic Support Reading	1.0	Full Year	9, 10, 11, 12
Academic Support I	0.5	Semester	9, 10
Academic Support I	1.0	Full Year	9, 10
Academic Support II	0.5	Semester	11, 12
Academic Support II	1.0	Full Year	11, 12

Course Description

860/861 Academic Support Reading Grades 9, 10, 11, 12

Semester 0.5 Credit Full Year 1.0 Credit

This course is specifically designed for students who require specialized instruction in advance decoding skills or comprehension support while attending mainstream English classes.

Prerequisite: Recommendation of IEP Team.

858/859 Academic Support I Grades 9, 10

Semester 0.5 Credit Full Year 1.0 Credit

This course is specifically designed for students who require specialized instruction and/or curriculum modification in a highly structured learning environment for a particular skill or for a specified amount of

time. Instruction is presented individually or as a small group as mandated in an Individualized Educational Plan to improve reading, writing, mathematics and/or study skills. Students are guided in the study and preparation of material related to the English, math, science and history/social science curriculum. Emphasis will be placed on the preparation of the student to access resources independently. Progress will be based on the quality of your use of instructional time and the application of the presented study skills strategies by monitoring logged assignments in a planner/organizer, subject notebooks, homework, and report cards.

Prerequisite: Recommendation of IEP Team.

828/829 Academic Support II Grades 11, 12

Semester 0.5 Credit Full Year 1.0 Credit

Description: This course is specifically designed for students who require specialized instruction and/or curriculum modification in a highly structured learning environment for a particular skill or for a specified amount of time. Instruction is presented individually or as a small group as mandated in an Individualized Educational Plan to improve reading, writing, mathematics and/or study skills. Students are guided in the study and preparation of material related to the English, math, science and history/social science curriculum. Emphasis will be placed on the preparation of the student to access resources independently. Progress will be based on the quality of your use of instructional time and the application of the presented study skills strategies by monitoring logged assignments in a planner/organizer, subject notebooks, homework, and report cards.

Prerequisite: Recommendation of IEP Team.

Access Program

Students in the Access Program may have a disability in the following categories: autism, developmental delay, intellectual, neurological, communication, and/or multiple disabilities. Access students participate in a modified curriculum with specialized instruction. The curriculum is aligned with curriculum frameworks but provides a continuum of approaching grade-level complexity (i.e., less-to-more complex), and is intended to allow educators to identify challenging and attainable standards-based skills for students with a range of disabilities. The program offers partial inclusion to substantially separate programming with a high student/staff ratio. Students in Access also receive related services as required by their IEPs. Partial inclusion students are included in general education classes and receive Tier I instruction with modifications and accommodations as outlined in their IEP. Within the Access classroom, they receive support, remediation, and reinstruction to support their progress in meeting their IEP goals.

Students whose service delivery places them in the substantially separate Access program receive specialized and modified instruction in the curriculum as outlined in their IEPs. There is an additional emphasis on functional academic, community living, and daily living skills. Students may be included with support in targeted content areas in accordance with their individual goals.

Students in Access are provided direct and consultative services from:

- Lead Special Education Teacher(s)
- Paraprofessionals
- Related Service Providers as designated on the IEP
- Board Certified Behavior Analyst (BCBA)
- Health Care Provider, as required on the IEP

Courses Offered

Course Offering	Length	Grade
Math Skills I	Full Year	8, 9
Math Skills II	Full Year	10
Money Skills	Full Year	11, 12
English Language Arts I	Full Year	8, 9, 10
English Language Arts II	Full Year	11, 12
Science	Full Year	8, 9, 10
Living on Your Own	Full Year	8, 9, 10, 11, 12
Community-Based Training	Full Year	8, 9, 10, 11, 12
Vocational Skills Training	Full Year	8, 9, 10, 11, 12
Civics	Full Year	8, 9, 10, 11, 12
SPOT	Full Year	8, 9, 10, 11, 12
Academic Support	Full Year	8, 9, 10, 11, 12
Academic Support Reading	Full Year	8, 9, 10, 11, 12
Application of Technology	Semester	8, 9, 10, 11, 12
Unified Physical Education	Semester	8, 9, 10, 11, 12
Transition Skills	Full Year	8, 9, 10, 11, 12

Course Descriptions

804 Math Skills I Full Year Grades 8, 9

This course is taught by a special educator. Students enrolled in this course have a documented disability, which impacts their ability to attend to, comprehend, and demonstrate knowledge of academic skills. This often precludes them from making efficient use of traditional educational materials and curricula. Content is derived from the Massachusetts Curriculum Frameworks, and modified to each student's ability level. Activities are designed to increase students' academic progress in the content area of mathematics. The level of support provided to students by staff will be based on the individual needs of each student.

805 Math Skills II Full Year Grades 10

Math Skills II is for students who will be completing their grade 10 MCAS requirements through an

Alternative Portfolio. Students in this class are working on either entry points or access skills that are derived from the Massachusetts Curriculum Frameworks.

853 Money Skills
Grades 11, 12
Full Year

Students are provided with instruction by an Access or MSS special education teacher. They are working on mathematical concepts at their level of understanding, through entry points and access points from the Massachusetts Curriculum Frameworks. Additionally, instruction is provided in functional mathematics in the areas of computation, money concepts, and making purchases. All instruction is related to daily living skills and solving real-world problems.

806 English Language Arts I Grades 8, 9, 10

Full Year

This course is taught by a special educator. Students enrolled in this course have a documented disability, which impacts their ability to attend to, comprehend, and demonstrate knowledge of academic skills. This often precludes them from making efficient use of traditional educational materials and curricula. Content is derived from the Massachusetts Curriculum Frameworks, and modified to each student's ability level. Activities are designed to increase students' academic progress in the content area of English Language Arts. The level of support provided to students by staff will be based on the individual needs of each student.

807 English Language Arts II Grades 11, 12

Full Year

Students are provided with instruction by an Access or MSS special education teacher. They are working on ELA concepts at their level of understanding, through entry points and access points from the Massachusetts Curriculum Frameworks. Additionally, instruction is provided in functional ELA in the areas of reading informational texts and writing. All instruction is related to daily living skills.

855 Science Full Year Grades 8, 9, 10

This course is taught by a special educator. Students enrolled in this course have a documented disability, which impacts their ability to attend to, comprehend, and demonstrate knowledge of academic skills. This often precludes them from making efficient use of traditional educational materials and curricula. Content is derived from the Massachusetts Curriculum Frameworks, and modified to each student's ability level. Activities are designed to increase students' academic progress in the content area of science. The level of support provided to students by staff will be based on the individual needs of each student. These sections have an emphasis on the content of Life Science and Biology.

841 Living on Your Own Grades 8, 9, 10, 11, 12

Full Year

This class provides opportunities for students to take community trips, read maps and follow bus schedules, plan meals using principles of healthy nutrition, cook, learn about personal hygiene and fitness, develop social skills, acquire personal safety strategies, perform organizational tasks, complete office tasks, care for plants, and participate in activities of daily living. Students are also provided with academic support for elective classes, as needed.

801 Community-Based Training Grades 8, 9, 10, 11, 12

Full Year

This course offers students the opportunity to generalize and practice activities of daily living skills in their community. Such activities of daily living skills may include but are not limited to, following safety

regulations, placing orders, following directions, and handling money. Based on the need and level of each individual student, students will generalize and practice such skills throughout their school community and their local community of Billerica. *Prerequisite: Recommendation of IEP Team.*

802 Vocational Skills Training Grades 8, 9, 10, 11, 12

Full Year

This course is taught by a special educator from one of the substantially separate special education programs listed above with access and consultation to a school-based job coach. It offers students the opportunity to think about the "working world" and how they see themselves fitting into it. Students will be provided with the opportunity to develop their knowledge regarding vocational skills through participating in personal inventories and mock interviews, learning to build resumes and complete applications, as well as attempting various types of potential vocational skills that may be asked of them in different work environments. The level of support provided to students by staff will be based on the

individual needs of each student.

Prerequisite: Recommendation of IEP Team.

857 Civics Full Year

Grades 8, 9, 10, 11, 12

Modified content from Modern World History and US History provides the contextual foundation for this class. Students develop comprehension, vocabulary, and writing skills as they learn about history, current events, geography, and civics.

973 Academic Support Grades 8, 9, 10, 11, 12

Full Year

This course is taught by a special educator. Every student who is enrolled in this course has an Individualized Education Plan (IEP) supported by the varied expertise of our staff. The main focus of the curriculum is dictated by the student's IEP. Our collaborative, multidisciplinary approach assures that students receive the best curriculum to meet their needs. Each student's program and progress is evaluated quarterly by the team, to be certain that it is meeting the student's educational goals and objectives.

856 Academic Support Reading Grades 8, 9, 10, 11, 12

Full Year

This course is taught by a special educator. Every student who is enrolled in this course has an Individualized Education Plan (IEP) supported by the varied expertise of our staff. This course focuses on reading fluency, decoding/encoding, reading comprehension and vocabulary. Students enrolled in this course have reading IEP goals, specifically goals related to fluency, decoding/encoding and reading comprehension.

