

BILLERICA MEMORIAL HIGH SCHOOL



PROGRAM OF STUDIES 2023-2024

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	Mark Efstratiou
Vice Chair	Annette Famolare
Secretary	Michael Domina
Board Member	John Kleschinsky
Board Member	Cheri Gargalianos

Billerica School Administration

Superintendent	Timothy Piwowar
Assistant Superintendent	Dr. Jill Geiser
Director of Finance and Operations	
Director of Special Services	
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.co
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 Maglizzi	jmaglizzi@billericak12.com
Director of School Counseling	Melinda Cripps	mcripps@billericak12.com
Visual & Performing Arts Coordinator	Christopher Dearbeck	cdearbeck@billericak12.com
Humanities Coordinator	Marian Dyer	mdyer@billericak12.com
STEM and Business Coordinator	Bill Manchester	bmanchester@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.

TABLE OF CONTENTS

Billerica School District Office	2
Billerica Memorial High School	3
Billerica Memorial High School	4
Mission Statement	4
Principal's Welcome	8
School Counseling Department.....	9
How to Use This Program of Studies	9
Online Course Selection	9
Course Change Procedure.....	10
Requirements for Graduation.....	11
Credit.....	12
Promotion Credit Requirements	12
Loss of Credit.....	12
Loss of Credit Appeal Process.....	13
Credit Recovery	14
Course Load.....	14
Transfer Students	14
Sample Course Sequence.....	15
Alternative Credit Opportunities	16
Extended Learning Opportunities (ELO)	16
Online Learning	16
Academic Performance and Recognition.....	17
Grade Point Average (GPA)*	17
Valedictorian and Salutatorian	18
Honor Roll	18
Academic Honor Societies	19
Seal of Biliteracy	20
Advanced Placement (AP) Program.....	21
Honors Courses (H)	21
College/Career Readiness Courses (CCR)	21
Project Lead the Way (PLTW)	22
Academic Supports	23
Academic Success	23
Advisory.....	23
Math Tutoring	23

Billerica Memorial High School Program of Studies

Library Media Center	23
Special Services	24
Consultation and Training	24
Classroom Accommodations	24
Classroom Supports	24
Curriculum Modifications	24
Planning a Course of Study.....	25
College Admission Requirements	25
NCAA Initial Eligibility Standards	26
List of Course Offerings	27
Air Force JROTC	37
Business Education and Information Communication Technology	38
Description of DECA	42
English.....	42
SENIOR LITERATURE SEMINARS	45
ENGLISH ELECTIVES	47
ELL (English Language Learners)	47
Family and Consumer Sciences	48
History & Social Science.....	51
Materials and Applied Technology	55
Mathematics.....	56
Science	60
Computer Science and Engineering.....	66
Specialized Courses.....	69
Compass Program.....	70
RISE Program	72
Pathways	74
8th Grade Specialized Courses	75
8th Grade Special Education Sub-Separate Programming.....	75
Visual and Performing Arts	76
Music	76
Theater Arts	82
Visual Arts	85
Wellness Education	88
World Languages	92
THE ADVANCED PLACEMENT PROGRAM	97
IN WORLD LANGUAGES	97

Billerica Memorial High School Program of Studies

Co-Curricular Offerings.....	99
Athletic Offerings.....	100

Principal's Welcome

Dear Students,

The 2023-2024 Program of Studies was developed with the hope that all students will experience an appropriately challenging course of study. For both new and returning students, we have created a sample course load for each grade as a pathway to graduation that is filled with a variety of electives and required courses.

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 extra-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 in the Class of 2023 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

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	Algebra 1 Geometry Algebra 2	3.0
STEM	1.0 year	Additional Math Course Additional Science Course Computer Science or Engineering Course	1.0
Science	3.0 years	Biology Chemistry Physics	3.0
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	2.0
Digital Literacy	0.5 years		0.5
Financial Literacy	0.5 years	Managing Your Money	0.5
Electives			4.5
MCAS	Competency Determination	English, Mathematics, STE	
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 10th grade and to be considered a junior:	12 credits
At the completion of 11th grade and to be considered a senior:	18 credits
At the completion of 12th 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.
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.

Sample Course Sequence

Grade 8	Freshman Year Grade 9		Sophomore Year Grade 10		Junior Year Grade 11		Senior Year Grade 12	
English	Grade 9 English	1.0	Grade 10 English	1.0	Grade 11 English	1.0	Senior Literature Seminar	1.0
Pre-Algebra/ Algebra I	Algebra I /Geometry	1.0	Geometry/ Algebra II	1.0	Algebra II/Pre-Calculus	1.0	Pre-Calculus/ Calculus	1.0
Grade 8 Science	Biology	1.0	Chemistry	1.0	Physics	1.0	Science Elective	1.0
Civics	US & The World I	1.0	US & The World II	1.0	US & The World III	1.0	History Elective	1.0
World Language I	World Language II	1.0	World Language III	1.0	World Language IV	1.0	AP World Language	1.0
Physical Education <u>and</u> Health	Wellness I	0.5	Wellness II	0.5	Wellness Elective	0.25	Wellness Elective	0.25
Grade 8 Academic Success	Open Elective	0.5	Business Elective	0.5	Open Electives	1.0	Family & Consumer Science	0.5
Open Elective	Arts Elective	0.5	Applied Materials & Technology	1.0	Arts Elective	0.5	Open Electives	1.0
Open Elective	Open Electives	0.5			Open Electives	0.5	Open Electives	0.5
	Total	7.0	Total	7.0	Total	7.25	Total	7.25

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. ELO credits may be available for independent study, private instruction, performing groups, internships, community service not otherwise required by the school, and work study. In addition, four college courses may be listed on the transcript as ELO courses. Additional college courses may be listed on the transcript at the principal's discretion. Other learning experiences, not identified herein, will also be considered on an individual basis. In all instances of alternative credit opportunities, credit may be earned, but the grade is not factored into a student's cumulative GPA. An ELO may not be used to replace a class that BMHS currently offers. Students interested in such opportunities should see the School Counseling Department for ELO guidelines. Please note that the opportunity to take an ELO is open only to students in Grade 11 & Grade 12

All grades are pass/fail, with the exception of college courses, which will receive a letter grade. ELOs are not calculated into a student's GPA and rank. Students may earn either 0.25 Credit, 0.5 Credit or 1.0 Credit, depending upon the nature and scope of the experience. All ELO programs must be pre-authorized in writing by a parent/guardian, faculty sponsor, and the ELO Coordinator; learning experiences already completed will not be retroactively considered as ELO credit.

Online Learning

In some instances, a student may take an online course for high school credit, provided the course meets the state standards and requirements and the course is approved in advance by the coordinator of the respective department and principal. In some instances, a course taken outside of Billerica Memorial High School may be used to meet graduation requirements; however, the grade received will not be calculated into a student's GPA. Any course taken outside of Billerica Memorial High School must be authorized in writing prior to enrollment. Students should see their counselor for the appropriate authorization form. 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
B	84-86	2.67	3.00	3.33
B-	80-83	2.33	2.67	3.00
C+	77-79	2.00	2.33	2.67
C	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 a **90 average or above** in all subjects listed on the report card.

Honors

A student must maintain an **80 average 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 hundredths 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 hundredths 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. Contact the honor society advisor for additional information.

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

To be considered for membership, students must be a sophomore or older, 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 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.

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

To be considered for membership, students must be enrolled in Italian at the time of their application, must have completed at least two full years of the language with an average grade of at least 90%, must have an overall academic average of at least 3.5, and must have never failed any class. Because enrollment in the Italian Honor Society is limited to 30% of all students enrolled in Italian at BMHS, the top 30% of students meeting these academic benchmarks will be invited to apply. Students must obtain a teacher recommendation outside of the World Languages Department and must have completed at least five hours of community service before submitting their 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 <i>with Distinction</i>
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*

Billerica Memorial High School Program of Studies

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 also required of 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.

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."

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,

Billerica Memorial High School Program of Studies

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.

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 both BMHS and UML credits. The courses are intended to provide an authentic college experience and to award credit for foundational courses applicable in many different majors.

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. 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.

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 to Engineering Program 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.

Academic Supports

Academic Success

Any student who does not enroll in eight courses will be assigned to Academic Study. This is an opportunity for all students to work on classroom assignments. Students will also have the opportunity to visit the Learning Center and Media Center, work on special projects, or meet with their teachers or school counselor during this time.

In Grade 8, students may enroll 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.

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 math teacher or school counselor, students may enroll in math tutoring during the school day. The tutoring will take the place of a study hall in the student's schedule and students do not earn credits. Tutors will support students to develop strategies for effective learning, fill learning gaps, complete homework, learn advanced topics, and evaluate 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 at <http://bit.ly/bmhslc>. The library offers multiple print periodicals and approximately 13,500 books. There

Billerica Memorial High School Program of Studies

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.