831 SPOT Full Year

Grades 8, 9, 10, 11, 12

This course is a time when our students within the special education sub-separate programs receive their services from speech and language, social skills, social work, occupational therapy, physical therapy, etc. Such services take place in both group and individualized settings based on each student's IEP.

817 Application of Technology Grades 8, 9, 10, 11, 12

Semester

This course is taught by a special educator. It provides opportunities for students to learn about topics ranging from identifying parts of the laptop, charging and caring for laptops, writing emails, texting, and social media. This course covers topics with a fSocus on Google apps, such as Google Docs, and Google

Drive with an emphasis on safe communication on the Internet. The concepts taught have a focus on mastery and are essential for each student to be able to live independent lives in today's world.

989 Unified Physical Education Grades 8, 9, 10, 11, 12

Semester

This course combines students of all abilities to participate in developmentally appropriate activities, including physical fitness and sports. Students will work together to increase competence and confidence in a variety of physical activities. Through ongoing leadership opportunities, members of this course will be empowered to help create a more inclusive and accepting school environment for all students. Activities will vary on a daily basis. Students will be paired 1:1 with an Adapted PE "buddy" and act as their mentor coach. Unified PE students will be expected to assist and play in all PE activities with their buddy. The mentor coach will be responsible for helping their buddy practice skills, learn the rules, and provide added motivation to help them be successful in their Adapted PE class.

Prerequisite: Recommendation of IEP Team.

851 Transition Skills Grades 8, 9, 10, 11, 12

Full Year

The Transition Skills class is taught by a special education teacher and focuses on students gaining skills they will need post-high school. Topics covered in this class include identifying personal information, completing important forms/documents, resume writing, utilizing transportation, banking, and interviewing skills. Students will also work on understanding their IEP, creating academic and personal goals, identifying their strengths and interests, and researching post-secondary options. The goal of the Transition Program is to help students become as independent as possible after high school.

MSS Program

BMHS MSS Program (Grades 8-12)

The Multi-Skill and Service (MSS) Program services students with global disabilities, inclusive of intellectual, physical, autism spectrum disorder, and medical impairments. The program provides individually designated instruction and specialized therapies in a substantially separate setting with a high student and staff ratio. Instruction in the MSS program focuses on the development of functional academics, life skills, and social pragmatics. Often students participate in co-treatments, integrating skills across domains. The program supports inclusion at appropriate times for students to participate in the life of the school with members of the school community.

Students in MSS are provided direct and consultative services from:

- Lead Special Education Teacher(s)
- Paraprofessionals
- Board Certified Behavior Analyst (BCBA)
- Related Service Providers as designated on the IEP
- Health Care Provider, as required on the IEP

Courses Offered

Course Offering	Length	Grade
SPOT	Full Year	8, 9, 10, 11, 12
Math Skills	Full Year	8, 9, 10

Money Skills	Full Year	11, 12
Science	Full Year	8, 9, 10
English Language Arts I	Full Year	8, 9, 10
English Language Arts II	Full Year	11, 12
Living on Your Own	Full Year	8, 9, 10, 11, 12
Vocational Skills	Full Year	8, 9, 10, 11, 12
Functional Kitchen Skills of Everyday Life	Full Year	8, 9, 10, 11, 12
Community-Based Training	Full Year	8, 9, 10, 11, 12
Unified Physical Education	Semester	8, 9, 10, 11, 12
Transition Skills	Full Year	8, 9, 10, 11, 12

Course Descriptions

831 SPOT Full Year

Grades 8, 9, 10, 11, 12

This course is a time when our students within the special education sub-separate programs receive their services from speech and language, social skills, social work, occupational therapy, physical therapy, etc. Such services take place in both group and individualized settings based on each student's IEP.

805 Math Skills II Full Year

Grades: 8, 9, 10

Math Skills II is for students who will be completing their grade 10 MCAS requirements through an Alternative Portfolio. Students in this class are working on either entry points or access skills that are derived from the Massachusetts Curriculum Frameworks.

853 Money Skills Full Year

Grades: 11, 12

Students are provided with instruction by an Access or MSS special education teacher. They are working on mathematical concepts at their level of understanding, through entry points and access points from the Massachusetts Curriculum Frameworks. Additionally, instruction is provided in functional mathematics in the areas of computation, money concepts, and making purchases. All instruction is related to daily living skills and solving real world problems.

855 Science Full Year

Grades 8, 9, 10

Biology, chemistry, and physics concepts are taught within the MSS classroom, as well as in the school community. Focus is on concepts that have real-world applications, to assist students understand themselves and the world around them. Human anatomy, ecology, plant life, chemical reactions, and physical forces are some of the general concepts taught. Science is for students who will be completing their grade 10 MCAS requirements through an Alternative Portfolio. Students in this class are working on either entry points or access skills that are derived from the Massachusetts Curriculum Frameworks.

806 English Language Arts I

Full Year

Grades: 8, 9, 10

ELA II is for students who will be completing their grade 10 MCAS requirements through an Alternative Portfolio. Students in this class are working on either entry points or access skills that are derived from the Massachusetts Curriculum Frameworks.

807 English Language Arts II

Full Year

Grades: 11, 12

Students are provided with instruction by an Access or MSS special education teacher. They are working on ELA concepts at their level of understanding, through entry points and access points from the Massachusetts Curriculum Frameworks. Additionally, instruction is provided in functional ELA in the areas of reading informational texts, writing. All instruction is related to daily living skills.

841 Living on Your Own Grades 8, 9, 10, 11, 12

Full Year

This class provides opportunities for students to take community trips, read maps and follow bus schedules, plan meals using principles of healthy nutrition, cook, learn about personal hygiene and fitness, develop social skills, acquire personal safety strategies, perform organizational tasks, complete office tasks, care for plants, and participate in activities of daily living. Students are also provided with academic support for elective classes, as needed.

801 Community Based Training Grades 8, 9, 10, 11, 12

Full Year

This course offers students the opportunity to generalize and practice activities of daily living skills in their community. Such activities of daily living skills may include, but are not limited to, following safety regulations, placing orders, following directions, and handling money. Based on the need and level of each individual student, students will generalize and practice such skills throughout their school community and their local community of Billerica.

Prerequisite: Recommendation of IEP Team.

802 Vocational Skills Training Grades 10, 11, 12

Full Year

This course is taught by a special educator from one of the substantially separate special education programs listed above with access and consultation to a school-based job coach. It offers students the opportunity to think about the "working world" and how they see themselves fitting into it. Students will be provided with the opportunity to develop their knowledge regarding vocational skills through participating in personal inventories and mock interviews, learning to build resumes and complete applications, as well as attempting various types of potential vocational skills that may be asked of them in different work environments. The level of support provided to students from staff will be based on the individual need of each student.

Prerequisite: Recommendation of IEP Team.

803 Functional Kitchen Skills for Everyday Life Grades 8, 9, 10, 11, 12

Full Year

This course is taught by a special educator. It offers students the opportunity to develop knowledge of storage and preparation of foods, kitchen and food safety, nutrition, meal planning, consumerism, and maintenance of the kitchen. Equipment and cooking procedures are used in making various food dishes. Based on the need of each individual student, students will work either independently, with support from staff, cooperatively in small groups with peers, or cooperatively in small groups with peers and teacher support. *Prerequisite: Recommendation of IEP Team.*

989 Unified Physical Education

0.5 Credit

Grades 10, 11, 12

This course combines students of all abilities to participate in developmentally appropriate activities, including physical fitness and sports. Students will work together to increase competence and confidence in a variety of physical activities. Through ongoing leadership opportunities, members of this course will be empowered to help create a more inclusive and accepting school environment for all students. Activities will vary on a daily basis. Students will be paired 1:1 with an Adapted PE "buddy" and act as their mentor coach. Unified PE students will be expected to assist and play in all PE activities with their buddy. The mentor coach will be responsible for helping their buddy practice skills, learn the rules, and provide added motivation to help them be successful in their Adapted PE class.

Prerequisite: Recommendation of IEP Team.

851 Transition Skills Grades 8, 9, 10, 11, 12

Full Year

The Transition Skills class is taught by a special education teacher and focuses on students gaining skills they will need post-high school. Topics covered in this class include identifying personal information, completing important forms/documents, resume writing, utilizing transportation, banking, and interviewing skills. Students will also work on understanding their IEP, creating academic and personal goals, identifying their strengths and interests, and researching post-secondary options. The goal of the Transition Program is to help students become as independent as possible after high school.

Pathways

The Pathways Program is a comprehensive post high school transitional curriculum designed to better prepare 18-22 year old students for their rightful place as contributing and active members of the community. The Pathways program teaches specific skills that are needed every day. Skills are taught using 1:1 instruction, in small and large groups and are modeled by classroom staff. A multi-sensory approach is used to teach and reinforce all skills. Skill development is monitored by and practiced through class activities, role-plays, and community-based instruction. Goals, curriculum, strategies, and interventions are jointly developed by educators, related services personnel, and parents. The entire team is focused on achieving a common set of goals/objectives that are focused on minimizing the impact of the student's disability in order to maximize the student's achievement and participation within Billerica and surrounding communities. The program features include:

- Functional academic studies including mathematics, reading, and writing
- Use of research-based strategies and differentiated instruction to appeal to a wide variety of learning styles and needs
- Vocational training including an initial skills assessment, volunteer internships, job search training, applications and interviewing skills, and supported employment
- Job coach supports students with generalizing trainings and skill development from school to the
 work site and provide ongoing, on-site support with a goal that students are working toward
 independent job skills
- Independent living skills including exploring living situations, domestic responsibilities (cooking, cleaning, laundry, shopping), telephone skills, and accessing the community
- Personal growth including health awareness, leisure skills, peer relationships, and social skills
- Communication skills including augmentative communication strategies, vocabulary skills, functional receptive and expressive language, and social pragmatics embedded in activities throughout the day
- Ongoing assessments and data analysis conducted on a routine basis in order to consistently adapt to the student's current abilities and needs
- Interaction with peers from the general curriculum on a daily basis in and out of the classroom setting

Entrance Criteria: Students with mild, moderate to severe disabilities who are recommended by the special education team at BMHS. Students enter the Pathways program once they have completed BMHS RISE or a request is made to have a post-secondary student enter the Pathways classroom from elsewhere.

Exiting the program: Students exit the program through evaluation, review of progress, teacher and related service provider recommendations, and consideration of developmental appropriateness of behavior and social skills.

Related services provided: Identified through the IEP process, services are provided through direct instruction and consultation to ensure that therapeutic strategies are interwoven and carried over into instructional activities and routines throughout the day. Skills are taught and integrated within the context of both academic and natural settings. Speech and Language Therapists may develop individualized communication programs that are implemented throughout the student's day. The main focus of the communication program is enhanced functional vocabulary, improved comprehension, and increased social pragmatic communication skills. For some students, this may require augmentative communication systems such as communication books, sign language, electronic switches and other devices. Physical Therapists and Occupational Therapists offer students instruction to improve motor skills, coordination, range of motion, muscle power, and posture using adaptive equipment as necessary. Opportunities to enter the workforce to develop general work habits and a positive attitude toward employment are provided. Students will participate in supported employment in the community with a job coach. Extended year services are provided for students who require consistency of programming during the summer to maintain educational progress. Other supports provided are social work/school adjustment counseling, behavior consultation and an initial vocational assessment.

8th Grade Specialized Courses

Course	Length	Grade
Math	Full Year	8
English Language Arts	Full Year	8
Social Studies	Full Year	8
Science	Full Year	8
Academic Support	Full Year	8

812 Academic Support Grade 8

Full Year

This course is specifically designed for students who require specialized instruction and/or curriculum modification in a highly structured learning environment for a particular skill or for a specified amount of time. Instruction is presented individually or as a small group as mandated in an Individualized Education Plan to improve reading, writing, mathematics, and/or study skills. Students are guided in the study and preparation of material related to the English, math, science, and history/social science curriculum. Emphasis will be placed on the preparation of the student to access resources independently. Progress will be based on the quality of your use of instructional time and the application of the presented study skills strategies by monitoring logged assignments in a planner/organizer, subject notebooks, homework, and report cards.

8th Grade Special Education Sub-Separate Programming

Course	Length	Grade
Math I	Full Year	8
English Language Arts I	Full Year	8
Science I	Full Year	8
Social Studies	Full Year	8

Course Descriptions

813 Math I Full Year Grade 8

This math class is for students who will be completing their grade 8 MCAS requirements through an Alternative Portfolio. Students in this class are working on either entry points or access skills that are derived from the Massachusetts Curriculum Frameworks.

814 English Language Arts I

Full Year

Grade 8

This English Language Arts class is for students who will be completing their grade 8 MCAS requirements through an Alternative Portfolio. Students in this class are working on either entry points or access skills that are derived from the Massachusetts Curriculum Frameworks.

815 Science I Full Year Grade 8

This Science class is for students who will be completing their grade 9 MCAS requirements through an Alternative Portfolio. Students in this class are working on either entry points or access skills that are derived from the Massachusetts Curriculum Frameworks.

816 Social Studies Full Year

Grade 8

Students participating in this class work to understand their school community, as well as their town community. Students work on learning the various daily living skills necessary to function within each community setting. Such skills include, but are not limited to: following safety regulations, placing orders, and following directions. Based on the need and level of each individual student, students will generalize and practice such skills across settings.

Visual and Performing Arts

Music

The goal of the Billerica High School Music Program is to enable students to develop self-expression and creativity through instrumental or choral performance, composing, listening, and developing improvisational techniques. Music has its own vocabulary and distinct symbol system to aid students as they learn to experience the world in a more perceptive fashion. The study of music fosters self-discipline, critical thinking, and self-assessment. It prepares students for careers as professional musicians or for a lifelong appreciation of music's value in our society.

8th Grade Music Opportunities

Course Offering	Length
Concert Choir - (Tenor/Bass Voices)	Full Year
Treble Chorus - (Soprano/Alto Voices)	Full Year
Grade 8 Band	Full Year
8-9 String Orchestra	Full Year
Digital Music	Semester
Beginning Piano	Semester
Advanced Piano	Semester

8-12 Courses Offered

**ALL CLASSES BELOW APPLY TOWARDS FINE ARTS GRADUATION REQUIREMENT AND CREDITS ONLY APPLICABLE DURING GRADE 9-12 ENROLLMENT

Course Offering	Credit	Length	Grade
Concert Choir – Full Year	1.0	Full Year	8, 9, 10, 11, 12
Concert Choir – Semester	0.5	Semester	9, 10, 11, 12
Treble Chorus (Soprano/Alto) – Honors	1.0	Full Year	8, 9, 10, 11, 12
Treble Chorus (Soprano/Alto) – Honors	0.5	Semester	9, 10, 11, 12
Chamber Singers – Honors	1.0	Full Year	9, 10, 11, 12

Musical Theater (co-taught with Theater Department)	0.5	Semester	9, 10, 11, 12
8 th Grade Band	X	Full Year	8
Band – Full Year	1.0	Full Year	9, 10, 11, 12
Concert Band – 2 nd semester ONLY	0.5	Semester	9, 10, 11, 12
8-9 String Orchestra	1.0	Full Year	8, 9
HS String Orchestra	1.0	Full Year	10, 11, 12
Digital Music	0.5	Semester	8, 9, 10, 11, 12
Beginning Piano	0.5	Semester	8, 9, 10, 11, 12
Advanced Piano	0.5	Semester	8, 9, 10, 11, 12
AP Music Theory	1.0	Full Year	10, 11, 12

Course Descriptions

921 Concert Choir 924 Concert Choir Full Year 1.0 Credit - Grades 8-12 Semester 0.5 Credit - Grades 9-12

The BMHS Concert Choir is open to all students in grades 9-12 who wish to be involved in music and like to sing. Students with previous musical experience, particularly choral singing and voice lessons are encouraged to enroll. This group will perform a minimum of two concerts each school year; attendance at and participation in these performances is mandatory. Students may elect Chorus five times for credit. 8th GRADERS ONLY: Tenor/Bass voice parts should schedule Concert Choir Full Year Only 9-12 Graders: All SATB voices may schedule Full Year or Semester

928 Treble Chorus (Soprano/Alto Voices) – Honors 922 Treble Chorus (Soprano/Alto Voices) – Honors Se

Full Year 1.0 Credit - Grades 8-12 Semester 0.5 Credit - Grades 9-12

The Treble Chorus is open to singers whose voices fit comfortably in the soprano/alto range. Students with previous musical experience, particularly in choral singing and voice lessons are encouraged to enroll. This ensemble will perform concerts with the Chamber Singers, Tenor/Bass Chorus, and Concert Choir. The Treble Chorus meets only one semester, so members are strongly encouraged to additionally participate in either Chamber Singers (pending successful audition) or Concert Choir. Students may elect to take Treble Chorus up to four times for credit.

8th GRADERS ONLY: Soprano/Alto voice parts should schedule Treble Chorus Full Year Only 9-12 Graders: All SA voices may schedule Full Year or 2nd Semester

941 Chamber Singers - Honors Grades 9, 10, 11, 12

1.0 Credit

The BMHS Chamber Singers is open by audition only to students in grades 9-12. Students with previous musical experience, particularly choral singing and voice lessons are encouraged to enroll. This is the highest-level choir at BMHS and provides the opportunity to learn more challenging repertoire and perform more than other BMHS Choirs. This ensemble will compete in state and national festivals. Students wishing to enroll should contact the **Choir Director** as soon as possible to schedule an audition. Students may elect Chamber Singers four times for credit.