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, or ICAP (Individual Curriculum Accommodation Plan), accommodations that are necessary 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 courses (SAT I/ACT and SAT II Subject tests)*
- *Application essay*
- *Extracurricular activities, including but not limited to: clubs, sports, activities, employment, volunteer experiences, etc.*

Suggested course of study if you are considering:

4-Year College	
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	4 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
--	-------------------

*Taken in grades 9 - 12

NCAA Initial Eligibility Standards

Students who plan to participate in Division I or Division II college athletics must register with the NCAA Clearinghouse. Once all materials have been submitted, the Clearinghouse issues a preliminary certification report to the college. At the end of your junior year and after you graduate, the Clearinghouse 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 Clearinghouse, 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)

Test Scores

- Division I and Division II have a sliding scale for test scores and grade point average (GPA). These scales can be found at the Clearinghouse website.
- The SAT scores used for NCAA purposes include only the critical reading and math sections. The writing section of the SAT is not used. The ACT score used for NCAA purposes is a sum of the four sections of the ACT: English, mathematics, reading, and science.
- All SAT and ACT scores must be reported directly to the NCAA Clearinghouse from the College Board or ACT. Scores on transcripts will not be used. When registering for these tests, use the code 9999 to ensure a score report is sent to the Clearinghouse.

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 Clearinghouse 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 Clearinghouse website (www.ncaaclearinghouse.org) 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	GRADE					CREDIT	PAGES
163	Airforce JROTC I	CCR		9				1.0	37 – 38
175	Airforce JROTC II	CCR			10	11		1.0	37 – 38
183	Airforce JROTC III	CCR				11	12	1.0	37 – 38
820	Airforce JROTC IV	CCR				11	12	1.0	37 – 38
821	Airforce JROTC Leadership	CCR					12	1.0	37 – 38

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	GRADE					CREDIT	PAGES
516	Exploring the World of Business	CCR	8	9	10	11	12	0.5	38 – 42
515	Social and Digital Media	CCR		9	10	11	12	0.5	38 – 42
523/522	Accounting I	CCR/H			10	11	12	0.5	38 – 42
540	Managing Your Money*	CCR			10	11	12	0.5	38 – 42
553/552	Marketing I	CCR/H			10	11	12	0.5	38 – 42
554	Marketing II	H				11	12	0.5	38 – 42
557	Sports Management	CCR		9	10	11	12	0.5	38 – 42
564/563	Entrepreneurship: Starting & Operating your own Business	CCR/H			10	11	12	0.5	38 – 42
581	Marketing/Management	H					12	1.0	38 – 42
551	Accounting II	H				11	12	0.5	38 – 42
591	AP Macroeconomics	AP			10	11	12	1.0	38 – 42
592	AP Microeconomics	AP			10	11	12	1.0	38 – 42

**Designates course that meets the Financial Literacy graduation requirement*

ENGLISH

Billerica Memorial High School Program of Studies

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
008	Grade 8 English	X	8					X	42 – 47
010/011	Grade 9 English	H/CCR		9				1.0	42 – 47
020/021	Grade 10 English	H/CCR			10			1.0	42 – 47
028/027	Lives and Literature Grade 10	H/CCR			10			2.0	42 – 47
030/031	Grade 11 English	H/CCR				11		1.0	42 – 47
034	AP Language and Composition	AP				11	12	1.0	42 – 47
054	AP Literature and Composition	AP				11	12	1.0	42 – 47
046/047	Archetypal Literature	H/CCR					12	1.0	42 – 47
040/041	The Adolescent in Literature	H/CCR					12	1.0	42 – 47
042/043	Creative and Expository Writing	H/CCR					12	1.0	42 – 47
050/051	Writing/Rhetoric in the Digital Age	H/CCR					12	1.0	42 – 47
059	Public Speaking and the Media	CCR			10	11	12	0.5	42 – 47
055/056	Academic Success	X	8	9				0.5	42 – 47
089	ESL English (Newcomer)	X	8	9	10	11	12	2.0	42 – 47
090	ESL English (Beginner)	X	8	9	10	11	12	1.0	42 – 47
091	ESL English (Intermediate)	X	8	9	10	11	12	1.0	42 – 47
ESL	ESL Support	X	8	9	10	11	12	X	42 – 47

FAMILY AND CONSUMER SCIENCES

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
602	Introduction to Cooking	CCR		9	10	11	12	0.5	48 – 50
603	Food Choices for Good Health	CCR			10	11	12	0.5	48 – 50
616	World of Foods	CCR			10	11	12	0.5	48 – 50
620	Emerging Adulthood	CCR		9	10			0.5	48 – 50
621	Child Growth and Development – Pt 1	CCR			10	11	12	0.5	48 – 50
627	Child Growth and Development – Pt 2	CCR				11	12	0.5	48 – 50
622	Advanced Child Development	CCR					12	1.0	48 – 50
625	Educators Rising Internship	CCR					12	1.0	48 – 50

Billerica Memorial High School Program of Studies

630	Personal & Family Living	CCR			10	11	12	0.5	48 – 50
631	Advanced Personal & Family Living	CCR				11	12	0.5	48 – 50

FCS credits count towards the Wellness Graduation Requirement

HISTORY AND SOCIAL SCIENCE

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
109	Civics	X	8					X	51 – 55
110/111	US & The World I	H/CCR		9				1.0	51 – 55
120/121	US & The World II	H/CCR			10			1.0	51 – 55
028/027	Lives and Literature Grade 10	H//CCR			10			2.0	51 – 55
130/131	US & The World III	H/CCR				11		1.0	51 – 55
139	AP US History	AP				11	12	1.0	51 – 55
061	Film Studies	CCR		9	10	11	12	0.5	51 – 55
154	American Legal System I	CCR				11	12	1.0	51 – 55
170	American Legal System II	H					12	1.0	51 – 55
155	Sociology	CCR				11	12	0.5	51 – 55
159	AP European History	AP					12	1.0	51 – 55
162	Local History and Government	CCR				11	12	0.5	51 – 55
191	AP US Government	AP			10	11	12	1.0	51 – 55
179	Psychology – An Introduction	CCR				11	12	0.5	51 – 55
176	Exploring Mental Illness and Theories of Personality	CCR				11	12	0.5	51 – 55
177	AP Psychology	AP				11	12	1.0	51 – 55
182	Topics in Global Studies	CCR				11	12	1.0	51 – 55

MATERIALS and APPLIED TECHNOLOGY

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
276	Construction Technology/Arts	X	8					Quarter	55 – 56
277	Construction Technology/Set Design II	CCR		9	10	11	12	0.5	55 – 56
294	Video Production	CCR			10	11	12	0.5	55 – 56

MATHEMATICS

Billerica Memorial High School Program of Studies

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
203	Pre-Algebra	X	8					X	56 – 60
200/201	Algebra I	H/CCR	8	9				1.0	56 – 60
210/211	Geometry	H/CCR		9	10			1.0	56 – 60
220/221	Algebra II	H/CCR			10	11		1.0	56 – 60
222	Algebra IIA	CCR				11		1.0	56 – 60
223	Algebra IIB	CCR					12	1.0	56 – 60
232	AP Precalculus	AP				11	12	1.0	56 – 60
230/231	Precalculus	H/CCR				11	12	1.0	56 – 60
234	Trigonometry	CCR					12	0.5	56 – 60
242	Introduction to Calculus	CCR					12	0.5	56 – 60
240	Calculus	H					12	1.0	56 – 60
249	AP Calculus AB	AP				11	12	1.0	56 – 60
250	AP Calculus BC	AP					12	1.0	56 – 60
263	Introduction to Statistics and Probability	CCR					12	0.5	56 – 60
266	AP Statistics	AP				11	12	1.0	56 – 60

SCIENCE

COURSE NO.	COURSE NAME		GRADE					CREDIT	PAGES
300	Grade 8 Science	X	8					X	60 – 65
310/311	Biology	H/CCR		9				1.0	60 – 65
319	AP Biology	AP				11	12	1.0	60 – 65
320/321	Chemistry	H/CCR			10	11	12	1.0	60 – 65
328	AP Environmental Science	AP				11	12	1.0	60 – 65
329	AP Chemistry	AP				11	12	1.0	60 – 65
330/331	Physics	H/CCR				11	12	1.0	60 – 65
333	AP Physics 1	AP				11	12	1.0	60 – 65
334	AP Physics 2	AP				11	12	1.0	60 – 65

Billerica Memorial High School Program of Studies

339	AP Physics C	AP					12	1.0	60 – 65
340	Anatomy & Physiology	H				11	12	1.0	60 – 65
374	Environmental Science	CCR				11	12	0.5	60 – 65
393	Forensics	CCR					12	0.5	60 – 65
394	Meteorology	CCR				11	12	0.5	60 – 65
395	Astronomy	CCR				11	12	0.5	60 – 65
378	Zoology	CCR			10	11	12	0.5	60 – 65
379	Organic Chemistry	H				11	12	1.0	60 – 65
381	PLTW Principles of Biomedical Science	H			10	11	12	1.0	60 – 65
382	PLTW Human Body Systems	H				11	12	1.0	60 – 65