Prerequisite: Open to students in grades 9-12. Students with prior singing experience and strong vocal skills are encouraged to enroll. <u>Students must complete an in-person audition and be accepted into the ensemble.</u>

919 Musical Theater (co-taught with Choral Department) Grades 9, 10, 11, 12

0.5 Credit

This course focuses on developing and introducing ways to study, create, and observe Musical Theater. In the form of workshops, students will study dance styles, vocal technique, and acting, culminating in an audition which will be used to cast a final performance. Can be taken multiple years for credit.

Prerequisite: Must complete Introduction to Theater OR Concert Choir; this prerequisite can be bypassed by performing an audition of a 16-bar musical theater song and a short scene reading with

950 Grade 8 Band Full Year Grade 8

Grade 8 Band is a full-year course with musical study in the continued development of fundamental musicianship, with the emphasis being placed upon the ensemble and concert experiences. Band literature of the appropriate level will be studied and performed. Membership is open to any member of the student body who adequately fulfills playing requirements as outlined by the director. Performances at a Winter Concert and Spring Concert may take place and may be combined with the Middle School Band and/or with the High School Band. Performance activities, including concerts, special events, and rehearsals, all during non-school hours, are an essential part of the course and will be considered in the grading process.

Prerequisite: Previous participation in a school band program, private lessons, or permission from instructor.

951 Band 1.0 Credit

Grades 9, 10, 11, 12

the choral and theater teachers.

The Band course consists of musical study in the Pep Band and Concert Band areas. Fall Programming (September - December)

Emphasis is placed on the study and performance of Pep Band music with performances at all home, playoff, and Thanksgiving Day football games. Students will also prepare and perform at the Yankee Doodle Parade and also have the opportunity to perform with the BMHS Orchestra and Middle School Band at various concerts throughout the 1st semester. All rehearsals take place during the class period, after-school commitments include the football games, parades, and concerts listed above.

Winter/Spring Programming (December - June)

Emphasis is placed upon concert repertoire. Band literature of high caliber and of varying styles is studied and performed. Performances may include the Winter and/or Spring Concerts. Students enrolled in the 955-Concert Band (2nd Semester) course will combine to create one ensemble.

Membership is open to any member of the student body who meets the prerequisite; you will be expected to advance in technique, musicianship, theory, and leadership during each year in Band. This course may be elected up to four times for credit.

Prerequisite: Previous participation in a school band program, private lessons, or permission from the instructor is required.

955 Concert Band (2nd Semester ONLY) Grade 9, 10, 11, 12

0.5 Credit

Concert Band is a 2nd-semester course that combines with the students enrolled in 951-Band at the start of the 2nd semester.

During the 2nd semester emphasis is placed on concert preparation which will include studying repertoire of high caliber and different styles. Performances include Spring Concerts and Graduation.

Membership is open to any member of the student body who meets the prerequisite; you will be expected to advance in technique, musicianship, theory, and leadership during each year in Band. This course may be elected up to four times for credit.

Prerequisite: Previous participation in a school band program, private lessons, or permission from the instructor is required.

957 8-9 String Orchestra Grade 8, 9

String Orchestra is open to all Grade 8 and 9 students who have previously studied a string instrument. Students will continue to learn the fundamentals of technique and performance through rehearsing various styles of repertoire including, but not limited to, traditional string ensemble and chamber literature, contemporary standards, and popular music. Students will be assessed regularly in performance and sight-reading skills. Performance activities, including special events, rehearsals, festivals and concerts all during non-school hours, are an essential part of the course and will be considered in the grading process. Students in the Grade 8 & 9 orchestra may also be combined with the Grade 6/7 Middle School Orchestra and/or the Grade 10-12 High School Orchestra for performance as permitted by scheduling. Students are also encouraged to take private lessons as well as audition for the MMEA Festivals.

Prerequisite: Previous participation in String Ensemble, private lessons, or permission from instructor.

956 HS String Orchestra Grades 10, 11, 12

1.0 Credit

String Orchestra is open to all students who have previously studied a string instrument. Students will continue to learn the fundamentals of technique and performance through rehearsing various styles of repertoire including, but not limited to, traditional string ensemble and chamber literature, contemporary standards, and popular music. Students will be assessed regularly in performance and sight-reading skills. Performance activities, including special events, rehearsals, field trips, festivals and concerts all during non-school hours, are an essential part of the course and will be considered in the grading process. Students are also encouraged to take private lessons as well as audition for the MMEA Festivals. Students may elect String Orchestra three times for credit.

Prerequisite: Previous participation in String Ensemble, private lessons, or permission from instructor.

956H-01 HS Honors String Orchestra Grades 10, 11, 12

1.0 Credit

Embedded into the HS Orchestra, honors orchestra students will engage in more rigorous solo and ensemble music preparation in addition to the regular orchestral studies. Instructor recommendation is required. Honors String Orchestra is open to all students who have previously studied a string instrument. Students will continue to learn the fundamentals of technique and performance through rehearsing various styles of repertoire including, but not limited to, traditional string ensemble and chamber literature, contemporary standards, and popular music. Students will be assessed regularly in performance and sight-reading skills. Performance activities, including special events, rehearsals, field trips, festivals and concerts all during non-school hours, are an essential part of the course and will be considered in the grading process. Students are also encouraged to take private lessons as well as audition for the MMEA Festivals. Students may elect String Orchestra three times for credit.

Prerequisite: Previous participation in String Ensemble and private lessons.

958 Digital Music 0.5 Credit

Grades 8, 9, 10, 11, 12

In this course, students will learn about the basic concepts of music in order to explore topics such as music production and digital music composition. Topics covered will include rhythm, meter, sound, beat, form, looping, digital audio workstations, synthesizers, and recording basics. By the end of one semester, students will have composed and created their own musical pieces and demonstrate competency in basic recording techniques. Much of this course will involve work on the Chromebook using web-based musical platforms and exercises.

Prerequisite: Must complete <u>at least</u> one semester of ANY of the following courses: Piano, Band, Chorus, or Orchestra

935 Beginning Piano Grades 8, 9, 10, 11, 12

0.5 Credit

Beginning Piano is a course geared towards the beginning musician and playing the piano keyboard. Students will learn how to read standard notation in treble and bass clef as well as focus on chords and chord construction, hand position, finger technique, and composition. Students will also research historical and contemporary icons in music and learn to perform well-known musical charts. Because of the daily instruction and supervised practice, a higher level of expertise can be achieved.

936 Advanced Piano - Honors Grades 8, 9, 10, 11, 12

0.5 Credit

Intermediate Piano is a course for students interested in advancing their piano skills and musical knowledge. In this course, pianists will learn advanced techniques (pedaling, scales, advanced articulations, etc.) as well as further their knowledge of musical theory (key signatures, scales, compound meter, ledger lines). Students will work at their own pace in learning new pieces with assistance from the teacher.

Prerequisite: Successful completion of Beginning Piano, or permission from instructor.

917 AP Music Theory Grades 10, 11, 12

1.0 Credit

The ultimate goal of an AP Music Theory course is 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 musical score. Achieving these goals is done by using both listening and written musical exercises, as well as sight singing. Building on this foundation, the course progresses to include more creative tasks, such as the harmonization of a melody by selecting appropriate chords, composing a musical bass line to provide two-voice counterpoint, or the realization of figured-bass notation. Students prepare for the national AP exam in May.

Prerequisite: Permission of instructor -> <u>lbunting@billericak12.com</u> AND Completion of summer work

Performing Arts

The goal of the Billerica High School Theater Program is to give students the opportunity to explore the skills necessary to be an actor, stage manager, director or playwright. Theater requires a willingness to learn and perform for peers as well as the greater school community. Much attention is given to acting techniques and personal presentation. If you wish to enter the field of theater or just want to gain an edge in the professional world later in life by developing presentation skills, then you should certainly explore the Introduction to Theater course as well as our other offerings.

8th Grade Theater Opportunities

Course Offering	Length
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Introduction to the Theater	Semester
Acting I	Semester
Construction Technology/Arts	Quarter

8-12 Courses Offered

**ALL CLASSES BELOW APPLY TOWARDS FINE ARTS GRADUATION REQUIREMENT AND CREDITS
ONLY APPLICABLE DURING GRADE 9-12 ENROLLMENT

Course Offering	Credit	Length	Grade
Introduction to the Theater	X/0.5	Semester	8, 9, 10, 11, 12
Acting I	0.5	Semester	8, 9, 10, 11, 12
Acting II	0.5	Semester	9, 10, 11, 12
Playwriting	0.5	Semester	9, 10, 11, 12
Directing for the Stage	0.5	Semester	9, 10, 11, 12
Advanced Theater Workshop – Honors	1.0	Full Year	10, 11, 12
Musical Theater (co-taught with Choral Department)	0.5	Semester	9, 10, 11, 12
Construction Technology/Arts	X	Quarter	8
Construction Technology/Set Design II	0.5	Semester	9, 10, 11, 12

Course Descriptions

926 Introduction to the Theater Grades 8, 9, 10, 11, 12

0.5 Credit

This course is designed for students who are interested in an overview of the theater and learning the fundamentals of what goes into a theater production. Participants will learn about theater terminology and stage techniques. You will learn about the three tools that an actor has to create a character: that actor's voice, body, and mind. Through analysis, presentation, and performances students will apply the tools of the actor to scenes and group work to showcase their understanding of the class material. Students will also learn about technical theater and what goes into creating the world of the play from a behind-the-scenes perspective. Activities include a physical warm-up, yoga, voice work, physicalizing, memorization, and analysis.