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	8					Semester	65 – 68
384	PLTW Gateway ENG - Design and Modeling / Automation and Robotics	X	8					Semester	65 – 68
298	PLTW Computer Science Essentials *	CCR		9	10	11	12	0.5	65 – 68
271	Computer Design and Animation I*	H		9	10	11	12	0.5	65 – 68
272	Computer Design and Animation II*	H		9	10	11	12	0.5	65 – 68
296	AP PLTW Computer Science Principles*	AP			10	11	12	1.0	65 – 68
270	AP Computer Science A*	AP				11	12	1.0	65 – 68
291	PLTW Engineering Essentials*	H		9	10	11	12	1.0	65 – 68
292	PLTW Introduction to Engineering Design*	H		9	10	11	12	1.0	65 – 68
293	PLTW Principles of Engineering*	H				11	12	1.0	65 – 68

**All classes marked with an asterisk apply towards the Digital Literacy requirement*

SPECIALIZED COURSES

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
860	Academic Support Reading	X	9	10	11	12		0.5	69
861	Academic Support Reading	X	9	10	11	12		1.0	69
858	Academic Support I	X	9	10				1.0	69

Billerica Memorial High School Program of Studies

859	Academic Support I	X		9	10			0.5	69
828	Academic Support II	X				11	12	1.0	69
829	Academic Support II	X				11	12	0.5	69

COMPASS PROGRAM

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
973	Academic Support I	X		9	10	11	12	1.0	70 – 72
803	Functional Kitchen Skills for Everyday Life	X		9	10	11	12	1.0	70 – 72
801	Community Based Training	X		9	10	11	12	1.0	70 – 72
802	Vocational Skills Training	X		9	10	11	12	1.0	70 – 72
804	Math Skills I	X		9	10			1.0	70 – 72
805	Math Skills II	X				11	12	1.0	70 – 72
806	English Language Arts I	X		9	10			1.0	70 – 72
807	English Language Arts II	X				11	12	1.0	70 – 72

RISE and PATHWAYS

COURSE NO.	COURSE NAME	LEVEL	GRADE					LENGTH	PAGES
857	Social Studies	X		9	10	11		Full Year	72 – 75
855	Science	X		9	10			Full Year	72 – 75
853	Money Skills	X		9	10	11	12	Full Year	72 – 75
841	Living on Your Own	X		9	10	11	12	Full Year	72 – 75
831	SPOT	X		9	10	11	12	Full Year	72 – 75
840	Pathways	X						Full Year	72 – 75

8th GRADE SPECIALIZED COURSES

COURSE NO.	COURSE NAME	LEVEL	GRADE					LENGTH	PAGES
808	Math	X	8					Full Year	75
809	English Language Arts	X	8					Full Year	75
810	Social Studies	X	8					Full Year	75
811	Science	X	8					Full Year	75

Billerica Memorial High School Program of Studies

812	Academic Support	X	8					Full Year	75
-----	------------------	---	---	--	--	--	--	-----------	----

8TH GRADE SPECIAL EDUCATION SUB-SEPARATE PROGRAMMING

COURSE NO.	COURSE NAME	LEVEL	GRADE					LENGTH	PAGES
813	Math I	X	8					Full Year	75 – 76
814	English Language Arts I	X	8					Full Year	75 – 76
815	Science I	X	8					Full Year	75 – 76
816	Social Studies	X	8					Full Year	75 – 76

MUSIC

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
919	Musical Theater (co-taught with Theater Department)	CCR		9	10	11		0.5	76 – 82
921	Chorus (Full Year)	CCR	8	9	10	11	12	1.0	76 – 82
924	Chorus (Semester)	CCR	8	9	10	11	12	0.5	76 – 82
925	A Capella Choir	CCR	8	9	10	11	12	0.5	76 – 82
922	Treble Chorus (Women's) - Honors	H		9	10	11	12	0.5	76 – 82
923	Tenor/Bass Chorus (Men's) - Honors	H		9	10	11	12	0.5	76 – 82
941	Chamber Singers - Honors	H		9	10	11	12	1.0	76 – 82
950	8th Grade Band	X	8					Full Year	76 – 82
951	Band	CCR		9	10	11	12	1.0	76 – 82
955	Concert Band	CCR		9	10	11	12	0.5	76 – 82
943	BMHS Jazz Ensemble	CCR		9	10	11	12	0.5	76 – 82
957	8-9 String Orchestra	CCR	8	9				Full Year	76 – 82
956	HS String Orchestra	CCR			10	11	12	1.0	76 – 82
958	Digital Music	CCR	8	9	10	11	12	0.5	76 – 82
935	Beginning Piano (Semester)	CCR	8	9	10	11	12	0.5	76 – 82
936	Intermediate Piano	CCR	8	9	10	11	12	0.5	76 – 82

Billerica Memorial High School Program of Studies

946	Music Composition	CCR	8	9	10	11	12	0.5	76 – 82
917	AP Music Theory	AP			10	11	12	0.5	76 – 82
715	Mud to Music (co-taught with Art Dept.)	CCR		9	10	11	12	0.5	76 – 82

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

THEATER ARTS

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
926	Introduction to the Theater	CCR	8	9	10	11	12	0.5	82 – 84
927	Acting I	CCR	8	9	10	11	12	0.5	82 – 84
931	Playwriting	CCR		9	10	11	12	1.0	82 – 84
916	Directing for the Stage	CCR		9	10	11	12	0.5	82 – 84
929	Acting II	CCR		9	10	11	12	0.5	82 – 84
919	Musical Theater (co-taught with the Choral Department)	CCR		9	10	11		0.5	82 – 84
930	Advanced Theater Workshop- Honors	H			10	11	12	1.0	82 – 84
276	Construction Technology/Arts	X	8					Quarter	82 – 84
277	Construction Technology/Set Design II	CCR		9	10	11	12	0.5	82 – 84

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

VISUAL ARTS

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
705	Intro to Art	CCR	8	9	10	11	12	0.5	84 – 88
709	3D Studio Art (Sculpture)	CCR		9	10	11	12	0.5	84 – 88
713	Digital Photography	CCR		9	10	11	12	0.5	84 – 88
716	Advanced Digital Photography	CCR			10	11	12	0.5	84 – 88
707	Illustration	CCR		9	10	11	12	0.5	84 – 88
710	Digital Art & Design	CCR		9	10	11	12	0.5	84 – 88
711	Color & Design	CCR		9	10	11	12	0.5	84 – 88
715	Mud to Music (co-taught with Music)	CCR		9	10	11	12	0.5	84 – 88
714	Art as Therapy	CCR		9	10	11	12	0.5	84 – 88

Billerica Memorial High School Program of Studies

700	Exploring the World of Art: Then and Now	CCR		9	10	11	12	0.5	84 – 88
735	Ceramics (Clay) I	CCR		9	10	11	12	1.0	84 – 88
736	Ceramics (Clay) II - Honors	H			10	11	12	1.0	84 – 88
740	Fine Arts: Drawing & Painting I	CCR			10	11	12	1.0	84 – 88
748	Fine Arts: Drawing & Painting II Honors	H				11	12	1.0	84 – 88
749	Fine Arts: Drawing & Painting III Honors	H				11	12	1.0	84 – 88

*****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	88 – 92
9902	Physical Education	X	8					Full Year	88 – 92
9962	Wellness I	CCR		9				0.5	88 – 92
9963	Wellness II	CCR			10			0.5	88 – 92
962	Advanced Personal Health	CCR				11	12	0.5	88 – 92
968	Ice Skating	CCR				11	12	0.25	88 – 92
967	Beginner Ice Skating	CCR			10	11	12	0.25	88 – 92
993	Net and Racquet Sports	CCR			10	11	12	0.25	88 – 92
997	Exercise Physiology	CCR			10	11	12	0.5	88 – 92
998	Sports Injury Management	CCR			10	11	12	0.5	88 – 92
995	Wellness Independent Study	CCR					12	0.5	88 – 92
994	Women's Health	CCR			10	11	12	0.5	88 – 92
9964	Team Sports	CCR			10	11	12	0.25	88 – 92
9966	Leisure Games	CCR			10	11	12	0.25	88 – 92
9968	Yoga/Cardio Dance	CCR			10	11	12	0.25	88 – 92
9969	Stress Management	CCR			10	11	12	0.25	88 – 92
989	Unified Physical Education	CCR				11	12	0.5	88 – 92