927 Acting I 0.5 Credit Grades 8, 9, 10, 11, 12

This course is designed for students interested in learning acting and personal presentation techniques. The basic techniques and vocabulary of the actor will be studied and evaluated. Activities include a physical warm-up, yoga, voice work, physicalizing, memorization, and analysis. You will be expected to analyze scenes, create characters, and present to the class both individually and in a group with consistency to showcase your understanding and application of the material. You will learn about Greek theater and participate in the creation of an original play.

Prerequisite: Completion of Introduction to the Theater is strongly recommended

929 Acting II 0.5 Credit Grades 9, 10, 11, 12

Acting 2 is a continuation of Acting 1 at a more advanced and in-depth level. You will be expected to analyze scenes, create characters, and present to the class with consistency. You will study the technique of auditioning. Through advanced scene and monologue work, you will analyze scripts and apply tools to the creation of a character. You will research, analyze, and present the work and methodology of an acting practitioner to gain a deeper understanding of different acting methods. You will learn about Shakespearean text and history and apply it to a soliloguy of your choosing.

Prerequisite: At least an 80 in Introduction to the Theater AND Acting I.

931 Playwriting 0.5 Credit Grades 9, 10, 11, 12

Playwriting is a course designed for new and experienced writers who are interested in learning how to improve their writing skills and learn to think and write theatrically. Students will explore character development, how to write dialogue, dramatic action, and plot structure. Students will engage in many different writing activities and keep a journal. Students will also be exposed to different styles of modern playwriting from Eugene O'Neil, Harold Pinter, Beckett, and Maria Irene Fornes to name a few. Students will critique each other's work and choose works to be submitted to competitions like the METG playwriting competition.

916 Directing for the Stage Grades 9, 10, 11, 12

0.5 Credit

In this course, you will be introduced to the fundamentals of stage direction. You will explore the role of the director by engaging in script analysis and studying stage composition and movement. You will develop skills to run auditions, create rehearsal schedules, run production meetings, and develop a director's prompt book. Students will direct scenes from a variety of historical periods. The course will culminate in the direction of a one-act play.

Prerequisite: Introduction to the Theater and Acting I

930 Advanced Theater Workshop – Honors Grades 10, 11, 12

1.0 Credit

Advanced Theater Workshop is for students with a serious interest in acting, directing, design, and stage management. Students will be exposed to advanced acting techniques. Activities include physical warm-ups, yoga, script analysis, vocal training, character analysis, and development. This class chooses and

produces the competition play for the METG drama festival in the spring. An audition/interview is required. Can be taken multiple years for credit.

Prerequisite(s):

For students wishing to enroll as an actor:

10th Grade - Must have completed Intro to Theater and Acting I

11th Grade - Must complete Acting II prior to enrollment.

ALL Students must schedule an audition for recommendation, email <u>khonan@billericak12.com</u>
For non-actors: Completion of Intro to Theater, interview, and teacher recommendation.

919 Musical Theater (co-taught with Choral Department) Grades 9, 10, 11, 12

0.5 Credit

This course focuses on developing and introducing ways to study, create, and observe Musical Theater. In the form of workshops, students will study dance styles, vocal technique, and acting, culminating in an audition which will be used to cast a final performance. Can be taken multiple years for credit.

Prerequisite: Must complete Introduction to Theater OR Concert Choir; this prerequisite can be

bypassed by performing an audition of a 16-bar musical theater song and a short scene reading with the choral and theater teachers.

276 Construction Technology/Arts Grade 8

Quarter

This course is designed to give students hands-on learning opportunities to gain basic skills in operating tools and machines to implement and construct various individual & group-based projects in the Technology shop. The course will focus primarily on developing an appreciation of the woodworking industry and the skills that are gained by working with one's hands. Students will gain experience in craftsmanship through the manipulation of many hand tools such as the hammer, square, and tape measure. They will also learn to safely use many power tools such as the cordless drill, miter saw, jigsaw, router, and sanders. The knowledge gained and techniques acquired throughout the course should provide students with a basis for developing problem-solving skills and for becoming more intelligent consumers in addition to builders. Understanding and adhering to Industrial Safety Standards is a primary requirement for each student. Grades will be based on the safety contract and student conduct as well as class participation, project work, technical drawings, and design. Written assessments will include vocabulary, machine safety, measurement, and industrial concepts learned throughout the course.

277 Construction Technology/Set Design II Grades 9, 10, 11, 12

0.5 Credit

This semester-based course is for students with varying interests; whether you enjoy the trades, theater, or the creative process, Construction Technology/Set Design II is for you. Intended as a continuation of either the Construction Technology and Arts course or other past woodshop experience, this course will provide students with the opportunity to further develop a wide array of skills. Students will continue working with machines like miter saws, band saws, and drill presses, as well as sanders, hand tools, paints, and stains. In addition to planning and creating their projects, students in this class will partner with the Theater Department to assist in the set-building process for fall and spring performances. Students will have the opportunity to both work independently and collaborate in small groups.

Prerequisite: B or better in Construction Technology/Arts OR permission of instructor.

Visual Arts

The goal of the Billerica High School Art Program is to enable students to use art as a medium to respond to and express their creativity. Since early civilization, people have created visual artifacts to communicate ideas, reflect, and expand upon life. Today, visual arts remain an important part of our daily lives. Students taking any of the specialized courses in visual arts will be able to explore materials and processes and develop their imagination and ability to create meaningful works. Students will be able to understand and evaluate art from structural, historical, and cultural perspectives. The art curriculum prepares students for careers as professional artists, artisans, or hobbyists, or for a lifelong appreciation of forms and materials.

8th Grade Visual Art Opportunities

Course Offering	Length
Foundations of Art	Semester

8-12 Courses Offered

**ALL CLASSES BELOW APPLY TOWARDS FINE ARTS GRADUATION REQUIREMENT ONLY APPLICABLE DURING GRADE 9-12 ENROLLMENT

Course Offering	Credit	Length	Grade
Foundations of Art	0.5	Semester	8, 9, 10, 11, 12
3D Studio Art (Sculpture)	0.5	Semester	9, 10, 11, 12
Digital Photography	0.5	Semester	9, 10, 11, 12
Advanced Digital Photography	0.5	Semester	10, 11, 12
Illustration	0.5	Semester	9, 10, 11, 12
Digital Art & Design	0.5	Semester	9, 10, 11, 12
Art as Therapy*	0.5	Semester	9, 10, 11, 12
Color & Design	0.5	Semester	9, 10, 11, 12
Ceramics (Clay) I	1.0	Full Year	10, 11, 12
Ceramics (Clay) II – Honors	1.0	Full Year	10, 11, 12
Fine Arts: Drawing & Painting I	1.0	Full Year	10, 11, 12
Fine Arts: Drawing & Painting II – Honors	1.0	Full Year	11, 12
Fine Arts: Drawing & Painting III – Honors	1.0	Full Year	12

* Fulfills Wellness requirement in grades 11 and 12

Course Descriptions

705 Foundations of Art Grades 8, 9, 10, 11, 12

0.5 Credit

This is a semester-long foundations course designed for 8-12th grade students ONLY who did not take Intro to Art in 8th grade. Students will explore drawing, painting, visual design, and aesthetics throughout the semester. This class will focus on drawing from observation, looking at historical drawings, color theory, and how the 7 elements and principles of design play a role in art making. Students will gain experience using both wet and dry media through independent projects and activities.

709 3D Studio Art (Sculpture)

Grades 9, 10, 11, 12

Students will design and construct sculptural forms using a variety of materials, tools, and techniques. Materials such as clay, plaster, paper, wire, and wood will be explored. Students will apply and expand their knowledge of the Principles of Elements of Design as they relate to the sculptural form. Individual and group experiences will promote problem-solving, creative thinking, and formal expression.

Prerequisite: At least an 84 in 8th Grade Intro to Art or Foundations of Art.

713 Digital Photography Grades 9, 10, 11, 12

0.5 Credit

This semester course is an exploration of the fundamental principles, techniques, and applications of digital photography. Areas covered will include the operation of a digital camera - its parts and functions, the use of the computer as a "digital darkroom," and the production of high-quality photographic prints. The emphasis in assignments will be on creative photography – creating digital prints that not only demonstrate strong design compositional and technical skills but also possess solid narrative content. Students will also learn to navigate the functions of the Adobe Photoshop software program necessary to meet these goals. **It is highly recommended that students supply their own digital camera due to limited supply for the full classroom. Those students using department cameras will be required to sign a waiver/replacement liability form and charged an equipment fee.