WORLD LANGUAGE

Billerica Memorial High School Program of Studies

COURSE NO.	COURSE NAME	LEVEL	GRADE					CREDIT	PAGES
401	French I	CCR	8	9	10	11	12	1.0	92 - 99
406	French II	CCR		9	10	11	12	1.0	92 - 99
412	French III	CCR			10	11	12	1.0	92 - 99
413	French IV	CCR				11	12	1.0	92 - 99
416	French IV Pre-AP	H				11	12	1.0	92 - 99
419	AP French Language	AP					12	1.0	92 - 99
431	Italian I	CCR	8	9	10	11	12	1.0	92 - 99
436	Italian II	CCR		9	10	11	12	1.0	92 - 99
442	Italian III	CCR			10	11	12	1.0	92 - 99
444	Italian IV	CCR				11	12	1.0	92 - 99
446	Italian IV Pre-AP	H				11	12	1.0	92 - 99
448	Italian V	H					12	1.0	92 - 99
447	AP Italian Language	AP					12	1.0	92 - 99
457	Spanish For Native Speakers A	CCR	8	9	10	11	12	1.0	92 - 99
458	Spanish For Native Speakers B	CCR		9	10	11	12	1.0	92 - 99
461	Spanish I	CCR	8	9	10	11	12	1.0	92 - 99
464	Spanish II	CCR		9	10	11	12	1.0	92 - 99
470	Spanish III	CCR			10	11	12	1.0	92 - 99
472	Spanish IV	CCR				11	12	1.0	92 - 99
473	Spanish IV Pre-AP	H				11	12	1.0	92 - 99
475	Spanish V	H					12	1.0	92 - 99
476	AP Spanish Language	AP					12	1.0	92 - 99
477	AP Spanish Literature	AP					12	1.0	92 - 99
481	Mandarin Chinese I	CCR	8	9	10	11	12	1.0	92 - 99
482	Mandarin Chinese II	CCR		9	10	11	12	1.0	92 - 99
483	Mandarin Chinese III	CCR			10	11	12	1.0	92 - 99
484	Mandarin Chinese IV	H				11	12	1.0	92 - 99

Billerica Memorial High School Program of Studies

485	Mandarin Chinese V	H					12	1.0	92 - 99
491	Destination: Puerto Rico	H				11	12	1.0	92 - 99

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
Airforce JROTC I	1.0	Full Year	9
Airforce JROTC II	1.0	Full Year	10, 11
Airforce JROTC III	1.0	Full Year	11, 12
Airforce JROTC IV	1.0	Full Year	11, 12
Airforce JROTC Leadership	1.0	Full Year	12

Course Descriptions

163 Airforce JROTC I **1.0 Credit** **Grade 9**

Airforce JROTC I covers 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 Airforce JROTC II **1.0 Credit** **Grades 10, 11**

Airforce 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 Airforce JROTC I or approval of Instructor.

Billerica Memorial High School Program of Studies

183 Airforce JROTC III **1.0 Credit**

Grades 11, 12

Airforce 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 Airforce JROTC II or approval of Instructor.

820 Airforce JROTC IV **1.0 Credit**

Grades 11, 12

Airforce 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 Airforce JROTC III or approval of Instructor.

821 Airforce JROTC Leadership **1.0 Credit**

Grades 12

Airforce 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 Airforce 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

Billerica Memorial High School Program of Studies

Accounting II	0.5	Semester	11, 12
Managing Your Money*	0.5	Semester	10, 11, 12
Marketing I	0.5	Semester	10, 11, 12
Marketing II	0.5	Semester	11, 12
Marketing/Management	1.0	Full Year	12
Sports Management	0.5	Semester	9, 10, 11, 12
Entrepreneurship: Starting and Operating your own Business	0.5	Semester	10, 11, 12
AP Macroeconomics	1.0	Full Year	10, 11, 12
AP Microeconomics	1.0	Full Year	10, 11, 12

* designates courses that meet the *Financial Literacy* graduation requirement

Course Descriptions

516 Exploring the World of Business - CCR

0.5 Credit

Grades 8, 9, 10, 11, 12

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

0.5 Credit

Grades 9, 10, 11, 12

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

0.5 Credit

Grades 10, 11, 12

This program provides an 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.

Billerica Memorial High School Program of Studies

551 Accounting II - Honors **0.5 Credit**

Grades 11, 12

Accounting II is a full year course open to all students who have successfully completed Accounting I. 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, and an introduction to advanced accounting problems.

Prerequisite: *Successful completion of Accounting I with an 85 or higher.*

540 Managing Your Money - CCR **0.5 Credit**

Grades 10, 11, 12

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.*

552/553 Marketing I – Honors/CCR **0.5 Credit**

Grades 10, 11, 12

Knowledge of marketing is indispensable to a person who plans a business career and this course will expose you to many career opportunities in marketing, management, and entrepreneurship. The concepts and terminology presented will provide the students with an understanding of our free enterprise system and the many forces that affect our economy. The fundamentals of marketing will be covered with an emphasis placed on marketing management, consumer behavior, product development, and advertising. Participation in DECA, a national organization for all high school students enrolled in a marketing program, will be available which will provide leadership development, civic consciousness, social intelligence, and vocational understanding.

Prerequisite(s): *None (for Grade 11, 12 students), successful completion of Exploring the World of Business (for Grade 10 students).*

554 Marketing II - Honors **0.5 Credit**

Grades 11, 12

This course is designed for students planning careers and college majors in marketing or business management. This course will provide insight into marketing research, marketing in special industries, as well as marketing and management skills. This course will present advanced concepts of our free enterprise system, help students understand business and economics, and be ready to enter a College of Management program or be workforce ready. This program teaches students how to organize and operate a business enterprise, building interpersonal skills, leadership skills, and organization skills. Participation in DECA, a national organization for all high school students enrolled in a marketing program, will provide leadership development, civic consciousness, social intelligence, and vocational understanding.

Prerequisite(s): *Successful completion of Marketing I with a 90 or higher / or recommendation of a Marketing teacher*

581 Marketing/Management - Honors **1.0 Credit**

Grade 12

Billerica Memorial High School Program of Studies

In this course, you will work independently on approved projects involving library resources, Internet, and informational interviews with businesspeople in the community. You will be eligible to be members of DECA and to participate in the competition and activities.

Prerequisite: Marketing I or Entrepreneurship: Starting and Operating Your Own Business with a 90 or higher and/or recommendation of a marketing teacher.

557 Sports Management - CCR **0.5 Credit**

Grades 9, 10, 11, 12

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.

563/564 Entrepreneurship – Honors/CCR **0.5 Credit**

Grades 10, 11, 12

Entrepreneurship: Starting and Operation your own Business focuses on understanding basic entrepreneurial concepts, the entrepreneurial mindset, and developing entrepreneurial skills through hands-on learning. The course emphasizes the entrepreneurial process and the application of this process to a broad range of business contexts. In this course students will develop a business plan for a new venture. *Participation in DECA is available to students enrolled in this course.*

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: B in CCR History OR B in Exploring the World of Business. Students who want to take this class in their sophomore year must have permission from the instructor.

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

Billerica Memorial High School Program of Studies

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: B in CCR Algebra I or B in Exploring the World of Business. Students who want to take this class in their sophomore year must have permission from the instructor.

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.

English

The English program at Billerica Memorial High School teaches students to appreciate literature and become more able readers and writers, listeners and speakers. The skills learned in English class make students independent thinkers who are able to rationalize decision making confidently in many 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, both for pleasure and enrichment, 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.

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
Lives and Literature	2.0	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	0.5	Semester	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

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.

Billerica Memorial High School Program of Studies

010/011 Grade 9 English – Honors or CCR 1.0 Credit **Required for Grade 9**

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. 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 the MCAS exam. 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. 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.

020/021 Grade 10 English – Honors or CCR 1.0 Credit **Required for Grade 10**

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, culminating in a research project at the end of their Sophomore Year. This course features some American literary classics, selected from *The Crucible*, *The Scarlet Letter*, *The Great Gatsby*, *Death of a Salesman*, *Copper Sun* and 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 – B in Grade 9 Honors English, or A- in Grade 9 CCR English

028/027 Lives and Literature Grade 10 - Honors or CCR 2.0 Credits **Meets Grade 10 English and History Requirement**

Lives and Literature will explore contemporary issues through the lens of history and literature. By combining the subjects of history and English, students will deepen their understanding, reinforce themes, and make connections. Through an approach that combines project-based learning, discussion, and creative writing, students will examine literature and lives from and about the period between 1800 and the end of the First World War. The course will explore themes of freedom, power, and the meaning of democracy. This course will require a high level of interest and curiosity, will engage students in reading, writing, and critical thinking, and will satisfy the sophomore English and History requirements for graduation.

Prerequisite: Completion of English 9 and US & The World I

030/031 Grade 11 English – Honors or CCR 1.0 Credit **Required for Grade 11**

The 11th-grade curriculum emphasizes reading a survey of 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 utilizing literature both as the context for that skills development

Billerica Memorial High School Program of Studies

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. 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 English.

034 AP English Language and Composition 1.0 Credit Grade 11 or 12

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): A in Sophomore or Junior Honors English, OR B 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 1.0 Credit Grade 11 or 12

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): A in Sophomore or Junior Honors English, OR B 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 the 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 also will 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. 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

Billerica Memorial High School Program of Studies

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.

The prerequisites for honors are as follows: B in Honors Survey of Western Literature or A in CCR Survey of Western Literature and the recommendation of the student's junior English teacher.

040/041 The Adolescent in Literature



1.0 Credit

Grade 12 only

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 only

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



1.0 Credit

Grade 12 only

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



1.0 Credit

Grade 12 only

Rhetoric: /'redərik/ n., The art of manipulating thought using words and images. In the 21st Century, the

Billerica Memorial High School Program of Studies

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 0.5 Credit

Grades 10, 11, 12

This course prepares you to deliver persuasive and informative speeches. To develop speech presentation skills, you will practice audience eye contact, voice projection, and articulation. You 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 9th grade English and current English teacher's recommendation or instructor's approval.

055/056 Academic Success 0.5 Credit (9th Grade only)

Grades 8, 9

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. The students will also participate in a direct 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 8, 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.

Billerica Memorial High School Program of Studies

ESL8 ESL Support Grade 8

ESL 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.

Billerica Memorial High School has entered into an articulation agreement with Middlesex Community College for its Child Growth and Development and Advanced Child Development courses. Students who complete the BMHS courses with a grade of “B” or better, and fulfill the requirements determined by the postsecondary schools will be granted conditional credits at Middlesex Community College.

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
Emerging Adulthood	0.5	Semester	9, 10
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
Personal & Family Living	0.5	Semester	10, 11, 12

Billerica Memorial High School Program of Studies

Advanced Personal & Family Living	0.5	Semester	11, 12
-----------------------------------	-----	----------	--------

** Articulation agreement with Middlesex Community College*

CREDITS EARNED IN ALL ABOVE CLASSES APPLY TOWARDS WELLNESS GRADUATION REQUIREMENT

Course Descriptions

602 Introduction to Cooking **0.5 Credit**

Grade 9, 10, 11, 12

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: Grade of 80 or higher 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: Grade of 80 or higher in both Introduction to Cooking and Food Choices for Good Health

620 Emerging Adulthood **0.5 Credit**

Grade 9, 10

This course encourages self-exploration and awareness by examining interpersonal relationships during the life span. Areas of study include understanding self and others, characteristics of young adulthood, communication styles, relationship dynamics, establishing safe and healthy living environments and self-care. This course allows students to demonstrate essential skills necessary to navigate the life stage after adolescence and before adulthood through interactive engagement, hands-on learning, critical thinking and decision making.

621 Child Growth and Development - Part 1 **0.5 Credit**

Billerica Memorial High School Program of Studies

Grades 10, 11, 12

(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

0.5 Credit

Grades 11, 12

(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 an average of 80 or higher

622 Advanced Child Development

1.0 Credit

Grade 12

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 an average of 80 or higher

625 Educators Rising Internship

1.0 Credit

Grade 12

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: Grade of 80 or higher in both Child Development 1 & 2, active member of Ed Rising Club and approval by Instructor.

630 Personal & Family Living

0.5 Credit

Grade 10, 11, 12

This course provides opportunities for students to examine strategies for improving personal and family relationships. Topics include understanding personality and its development, family types and the different stages of family life, the art of effective communication, Self Esteem and its development, love versus infatuation along with relationships and dating.

Suggestion: Students interested in scheduling this course are encouraged to complete Emerging Adulthood first. Students may still elect this course without prior completion of Emerging Adulthood.

631 Advanced Personal & Family Living

0.5 Credit

Grade 11, 12

Continuing on from Personal and Family Living, the advanced section of this course provides students more opportunities to improve strategies for effective living. A review of topics from Personal and Family living will be included. New topics include, personal mental health, wellness and self-care, understanding

Billerica Memorial High School Program of Studies

substance use and abuse, dating violence, family issues and basic child-care skills along with independent living strategies. Due to the mature nature of topics, this course is only offered to Juniors and Seniors.

Prerequisites: Personal & Family Living with an average 80 or higher

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
Lives and Literature	2.0	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	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

Billerica Memorial High School Program of Studies

Topics in Global Studies	1.0	Full Year	11, 12
Film Studies	0.5	Semester	9, 10, 11, 12

Course Descriptions

109 Civics

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

1.0 Credit

Required for Grade 9

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.

120/121 The United States & The World II – Honors/CCR

1.0 Credit

Required for Grade 10

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 – B in US & The World I Honors, or A- in US & The World I CCR.

028/027 Lives and Literature Grade 10 - Honors or CCR

2.0 Credits

Meets Grade 10 English and History Requirement

Lives and Literature I will explore contemporary issues through the lens of history and literature. By combining the subjects of history and English, students will deepen their understanding, reinforce themes, and make connections. Through an approach that combines project-based learning, discussion, and creative writing, students will examine literature and lives from and about the period between 1800 and the end of the First World War. The course will explore themes of freedom, power, and the meaning of democracy. This course will require a high level of interest and curiosity, will engage students in reading, writing, and critical thinking, and will satisfy the sophomore English and History requirements for graduation.

Prerequisite: Completion of English 9 and US & The World I

Billerica Memorial High School Program of Studies

130/131 The United States & The World III - Honors/CCR 1.0 Credit

Required for Grade 11

In the post-WWII era, the history of the United States is largely inseparable from that of the world. Students explore 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 – *B in US & The World II Honors, or A- in US & The World II CCR.*

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: *U.S. History I and teacher recommendation. See the section “Advanced Placement” under Academic Expectations for additional details.*

ELECTIVES

061 Film Studies 0.5 Credit

Grades 9, 10, 11, 12

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 U.S. History I.*

170 American Legal System II – Honors 1.0 Credit

Grade 12

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 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.

Billerica Memorial High School Program of Studies

159 AP European History **1.0 Credit** **Grade 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: U.S. History II 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: Grade of at least B in your current history class and the recommendation of your history teacher.

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 **0.5 Credit** **Grades 11, 12**

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**

Billerica Memorial High School Program of Studies

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

1.0 Credit

Grades 11, 12

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, use the computer lab, 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.*

Materials and Applied Technology

The goal of the Billerica Memorial High School Materials and Applied Technology Program is to offer students opportunities to explore the practical application of modern technology to solving real world problems. 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.

Courses Offered

Course Offering	Credit	Length	Grade
Construction Technology/Arts	X	Quarter	8
Construction Technology/Set Design II	0.5	Semester	9, 10, 11, 12
Video Production	0.5	Semester	10, 11, 12

276 Construction Technology/Arts

Quarter

Grade 8

This course is designed to give students hands-on learning opportunities to gain basic skills 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 working with one's hands. Students will gain experience in

Billerica Memorial High School Program of Studies

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

0.5 Credit

Grades 9, 10, 11, 12

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 own 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.

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 ninth grade math classes will be determined by a combination of factors, including eighth grade math placement, results of an end-of-course assessment, middle school grades, MCAS history, MAP Assessments and teacher recommendation. Options for incoming freshmen include Geometry and Algebra I. 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 both graded and pass/fail 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
-----------------	--------	--------	-------

Billerica Memorial High School Program of Studies

Pre-Algebra	X	Full Year	8
Algebra I – Honors / CCR	1.0	Full Year	8, 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
Trigonometry – CCR	0.5	Semester	12
Introduction to Calculus – CCR	0.5	Semester	12
Calculus – Honors	1.0	Full Year	12
AP Calculus AB	1.0	Full Year	11, 12
AP Calculus BC	1.0	Full Year	12
Introduction to Statistics and Probability	0.5	Semester	12
AP Statistics	1.0	Full Year	11, 12

Course Descriptions

203 Pre-Algebra

Full Year

Grade 8

This class will cover the Massachusetts Frameworks for 8th grade mathematics. We will review the basic operations of arithmetic on whole numbers, fractions, and decimals. These operations will be used in dealing with ratio, proportions, percent, simple geometry, and algebra. Students will be expected to understand basic operations with integers, rational numbers, irrational, and real numbers, the use of variables, properties of numbers and of equality, solving equations and inequalities, problem solving, relations and functions, and polynomials. This course allows students to build a strong mathematical foundation and to prepare for a formal course sequence in algebra I, geometry, and algebra II.

200/201 Algebra I – Honors / CCR



1.0 Credit (9th Grade)

Grade 8, 9

This course allows students to build a strong algebraic foundation and 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, radicals, quadratic equations, polynomials, and factoring.

Prerequisite: Teacher recommendation based on grade 8 or grade 7 performance, and results from MCAS and MAP assessments.

210/211 Geometry – Honors / CCR



1.0 Credit

Billerica Memorial High School Program of Studies

Grades 9, 10

This rigorous and challenging course involves the study of Euclidean geometry. The process of logical thinking will be developed by incorporation postulates, theorems, definitions, and algebraic properties through the use of deductive reasoning. Topics included are the basic elements of geometry, perpendicular and parallel lines, congruence, triangles, quadrilaterals, transformations, similarity, right triangle trigonometry, circles, area, surface area, and volume.

Prerequisite: *Teacher recommendation based on Algebra I performance, and results from MCAS and MAP assessments.*

220/221 Algebra II – Honors / CCR 

1.0 Credit

Grades 10, 11

This rigorous and challenging course will provide a thorough development of the structure of the real number system. Topics covered include inequalities, algebraic proof, linear equations and functions, polynomial factoring, rational expressions, irrational and complex numbers, quadratic equations and functions, variation, polynomial equations, analytic geometry, exponential and logarithmic functions, sequences, and series.