Prerequisite: Intro to Art: At least an 84 in Foundations of Art or 8th Grade Intro to Art.

716 Advanced Digital Photography Grades 10, 11, 12

0.5 Credit

This semester course is designed for the student interested in continuing their study of digital photography. This course presents a more complex understanding of the digital camera and Adobe Photoshop. The focus will be on both the creative and technical process with a strong emphasis on the communication of ideas, while exploring more alternative methods of digital photography. The course also covers the history of photography and introduces students to the work of several major photographers. It is highly recommended that students supply their own digital camera due to limited supply for the full classroom. Those students using department cameras will be required to sign a waiver/replacement liability form and charged an equipment fee.

Prerequisite: At least an 84 in 8th Grade Intro to Art or Foundations of Art, AND 713-Digital Photography.

707 Illustration 0.5 Credit Grades 9, 10, 11, 12

This fun but rigorous course is an introduction to illustration as a form of creative expression. Students will use and expand upon technical skills learned in Foundations of Art to create artwork that conveys ideas visually. There is a strong emphasis on drawing in this course. A variety of art materials and styles will be explored. Work created in this course could be used in college admissions portfolios. Students may receive credit for up to two semesters of this course.

Prerequisite: At least an 84 in 8th Grade Intro to Art or Foundations of Art.

710 Digital Art & Design Grades 9, 10, 11, 12

0.5 Credit

This course is designed to expose students to the various aspects of digital art. Students will learn the skills and concepts necessary to utilize Adobe Photoshop in a comprehensive manner. Image editing, creating, typography, printing and scanning are some examples of what will be covered in class. Types of projects that may be completed in class: Metamorphosis, Self Portrait, Surreal Landscape, Typographic Illustration, Postcard, Poster, Logo, Expressive Design, CD Cover to name a few. This course relies on a fundamental knowledge of the Elements and Principles of Art and Design learned in Foundations of Art.

Prerequisite: At least an 84 in 8th Grade Intro to Art or Foundations of Art.

714 Art as Therapy Grades 9, 10, 11, 12

0.5 Credit

Art Therapy uses the nonverbal language of art for stress relief, self-expression, and personal growth. In this course, students will create expressive art and compile techniques to be taken with them for future use. Students will also learn about the field of Art Therapy, its history, and how it is used in society today.

Prerequisite: At least an 84 in 8th Grade Intro to Art or Foundations of Art.

711 Color & Design Grades 9, 10, 11, 12

0.5 Credit

In this project-based course, students will explore color theory and design using 2D art making materials. There is an emphasis on painting, color mixing, and working with mixed media, all while creating strong compositions with visual impact. The work created in this course can be used towards a college admissions art portfolio.

Prerequisite: At least an 84 in 8th Grade Intro to Art or Foundations of Art.

735 Ceramics (Clay) I

1.0 Credit

Grades 10, 11, 12

This course is designed for students who are interested in working three-dimensionally with form and function. Students will use critical thinking skills to solve sculptural design problems. The course focuses primarily on clay. Students will learn pinch, coil & slab hand-building techniques in making a variety of functional and non-functional objects.

Prerequisite: At least an 84 in 8th Grade Intro to Art or Foundations of Art.

736 Ceramics (Clay) II – Honors Grades 10, 11, 12

1.0 Credit

This course is a continuation of Ceramics I. Students will continue to develop their skills in working three dimensionally by creating more challenging art projects. As an advanced course, students will be asked to expand on their existing knowledge of ceramics and to strengthen their technical skills. The course

emphasis will focus on design, craftsmanship, glazing techniques, and exploration of students' own ideas. All students will complete one project on the potter's wheel.

Prerequisite: Intro to Art: 8th or Foundations of Art and Ceramics I.

740 Fine Arts: Drawing & Painting I Grades 10, 11, 12

1.0 Credit

This is a drawing and painting course with emphasis on observational drawing of objects and figures in space. Students will gain experience in both wet and dry media, as well as participate in group critiques. Work created in this course could be used in college admissions portfolios.

Prerequisite: AT least an 85 in 8th Grade Intro to Art or Foundations of Art.

748 Fine Arts: Drawing & Painting II – Honors **Grades 11, 12**

1.0 Credit

This course continues the work of Fine Arts I. In addition to observation, students will be using abstraction, expression and invention in wet, dry and mixed media projects. There will be an emphasis on engaging in conversation about art as a means of improving work. Work created in this course could be used in college admissions portfolios.

Prerequisite: Intro to Art: 8th or Foundations of Art, AND Fine Arts I.

749 Fine Arts: Drawing & Painting III – Honors **Grades 12**

1.0 Credit

This course continues the work of Fine Arts II. Students will interpret, create, and evaluate from the

knowledge that they've acquired in previous art courses. The class will engage in dialogue about art through group critiques. Work created in this course could be used in college admissions portfolios.

Prerequisite: Intro to Art: 8th or Foundations of Art, AND Fine Arts I, & Fine Arts II.

Wellness Education

Skills and knowledge based on the 6 Dimensions of Wellness empower students to build a foundation that supports a lifelong commitment to Wellness through a healthy and active lifestyle. Through Wellness Education, students will increase their health literacy and be supported to develop habits which will help them avoid health risks in the future. All Wellness activities – in the classroom, fitness center, and gym based – include elements of instruction, practice, and application. As students progress through various courses, the term "Wellness" is used as a lens through which to explore and engage in the active process of becoming aware of and making choices that contribute to a successful and healthy lifestyle. At BMHS we value the well-being of all students; thus, the Wellness course requirements reflect the Massachusetts Department of Elementary and Secondary Education (DESE) requirements that all high school students enroll in and pass four years of any combination of PE/Health coursework. Senior students are offered a unique course designed to support lifelong wellness titled "Wellness: Independent Study" which appears as a pass or fail on their transcript and fulfills their yearly and graduation requirement.

Courses Offered

Course Offering	Credit	Length	Grade
Health	X	Semester	8
Physical Education	X	Full Year	8
Wellness I	0.5	Semester	9
Wellness II	0.5	Semester	10
Beginning Ice Skating	0.25	Term	10, 11, 12
Ice Skating	0.25	Term	10, 11, 12
Net and Racquet Sports	0.25	Term	10, 11, 12
Women's Health	0.5	Semester	10, 11, 12
Wellness Independent Study	0.5	Semester	12
Exercise Physiology	0.5	Semester	10, 11, 12
Sports Injury Management	0.5	Semester	10, 11, 12
Team Sports	0.25	Term	10, 11, 12

Leisure Games	0.25	Term	10, 11, 12
Yoga/Cardio Dance	0.25	Term	10, 11, 12
Stress Management	0.25	Term	10, 11, 12
Unified Physical Education	0.5	Semester	11, 12

Course Descriptions

9901 Health

Required for Grade 8

In grade eight Health, students participate in a curriculum that incorporates the topics, issues and concerns of adolescents and builds upon health education concepts developed in previous grades. This one-semester required course offers students classes on: Anti-Bullying/Tolerance, Character Education/Values, Puberty and Adolescent Development (which includes anatomy and physiology, maturation, healthy relationships, friendships and dating personal safety, identity, and communicable diseases), Drug Education, Nicotine/Vaping, and Goal Setting. All subjects are combined with core concepts of health such as peer pressure, refusal skills, decision making, self-advocacy and communication skills.

9902 Physical Education Required for Grade 8

This full year course is an inclusive environment designed to encourage all students to engage in physical activity with the goal of improving overall health. The course will focus on achieving this goal through fitness, sports, cooperative games, nutrition, dance, and rhythm. The curriculum is designed to promote a healthy lifestyle through units of study that build skills and knowledge, resulting in physically literate students. A physically literate student:

- Exhibits responsible personal and social behavior that respects self and others
- Actively participates in applying knowledge and concepts related to movement
- Recognizes the value of physical activity and how it contributes to overall wellness

9962 Wellness I 0.5 Credit Grade 9

Required course for Grade 9 students. The goal of Wellness l is to provide up-to-date, age-appropriate information that will help students continue to develop positive and healthy lifestyles. The course integrates both health content and physical education. The curriculum is focused on adolescent health issues appropriate for this age group. Course topics include emotional health, stress management, substance abuse prevention, and the value of physical fitness. Parental notification is posted on the BPS web page and distributed in September. The letter outlines when the content of the course and timing of sensitive topics are taught. Successful completion is a requirement for graduation from Billerica Memorial High School.