Prerequisite for Honors Algebra II: *C in Honors Geometry, and approval of participating teachers or the math Curriculum Coordinator.*

Prerequisite for CCR Algebra II: *C in Geometry CCR, or approval of the math Curriculum Coordinator.*

222 Algebra IIA – CCR 

1.0 Credit

Grades 11

This course provides a sound development of the structure of the real number system. Topics covered are quadratics and the complex number system, operations and graphing with polynomials, rational equations, and radicals. Additionally, the course will include interpreting data and making inferences, and hypothesis testing. This class must be followed by Algebra IIB

Prerequisite: *Passing Geometry CCR, or approval of the math Curriculum Coordinator.*

223 Algebra IIB – CCR 

1.0 Credit

Grades 12

Topics covered include operations and graphing of logarithmic and exponential functions, angles and their measure, solving right and oblique triangles, and solving trigonometric equations and their graphs. Additionally, the course will include representing and modeling with vector quantities, and performing calculations with matrices.

Prerequisite: *Passing Algebra IIA, or approval of the math Curriculum Coordinator.*

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

1.0 Credit

Grade 11, 12

This rigorous and challenging course includes a thorough treatment of function theory and complete discussion of the theory and applications of differential calculus. Topics covered include trigonometric functions and their graphs, vectors, polar coordinates, inverse functions, statistics, combinatorics, probability, matrices, coordinate geometry, graphing, limits, continuity, differentiation, related rates, and maximum and minimum values of a function.

Prerequisite for AP/Honors Precalculus: *C in Algebra II -Honors or approval of the math Curriculum Coordinator.*

Prerequisite for CCR Precalculus: *C in Algebra II CCR, or approval of the math Curriculum Coordinator.*

234 Trigonometry – CCR 

0.5 Credit

Grade 12

Billerica Memorial High School Program of Studies

There will be a brief review of SAT preparation, and students are encouraged to take the SAT examination during the fall of senior year. The remaining part of the class, students will begin the study of trigonometry, and topics covered will include angles and their trigonometric functions, trigonometry of right and oblique triangles, graphs, identities, and trigonometric equations.

Prerequisite: *Successful completion of Algebra II.*

242 Introduction to Calculus – CCR

0.5 Credit

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, maximum and minimum problems, rectilinear motion, indefinite and definite integrals, summation notation, the mean-value theorem, and simple applications of the integral.

Prerequisite: *Successful completion of Precalculus.*

240 Calculus – Honors



1.0 Credit

Grade 12

This course will include a complete 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, maximum and minimum problems, rectilinear motion, indefinite and definite integrals, summation notation, the mean-value theorem, and simple applications of the integral.

Prerequisite: *C in Precalculus CCR, or approval of the math Curriculum Coordinator.*

249 AP Calculus AB



1.0 Credit

Grade 11, 12

As students in this course have satisfactorily completed differential calculus, 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: *C in Honors Precalculus or A/B in CCR Precalculus or approval of Math Curriculum Coordinator*

250 AP Calculus BC



1.0 Credit

Grade 12

As students in this course have satisfactorily completed differential calculus, 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(s): *A in Honors Precalculus or successful completion of AP Calculus AB or approval of Math Curriculum Coordinator*

263 Introduction to Statistics and Probability

0.5 Credit

Grade 12

This course addresses the 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 student in specific areas of study (i.e., business, engineering, sports, and psychology).

Topics shall include identifying tools for collecting and analyzing data, measures of central tendency, standard deviation, survey methods, and basics of experimental design. Apply the probability of events based on probability rules, combinations and permutations. The course continues with comparing two sets

Billerica Memorial High School Program of Studies

of data and analyzing scatterplots and lines of best fit. This course is geared towards any student interested in statistical analysis and probability but not at the Advanced Placement level.

Prerequisite: *Successful completion of Algebra II*

266 AP Statistics



1.0 Credit

Grades 11, 12

The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students are exposed to four broad conceptual themes: I. Exploring Data: Describing patterns and departures from patterns. II. Sampling and Experimentation: Planning and conducting a study. III. Anticipating Patterns: Exploring random phenomena using probability and simulation. IV. Statistical Inference: Estimating population parameters and testing hypotheses. Additionally, using the vocabulary of statistics this course will teach students how to communicate statistical methods, results and interpretations. Students will learn how to use the graphing calculator TI-84 and read computer output in an effort to enhance the development of statistical understanding. Students enrolling in this course will also be required to participate in the AP testing at their expense in order to receive credit for an AP course on their transcripts.

Prerequisite: *A grade of B in Algebra II CCR or Algebra II honors*

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

Billerica Memorial High School Program of Studies

AP Physics 2	1.0	Full Year	11, 12
AP Physics C	1.0	Full Year	12
Anatomy & Physiology – Honors	1.0	Full Year	11, 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
Zoology	0.5	Semester	10, 11, 12
Organic Chemistry	1.0	Full Year	11, 12
PLTW Principles of Biomedical Science	1.0	Full Year	10, 11, 12
PLTW Human Body Systems	1.0	Full Year	11, 12

Course Descriptions

300 Grade 8 Science

Full Year

Required for Grade 8

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. 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.

Billerica Memorial High School Program of Studies

Prerequisite: B in Honors Biology and Honors Chemistry, or A- in Biology CCR and Chemistry CCR, and B in Algebra II Honors or CCR, and approval from the Advanced Biology teacher or Science Curriculum Coordinator. Sophomores may take this concurrently with Chemistry with the AP Biology instructor's approval.

320/321 Chemistry – Honors / CCR

1.0 Credit

Grade 10

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 week. Each unit is accompanied by hands-on 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 Algebra 2: At least enrolled in Algebra II, completed Algebra 1 with B or better, B in Honors Biology, or A in CCR Biology along with Biology teacher recommendation.

Prerequisite for CCR Chemistry: C in Algebra I CCR.

328 AP Environmental Science

1.0 Credit

Grades 11, 12

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: B in Honors Biology and Honors Chemistry, or A- in Biology CCR, and Chemistry CCR, and B in Algebra II

Honors or CCR, and approval from the Advanced Environmental Science teacher or Science Curriculum Coordinator.

329 AP Chemistry

1.0 Credit

Grades 11, 12

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

Billerica Memorial High School Program of Studies

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: B+ in Honors Chemistry, others with permission of AP Chemistry teacher.

330/331 Physics – Honors / CCR

1.0 Credit

Grades 11, 12

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: C in Honors Algebra II or Algebra II CCR.

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: B in Honors Geometry & Algebra II, B in Honors Chemistry, and permission of AP Teacher or STEM Curriculum Coordinator.

334 AP Physics 2

1.0 Credit

Grades 11, 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: B in Honors Physics, or A- in Physics CCR and permission of AP teacher or Science Curriculum Coordinator.

339 AP Physics C: Mechanics + Electricity & Magnetism

1.0 Credit

Grade 12

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. Part way through term 2 we begin the E&M portion of the course (essentially a calculus-based version of AP Physics II). 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; A- in Honors Physics or A- in AP Physics I; permission of AP Physics C teacher or Science Coordinator.**

340 Anatomy and Physiology – Honors

1.0 Credit

Grades 11, 12

Billerica Memorial High School Program of Studies

This is a fast paced course designed for responsible, independent students considering a career in the health sciences or a science major in college. Topics include: biochemistry, the cell, histology, osteology, and systems of the human body. This lab-intensive class requires independent study of many of the systems of the body, including a semester long dissection of the fetal pig. There are six lab practical exams pertaining to lab assignments. Homework (reading and reviewing of class notes) is expected to be done nightly. Additional time in lab preparing for lab practical exams is mandatory.

Prerequisite: B+ or better in Honors Biology; A- or better in CCR Biology

B+ or better in Honors Chemistry; A- or better in CCR Chemistry

374 Environmental Science

0.5 Credit

Grades 11, 12

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



0.5 Credit

Grade 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



0.5 Credit

Grades 11, 12

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



0.5 Credit

Grades 10, 11, 12

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 math-based, 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; already met MCAS science requirement.

Billerica Memorial High School Program of Studies

378 Zoology Grades 10, 11, 12

0.5 Credit

This course is designed for those students who wish for a deeper understanding of the animal world. Using a hands-on approach, students will learn about and explore the unique behaviors and anatomy of different groups of animals including fish, amphibians, lizards, snakes, birds, and mammals. The second half of the class will focus on the unique animals found in the different biomes around the world and how they have managed to adapt to and survive in extreme conditions. From the exotic to the domestic we will learn together through handling live animals, virtual and physical dissections, and various classroom activities. Students will prepare a public educational presentation showcasing one of our live animals as well as a presentation on an exotic organism.

Prerequisite: *Successful completion of Biology and met MCAS science requirement*

379 Organic Chemistry Grades 11, 12

1.0 Credit

This is an introductory course geared to high school students interested in pursuing careers in biochemistry, human or veterinary medicine, pharmacy, nursing, health sciences, or bioengineering, among others. This advanced chemistry course addresses molecular structures, reactions, and uses of carbon compounds. The classes of carbon molecules will be studied with emphasis on stereochemistry, reactivity, and reaction mechanisms. Laboratory investigations and model building will enhance the student's comprehension of the topics.

Evaluation will be based on homework assignments, class participation, laboratory reports, quizzes, tests, and semester examinations.

Prerequisite: *B+ in Honors Chemistry, or A- in Chemistry CCR, and approval from the Organic Chemistry teacher or Science Curriculum Coordinator.*

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: *B- or better in CCR Biology; already met MCAS science requirements and instructor or Curriculum Coordinator approval*

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. Students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis. Exploring science in action, students 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; and take on the roles of biomedical professionals to solve real-world medical cases.

Prerequisite: *Successful completion of PLTW Principles of Biomedical Science or approval from instructor and Curriculum Coordinator.*

Computer Science and Engineering

The goal of the Billerica Memorial High School STEM 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	Semester	8
PLTW Gateway ENG	X	Semester	8
Computer Design and Animation I - Honors	0.5	Semester	9, 10, 11, 12
Computer Design and Animation II - Honors	0.5	Semester	9, 10, 11, 12
PLTW Computer Science Essentials	0.5	Semester	9, 10, 11, 12
AP PLTW Computer Science Principles	1.0	Full Year	10, 11, 12
AP Computer Science A	1.0	Full Year	11, 12
PLTW Engineering Essentials	1.0	Full Year	9, 10, 11, 12
PLTW Introduction to Engineering Design	1.0	Full Year	9, 10, 11, 12
PLTW Principles of Engineering	1.0	Full Year	11, 12

Course Descriptions

271 Computer Design and Animation I – Honors **0.5 Credit**

Grades 9, 10, 11, 12

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 Glowscript, a 3D graphics package.

Prerequisite: C in Algebra I.

Billerica Memorial High School Program of Studies

272 Computer Design and Animation II - Honors **0.5 Credit**

Grades 9, 10, 11, 12

Continuing where Computer Programming I left off, students will continue to expand their knowledge of the Python computer language and computer programming techniques in general. Topics covered include Object Oriented Programming, Inheritance, error handling, and user interface design. Also includes more Glowscript for 3-D graphics and animation.

Prerequisite: B in Computer Programming I and permission of instructor.

270 AP Computer Science A **1.0 Credit**

Grades 11, 12

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. 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: Permission of the instructor or Curriculum Coordinator.

383 PLTW Gateway CS - App Creators and CS for Innovators and Makers **Semester**

Grade 8

Gateway CS = Computer Science

[8th Graders 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 / Automation and Robotics **Semester**

Grade 8

Gateway ENG = Engineering

[8th Graders 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

Automation and Robotics (AR) allows students to trace the history, development, and influence of automation and robotics as they learn about mechanical systems, energy transfer, machine automation, and computer control systems. Students use the VEX Robotics® platform to design, build, and program real-world objects such as traffic lights, toll booths, and robotic arms.

Billerica Memorial High School Program of Studies

291 PLTW Engineering Essentials **1.0 Credit**

Grades 9, 10, 11, 12

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

292 PLTW Introduction to Engineering Design **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: C- or better in 291 PLTW Engineering Essentials or consent of the instructor

293 PLTW Principles of Engineering **1.0 Credit**

Grades 11, 12

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: C- or better in 291 PLTW Engineering Essentials or 292 PLTW Introduction to Engineering Design or consent of the instructor

296 AP PLTW Computer Science Principles **1.0 Credit**

Grades 10, 11, 12

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 app development, visualization of data, cybersecurity, and simulation. 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.

298 PLTW Computer Science Essentials **0.5 Credit**

Grades 9, 10, 11, 12

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.

Billerica Memorial High School Program of Studies

Students will be exposed to a diverse set of computational thinking concepts, fundamentals, and tools, allowing them to gain understanding and build confidence.

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.

Billerica Memorial High School Program of Studies

858/859 Academic Support I

Grades 9, 10

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.

Semester 0.5 Credit Full Year 1.0 Credit

828/829 Academic Support II

Grades 11, 12

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.

Semester 0.5 Credit Full Year 1.0 Credit

Compass Program

The Compass Program is designed for students who have a diagnosis on the Autism Spectrum or a Social/Emotional disability, and have been placed by the TEAM through the IEP process. Students receive specialized instruction in conjunction with the Billerica Memorial High School curriculum, individual and group counseling with a social worker, and a social skills curriculum. Additional services are also available to the student based on recommendations by the TEAM. Students are also encouraged, with feedback from the TEAM and parents, to be integrated into a less restrictive setting within Billerica Memorial High School. It is the goal of the Compass Program, to provide opportunities for students to become more confident and independent individuals, which is vital to their success upon completion of high school.

Courses Offered

Course Offering	Length	Grade
Math Skills I	Full Year	9, 10
Math Skills II	Full Year	11, 12
English Language Arts I	Full Year	9, 10

Billerica Memorial High School Program of Studies

English Language Arts II	Full Year	11, 12
Functional Kitchen Skills for Everyday Life	Full Year	9, 10, 11, 12
Community Based Training	Full Year	9, 10, 11, 12
Vocational Skills Training	Full Year	9, 10, 11, 12
Academic Support	Full Year	9, 10, 11, 12

Course Descriptions

804 Math Skills I **Full Year**

Grades 9, 10

This course is taught by the 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 curriculum. 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 from staff will be based on the individual need of each student.

805 Math Skills II **Full Year**

Grades 11, 12

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.

806 English Language Arts I **Full Year**

Grades 9, 10

This course is taught by the special educator from the Compass Program. 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 curriculum. 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 from staff will be based on the individual need of each student.

807 English Language Arts II **Full Year**

Grades 10, 11

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.

803 Functional Kitchen Skills for Everyday Life **Full Year**

Grades 9, 10, 11, 12

This course is taught by the special educator from the Compass Program. 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

Billerica Memorial High School Program of Studies

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.

801 Community Based Training **Full Year**

Grades 9, 10, 11, 12

Description: 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 **Full Year**

Grades 9, 10, 11, 12

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.

RISE Program

(Reaching for Independence through Structured Environments)

BMHS RISE Program (Grades 9-12)

The RISE Program is for those students who require significant modification of the Massachusetts Curriculum Frameworks and small group instruction to access the high school curriculum. Students receive instruction in English, math, science, and history/social studies at access and/or entry points to the Massachusetts Curriculum Frameworks to meet individual student needs. Pre-vocational/vocational training is also provided through the program. The RISE Program focuses on functional academics, communication, transition planning, vocational skills training, community-based experiences, travel training, social skills development, and instruction in health, nutrition, safety, independent living, and leisure activities. Additionally, the students are integrated with their peers in advisory and elective classes. SPOT (a service block during which students receive related services and work on IEP goals and objectives) is provided within the RISE Program to assist students' access with the material of high school elective classes, as well as meet their service needs that are documented on their IEPs. The RISE Program is a non-diploma track program. Students participate in MCAS through the submission of an Alternate Assessment Portfolio at entry and access points. It is the goal of the RISE Program to provide students with the skills necessary to live as independently as possible as adults.

Admission: By individual education program (IEP) and approval from Special Education Administrator.

Courses Offered

Billerica Memorial High School Program of Studies

Course Offering	Length	Grade
Social Studies	Full Year	9, 10, 11
Science	Full Year	9, 10
Money Skills	Full Year	9, 10, 11, 12
Living on Your Own	Full Year	9, 10, 11, 12
SPOT	Full Year	9, 10, 11, 12
Pathways	Full Year	

Course Descriptions

853 Money Skills **Full Year**

Grades 9, 10, 11, 12

Students are provided with instruction by a RISE 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 RISE Science **Full Year**

Grades 9, 10

Biology, chemistry, and physics concepts are taught within the RISE 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 of access skills that are derived from the Massachusetts Curriculum Frameworks.

857 RISE Social Studies **Full Year**

Grades 9, 10, 11

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

841 RISE Living on Your Own **Full Year**

Grades 9-12

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.

831 SPOT (Grades 9, 10, 11, 12)

Billerica Memorial High School Program of Studies

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

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
- Two job coaches support 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.

Billerica Memorial High School Program of Studies

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 **Full Year** **Grade 8**

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

Billerica Memorial High School Program of Studies

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

Billerica Memorial High School Program of Studies

Course Offering	Length
Chorus – Full Year	Full Year
Chorus – Semester	Semester
A Capella Ensemble	Semester
8th Grade Band	Full Year
8-9 String Orchestra	Full Year
Digital Music	Semester
Beginning Piano	Semester
Intermediate Piano	Semester
Music Composition	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
Chorus – Full Year	1.0	Full Year	8, 9, 10, 11, 12
Chorus – Semester	0.5	Semester	8, 9, 10, 11, 12
A Capella Ensemble	0.5	Semester	8, 9, 10, 11, 12
Treble Chorus (Women's) – Honors	0.5	Semester	9, 10, 11, 12
Tenor/Bass Chorus (Men's) – 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
8th 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
BMHS Jazz Ensemble	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

Billerica Memorial High School Program of Studies

Digital Music	0.5	Semester	8, 9, 10, 11, 12
Beginning Piano	0.5	Semester	8, 9, 10, 11, 12
Intermediate Piano	0.5	Semester	8, 9, 10, 11, 12
Music Composition	0.5	Semester	8, 9, 10, 11, 12
AP Music Theory	1.0	Full Year	10, 11, 12
Mud to Music (co-taught with Art Dept)	0.5	Semester	9, 10, 11, 12

Course Descriptions

921/924 Chorus

Full Year 1.0 Credit | Semester 0.5 Credit

Grades 8, 9, 10, 11, 12

The BMHS Chorus is open to all students in grades 8-12 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 four times for credit.