9963 Wellness II 0.5 Credit Grade 10

Required Course for Grade 10 students. The Wellness II course builds upon the skills and knowledge learned in Wellness I. Significant emphasis is placed on lifetime activities and fitness. Exploration and development of individual interests and programs are encouraged, thus encouraging students in the pursuit of lifelong wellness. Each student will learn how to design and implement their own fitness plan based on their personal fitness goals. Course topics include fitness, relationships, human sexuality, avoiding bullying, and substance use and mental health. Skill building will focus on accessing valid

health information, goal setting and decision making. Focusing on the high school's "wellness" expectation, this course provides a variety of learning experiences that contribute to a better understanding of self and the society in which we live. Successful completion is a requirement for graduation from Billerica Memorial High School.

967 Beginning Ice Skating Grades 10, 11, 12

0.25 Credit

Want to learn to ice skate? This fitness-based class is for you. If you have never ice skated or only ventured onto the rink once, this course will offer the opportunity to build basic skills and confidence as an ice skater. The skills of ice skating practiced in this class are skills that students will utilize for the rest of their lives. Students are not required to have any previous ice-skating experience.

968 Ice Skating 0.25 Credit

Grades 11, 12

Ice skating is a fitness-based course in which movement is the focus. Students will engage in improvement of fitness levels through sustained skating over a period of time, alternating with short bursts of intense movement. Skills will be taught and practiced through instruction, game play, and practice. For successful participation in this course, students are required to be able to skate.

993 Net and Racquet Sports Grades 10, 11, 12

0.25 Credit

Emphasis in this course will be on learning the rules and skills necessary to play net and racquet sports such as badminton, volleyball, pickleball, and tennis. Fitness principles and traditional and nontraditional activities will be incorporated throughout the trimester, that support skill building and capacity to be a successful participant.

994 Women's Health Grades 10, 11, 12 0.5 Credit

Explores health issues specific to women. Emphasis will be placed on developing and improving selfcare. Students will examine topics including: female sexual health and reproduction, exercise and eating behaviors, substance abuse, mental health, stress response, societal violence and situational awareness.

This course is designed to support students in their personal exploration of attitudes, knowledge and values related to women's health and to assist them as they analyze their personal health behaviors.

995 Wellness Independent Study Grade 12

0.5 Credit

Wellness Independent Study supports seniors in the lifelong pursuit of proper nutrition, continued engagement in fitness activities, integrating positive leisure activities, and maintaining health and fitness levels achieved during the high school years. Those enrolled in Wellness Independent Study will be required to submit some written assignments and participate in self-directed, rigorous physical activity. The assignments are based on the National Standard for Health and Physical Education, which will allow students to demonstrate that adequate health literacy has been attained during their enrollment in Wellness Independent Study. Upon completion of both components of the course students receive a Pass or Fail.

9964 Team Sports 0.25 Credit Grades 10, 11, 12

Team sports class is designed for students who enjoy high energy activities and can work with others on teams of different sizes. This class will place an emphasis on several different types of sports including basketball, touch football, ultimate Frisbee, soccer, softball, team handball, speed-ball, and volleyball. Students will be presented with the rules and regulations of each sport and practice the skills to be successful at each sport. You will have opportunities to take a leadership role as a captain or a team member to make your team successful.

9966 Leisure Games 0.25 Credit Grades 10, 11, 12

The purpose of this course is to provide instruction in leisure and recreation to promote physical activity lifelong. Some activities include horse shoes, bocce, volleyball, badminton and other lawn games.

9968 Yoga/Cardio Dance Grades 10, 11, 12

0.25 Credit

This course will explore different movement patterns through dance activities and yoga. These activities will improve students' cardiorespiratory endurance, muscular endurance, body composition, flexibility, and coordination. This course will utilize a mix of Latin and hip-hop style dance, yoga flow and boot camp style toning.

9969 Stress Management Grades 10, 11, 12

0.25 Credit

The Stress Management course is designed to help students become aware of stressors in their life and to properly manage them, thus reducing negative effects. The course content will cover methods for identifying stressors and strategies to effectively manage them. Students will engage in practicing techniques such as mindfulness, meditation, yoga, music and time management other holistic methods of stress reduction. The course will focus on time management skills to help students understand how to manage their time both in and out of school.

997 Exercise Physiology Grades 10, 11, 12

0.5 Credit

This course will introduce the concepts of physiological and metabolic functioning of the human body during physical activity. Topics include: structure and function of exercising muscles, muscle metabolism, cardio-respiratory system (measuring blood pressures and EKGs), adaptations to resistance training, and adaptations to aerobic and anaerobic exercise. Completion of this course will help prepare you to pass a variety of personal training certification tests.

998 Sports Injury Management Grades 10, 11, 12

0.5 Credit

This course will introduce the concepts of athletic training and the science behind sports injuries. During this course, you will learn a general understanding of sports injuries and how to prevent and treat these injuries. Topics include; mechanism and characteristics of muscle injuries, tissue response to healing, musculoskeletal conditions of the ankle, lower leg, knee, hip, shoulder, elbow, forearm, wrist, hand and spine. Students who might be interested in going into the health field or learning more about the body would benefit from taking this course.

989 Unified Physical Education Grades 11, 12

0.5 Credit

This course combines students of all abilities to participate in developmentally appropriate activities, including physical fitness and sports. Students will work together to increase competence and confidence in a variety of physical activities. Through ongoing leadership opportunities, members of this course will be empowered to help create a more inclusive and accepting school environment for all students. Activities will vary on a daily basis. Students will be paired 1:1 with an Adapted PE "buddy" and act as their mentor coach. Unified PE students will be expected to assist and play in all PE activities with their buddy. The mentor coach will be responsible for helping their buddy practice skills, learn the rules, and provide added motivation to help them be successful in their Adapted PE class.

Please note that there is an application process for this course. See your school counselor for more information.

World Languages

Since the Common Core of Learning for the Commonwealth of Massachusetts states that all children should be able to communicate in a language other than English before graduation, the Department of World Languages offers sequential language study to students in four modern languages: French, Italian, Spanish, and Mandarin Chinese. The goal of the language program is the functional use of a second language by graduation. Throughout the program, students are assessed in a variety of ways to determine proficiency in understanding, speaking, reading, and writing the language. Since the primary purpose of language is communication, the program uses a whole language approach. Students will communicate in the target language from the first days in the language class. Students able to demonstrate proficiency in one of these, or any other, languages may pursue the Seal of Biliteracy (https://sealofbiliteracy.org/) described earlier in the Program of Studies.

Courses Offered

Course No.	Course Offering	Credit	Length	Grade
401	French I	1.0	Full Year	8, 9, 10, 11, 12
406	French II	1.0	Full Year	9, 10, 11, 12
412	French III	1.0	Full Year	10, 11, 12
413	French IV	1.0	Full Year	11, 12
416	French IV Pre-AP	1.0	Full Year	11, 12
419	AP French Language and Culture	1.0	Full Year	12
431	Italian I	1.0	Full Year	8, 9, 10, 11, 12
436	Italian II	1.0	Full Year	9, 10, 11, 12
442	Italian III	1.0	Full Year	10, 11, 12
444	Italian IV	1.0	Full Year	11, 12
446	Italian IV Pre-AP	1.0	Full Year	11, 12

448	Italian V	1.0	Full Year	12
447	AP Italian Language and Culture	1.0	Full Year	12
461	Spanish I	1.0	Full Year	8, 9, 10, 11, 12
464	Spanish II	1.0	Full Year	9, 10, 11, 12
470	Spanish III	1.0	Full Year	10, 11, 12
472	Spanish IV	1.0	Full Year	11, 12
473	Spanish IV Pre-AP	1.0	Full Year	11, 12
475	Spanish V	1.0	Full Year	12
476	AP Spanish Language and Culture	1.0	Full Year	12
477	AP Spanish Literature and Culture	1.0	Full Year	12
484	Mandarin Chinese IV	1.0	Full Year	11, 12
485	Mandarin Chinese V	1.0	Full Year	12

Course Descriptions

The descriptions below refer to general proficiency guidelines; for more detailed curriculum information, please see your world language teacher or contact the Humanities Coordinator.

401 French I 431 Italian I

461 Spanish I Grades 8, 9, 10, 11, 12

X/1.0 Credit

The first level of the world language program introduces the language using the four skills sequence: listening, speaking, reading and writing. All skills are equally emphasized through a multi-faceted program. Students' verbal and listening skills are developed by the use of multimedia. Structured writing and reading activities have been created to reinforce these skills. Students are assessed in a variety of ways with a focus on skills assessment. All facets of language are integrated in order to develop effective communication skills in the world language within the context of the first year's curriculum objectives. This course is designed for students who are new to the language or who have had little exposure to the language.

406 French II 436 Italian II

464 Spanish II Grades 9, 10, 11, 12

1.0 Credit

At the end of the second level of the world language program, students should be able to function in the high novice range of the American Council on the Teaching of Foreign Languages (ACTFL) proficiency guidelines in listening, comprehension, speaking, reading and writing. This level of world language study

is a continuation of the achievement of proficiency in a world language. Effective communication skills are emphasized, and students begin to express themselves with increasing proficiency in speaking and writing when dealing with topics of everyday life.

Prerequisites: Passing grade in Level I French, Italian, or Spanish.

412 French III 442 Italian III

470 Spanish III Grades 10, 11, 12

1.0 Credit

At the completion of the third level of the world language program, students function within the Intermediate Low range of the ACTFL proficiency guidelines in listening comprehension, speaking, reading and writing. This level of world language study synthesizes and extends the linguistic concepts introduced in the first two phases of language. Through use of language in context and in authentic settings and extended writing practice, students advance to using language more freely in many different everyday situations. Students continue to read authentic material, such as magazines and newspapers, view videos in authentic and culturally appropriate contexts, and access language through multimedia hardware and software to communicate with the global community in the world language.

Prerequisites: Passing grade in Level II French, Italian, or Spanish (70 or higher recommended).

413 French IV 448 Italian IV

472 Spanish IV **Grades 11, 12**

1.0 Credit

Level IV of a world language provides students with the opportunity to develop proficiency at the Intermediate Mid-range of the ACTFL proficiency guidelines. Students communicate almost exclusively in the target language and develop skills which enable them to

- understand and converse with native speakers dealing with a wide variety of topics
- read unadapted material, such as short stories and newspaper articles
- write extended samples, such as letters and reports
- use technology to access information and communicate with native speakers

Prerequisites: Passing grade in Level III French, Italian, or Spanish (70 or higher recommended).

484 Mandarin Chinese IV Honors **Grades 11, 12**



1.0 Credit

This course is for students who have well developed skills from Mandarin III. Mandarin course IV is designed to consolidate conversational usage and grammatical knowledge through the continual development of the four language skills: listening, speaking, reading and writing. Emphasis will be placed on the expanding of speaking and listening abilities, approximately 400 Chinese characters included. To support a broader cultural understanding and appreciation, students will also continue learning Chinese culture, including Chinese geography, environment and energy, life and health, history and education. In addition to learning the language, we'll also explore culture through various activities throughout the year. Students will be assessed in the following language elements: Speaking, Listening, Reading, Writing, and Culture.

Prerequisite: Passing grade Mandarin Chinese III (70 or higher recommended). See the section "Honors Courses" under Academic Expectations for additional details.

448 Italian V - Honors

475 Spanish V - Honors Grade 12

1.0 Credit

Level V of a world language provides students with the opportunity to develop proficiency toward the

Intermediate High level of the ACTFL proficiency guidelines. Students communicate almost exclusively in the target language and develop skills through extensive use of authentic target language resources and experiences.

Prerequisites: Passing grade in Level IV Spanish or Italian (a grade of 84 or higher is recommended). See the section "Honors Courses" under Academic Expectations for additional details.

485 Mandarin Chinese V Honors Grade 12

1.0 Credit

This course is for students who have well developed skills of Mandarin IV. Mandarin V is a broader application and deeper cultural understanding of Chinese language through the continual development of the four language skills: listening, speaking, reading, and writing. The course focuses on applying Chinese language in real world situations, approximately 400 Chinese characters included. To support a deeper cultural understanding and appreciation, students will also continue learning Chinese culture, including Chinese food culture, history and education, aesthetic, and living. In addition to learning the language, we'll also explore culture through various activities throughout the year. Students will be assessed in the following standards: Speaking, Listening, Reading, Writing, and Culture.

Prerequisite: Passing grade Mandarin Chinese IV (C- or higher recommended). See the section "Honors Courses" under Academic Expectations for additional details.

The Advanced Placement Program in World Languages

416 French IV Honors - Pre-AP

446 Italian IV Honors - Pre-AP

473 Spanish IV Honors - Pre-AP Grades 11, 12

1.0 Credit

Students who intend to take the Advanced Placement examination in French, Spanish, or Italian Language and Culture at the end of their senior year will begin their preparation for this rigorous exam the preceding year in Honors/Pre-AP. This course provides students with an intense curriculum that will challenge them to develop their ability to express themselves in the second language both orally and in writing. It will also train them to interpret both the written and the spoken language. Students will be presented with the necessary grammar and vocabulary for success on the AP examination. Students will be moving towards the Intermediate High level of proficiency according to the ACTFL proficiency guidelines. Additionally, cultural elements relating to language acquisition and study will be an important focus.

Prerequisites: At least a 90 in Level III French, Italian or Spanish and approval of current language teacher. See the sections "Advanced Placement" and "Honors" under Academic Expectations for additional details. Native or Heritage Spanish speakers who wish to take this course without taking these prerequisites should see the curriculum coordinator for permission.

419 AP French Language and Culture 447 AP Italian Language and Culture

476 AP Spanish Language and Culture Grade 12

1.0 Credit

AP Language & Culture courses allow students who have completed Honors/Pre-AP to continue their language study in a course that follows a college-level curriculum. It is also designed for students who have advanced past the fourth year of a second language before their senior year or who are native speakers. Students will be moving toward the Advanced level of the ACTFL proficiency guidelines in listening comprehension, speaking, reading and writing. The AP Language & Culture courses culminate in the taking of the College Board AP Spanish, Italian, or French Language Examination, which all

enrolled students will be required to take at their own expense. The curriculum of the course is designed to promote student success on the AP exam.

Prerequisites: Successful completion of Level IV Honors/Pre-AP) and approval of current language teacher. See the section "Advanced Placement" under Academic Expectations for additional details.

477 AP Spanish Literature & Culture

1.0 Credit

Grade 12

This course allows students to continue their study of Spanish after successfully completing AP Spanish Language. As an independent study, students will work at their own pace, guided by the teacher. AP Spanish Literature follows a rigorous college-level curriculum. Students will read works from the required reading list which includes poems, short stories and excerpts from novels encompassing the medieval period and the 19th and 20th centuries. Students' writing will be focused on the literary analysis of the works they read. Students will be moving toward the Advanced Level of the ACTFL proficiency guidelines in reading and writing. The AP Spanish literature course culminates in the taking of the College Board AP Spanish Literature exam, which all enrolled students will be required to take at their own expense. The curriculum of the course is designed to promote student success on the AP exam. *Prerequisites: Successful completion of AP Spanish Language & Culture and approval of current language teacher. See the section "Advanced Placement" under Academic Expectations for additional details.*

Characteristics of Speaking Proficiency According to the American Council for the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines:

ACTFL PROFICIENCY LEVELS

NOVICE: The individual can express basic personal information and satisfy a limited number of personal needs using formulaic and rote utterances, lists, and phrases.

INTERMEDIATE: The individual can participate in short conversations on predictable topics, ask and answer simple questions, and handle simple transactions using sentence-level communication.

ADVANCED: The individual can participate in interactions on topics of personal and public interest, narrate and describe in present, past, and future time frames, and handle a situation with a complication using paragraph-level communication.

ACTFL PROFICIENCY SUBLEVELS

Low: Baseline performance at the level. Individuals at this sublevel have consistent ability to meet the criteria for the level in all level-relevant communication situations. They may demonstrate some hesitation in doing so, but they are able to sustain communication with regard to all of the criteria. They demonstrate little ability to carry out communication functions that typify the next-higher major level.

Mid: Solid performance at the level. Individuals at this sublevel demonstrate skill in carrying out the functions of the major level in all level-relevant communication situations. They may also exhibit partial ability to carry out communication tasks that typify the next-higher major level.

High: Performance with quality and quantity at the level. Individuals at this sublevel communicate with ease and confidence when performing the functions of the level. They are capable of functioning much of the time at the next higher major level, but they are unable to sustain language at that level without evidence of difficulty.

-American Council of the Teaching of Foreign Languages, 2024

Co-Curricular Offerings

The following co-curricular activities are offered at Billerica Memorial High School. Some of these activities are subject to change depending upon student interest.

- ADL Peer Leader Program
- Billerica Beat
- Billerica Clean-Up Club
- BMHS Pride Alliance
- Chemistry Club
- Club D'Italiano
- Community Service Club
- DECA
- Drama Club
- Dungeons & Dragons Club
- Educators Rising Club
- Environmental Club
- FIRST Robotics
 Competition Team FRC
 4909 Bionics
- Fitness Center
- French Club
- Garden Club
- The History Mission

- Key Club
- The Literary Club
- The Literary Magazine
- Math League
- Mock Trial
- Model UN
- Photography/Art Club
- Poetry Club
- Science and Engineering Fair
- Ski and Snowboard Club
- Spanish Club
- Student Government
- Television Production Club
- Unified Basketball
- The Writing Center
- Yearbook Club
- Yoga Club

Athletic Offerings

FALL	WINTER	SPRING
Cheerleading	Basketball	Baseball
Cross Country	Cheerleading	Lacrosse
Football	Gymnastics	Softball
Golf	Ice Hockey	Tennis
Soccer	Indoor Track	Track & Field
Swimming/Diving	Wrestling	Volleyball
Unified Basketball		

Volleyball