925 A Capella Ensemble

0.5 Credit

Grades 8, 9, 10, 11, 12

The BMHS a capella ensemble is a contemporary vocal ensemble that explores the pop idiom in its various forms ranging from 1920s jazz to modern popular music. Students in this ensemble will develop stylistically appropriate vocal techniques; hone music literacy skills in reading notation, ear training, and improvising; create historically informed performances; and build a cohesive ensemble for both in-school and extracurricular performances. Though the a capella ensemble meets as a class one semester in the academic year, performance opportunities can extend beyond the classroom and include community performances, festivals, and competitions. Students who enroll in a capella ensemble should plan to enroll in either concert choir or tenor/bass choir or treble choir the semester they are not enrolled in a capella ensemble.

Prerequisite: *8th grade students who wish to enroll in a cappella must have been enrolled in 7th grade choir for the full previous academic year*

922 Treble Chorus (Women's) – Honors

0.5 Credit

Grades 9, 10, 11, 12

The Treble Chorus is open by audition only 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 audition in the spring. 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 wishing to enroll should contact Mr. Mills as soon as possible to schedule an audition. Students may elect to take Treble Chorus up to four times for credit.

Prerequisite: *Open to students grade 9-12*

923 Tenor/Bass Chorus (Men's) - Honors

0.5 Credit

Grades 9, 10, 11, 12

The Tenor/Bass chorus is open by audition only to singers whose voices fit comfortably in the tenor/bass range. Students with previous musical experience, particularly in choral singing and voice lessons are

Billerica Memorial High School Program of Studies

encouraged to audition in the spring. This ensemble will perform concerts with the Chamber Singers, Treble Chorus, and Concert Choir. The Tenor/Bass Chorus meets only one semester, so members are strongly encouraged to additionally participate in either Chamber Singers (pending successful audition) or Concert Choir. Students wishing to enroll should contact Mr. Mills as soon as possible to schedule an audition. Students may elect to take Tenor/Bass Chorus up to four times for credit.

Prerequisite: *Open to students grade 9-12*

941 Chamber Singers - Honors

1.0 Credit

Grades 9, 10, 11, 12

The BMHS Chamber Singers is open by audition only to students in grades 10-12. Students with previous musical experience, particularly choral singing and voice lessons are encouraged to enroll. This is the Concert Choir for 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 three times for credit.

Prerequisite: *Open to students in grades 9-12. Students with prior singing experience and strong vocal skills are encouraged to enroll. Students must successfully complete an in-person audition.*

916 Musical Theater (co-taught with Theater Department)

0.5 Credit

Grades 9, 10, 11

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.

Prerequisite: *Must complete Introduction to Theater OR at least one semester of a choral class; this prerequisite can be bypassed by performing an audition of a 16-bar musical theater song and monologue with the choral and theater teachers.*

950 8th Grade Band

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 the 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

(First Year)

(Second Year)

(Third Year)

(Fourth Year)

Grades 9, 10, 11, 12

The Band course is a two component course with musical study in the marching and concert areas. First component: During the fall season, emphasis is placed upon the development of a highly competitive marching band. The band will participate in a competitive circuit which consists of over 100 bands from the east coast.

Billerica Memorial High School Program of Studies

Second component: During the winter and spring seasons, emphasis is placed upon the concert area. Band literature of the highest caliber is studied and performed. Membership is open to any member of the student body who adequately fulfills playing requirements as outlined by the director, and attends the band camp held approximately the last two weeks in August. You will be expected to advance in technique, theory, musicianship and leadership during each year in band.

You should select the course number which is consistent with the number of years you have participated in the high school band program.

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

955 Concert Band (2nd Semester ONLY)

0.5 Credit

Grade 9, 10, 11, 12

Concert Band is a 2nd semester course with musical study in fundamental musicianship and spring concert literature.

Second component: During the 2nd semester, emphasis is placed upon the concert experience. Band literature of the highest caliber is studied and performed. Membership is open to any member of the student body who adequately fulfills playing requirements as outlined by the director. You will be expected to advance in technique, theory, musicianship and leadership during each year in concert band. If you plan to participate in MARCHING BAND, then you should schedule the full year 5.0 credit Band course.

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

943 BMHS Jazz Ensemble

0.5 Credit

Grade 9, 10, 11, 12

The Billerica Memorial High School Jazz Ensemble is an audition-based honors ensemble that performs a variety of styles in the jazz idiom. Students will develop improvisational skills through the performance of blues, jazz standards, and popular music. Students will be assessed regularly in performance and music fundamental skills. The ensemble is expected to perform at all major required performances including, but not limited to, school and community functions, field trips, and festivals, all of which are predominant factors in determining their grade. Students are encouraged to audition for the MMEA Jazz Festivals. Enrollment will only allow for an equally balanced instrumentation (standard jazz/swing band instrumentation). Billerica Memorial High School Jazz Ensemble may be elected four times (years) for credit.

Prerequisite: *Enrollment by audition only. Standard Instrumentation: Saxophones, Trumpets, Trombones, Piano/Keyboard, Guitar, String Bass, Drum Set, Auxiliary Percussion.*

957 8-9 String Orchestra

Grades 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.*

Billerica Memorial High School Program of Studies

956 HS String Orchestra **1.0 Credit**

Grades 10, 11, 12

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.

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.

935 Beginning Piano **0.5 Credit**

Grades 8, 9, 10, 11, 12

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 Intermediate Piano **0.5 Credit**

Grades 8, 9, 10, 11, 12

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.

946 Music Composition **0.5 Credit**

Grades 8, 9, 10, 11, 12

In this course all students will quickly learn how to compose music using rhythmic and melodic patterns, chord progressions and song forms. Beginning musicians will learn basic rudiments of music for composing, while experienced musicians will incorporate their advanced knowledge into their work. Use of computer notation applications will allow development of these skills. Students will also compose short pieces for school ensembles to perform.

Prerequisite: Basic knowledge of musical elements (note names, beat, rhythm)

917 AP Music Theory **1.0 Credit**

Grades 10, 11, 12

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

Billerica Memorial High School Program of Studies

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 notion. Students prepare for the national AP exam in May.

Prerequisite: *Completion of summer work*

715 Mud to Music (Co-taught with Art Dept.) **0.5 Credit**

Grades 9, 10, 11, 12

Students will create and play their own ceramic musical instruments. This course will give students the opportunity to explore the cultural connections of ancient ceramic instruments, by creating, playing, and listening to the music of their time. Percussion, wind, string, and even unique hybrid instruments can be created in clay.

Prerequisite: *2D Studio Art (Drawing & Painting) completion with B- (80) average.*

Theater 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
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 ONLY
APPLICABLE DURING GRADE 9-12 ENROLLMENT***

Course Offering	Credit	Length	Grade
Introduction to the Theater	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	1.0	Full Year	9, 10, 11, 12
Directing for the Stage	0.5	Semester	10, 11, 12

Billerica Memorial High School Program of Studies

Advanced Theater Workshop – Honors	1.0	Full Year	10, 11, 12
Musical Theater (co-taught with Choral Department)	0.5	Semester	9, 10, 11
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 **0.5 Credit**

Grades 8, 9, 10, 11, 12

This course is designed for students who are interested in an overview of the theater. Participants will bring plays to life as you read them aloud and practice stage techniques. You will learn about design and technical elements of theater, such as lighting, makeup and costuming. Directing and theater management will be covered. You also will analyze and evaluate class performances and share information about artists and cultural institutions. Various styles and genres of plays will be studied in relation to the cultural norms and historical events which they represent.

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 group will participate in activities which enhance stage movement, speech and body control. The basic techniques and vocabulary of the actor will be studied and evaluated. Characterization, improvisation, role playing, mime and voice training will be included. Preparation for auditions and professional acting work will be explored. Audio-visual media as well as reading will be included in the course.

Prerequisite: Completion of Introduction to the Theater

929 Acting II **0.5 Credit**

Grades 9, 10, 11, 12

In this course, you will study the full development of a character and present scenes of plays from many major theatrical periods. You will be expected to analyze scenes, create characters and present scenes to the class. Assignments will include reports on plays read outside of class, the development of acting scores for scene analysis, and presentations, and critiques of your own work and the work of others. The final project will be the presentation of a monologue and scene analysis.

Prerequisite: Completion of Acting I with a B- (80) or better

931 Playwriting **1.0 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 both the METG playwriting competition and the T.O.P.S. new writer’s competition.

916 Directing for the Stage **0.5 Credit**

Billerica Memorial High School Program of Studies

Grades 9, 10, 11, 12

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

1.0 Credit

Grades 10, 11, 12

Advanced Theater Workshop is a college level theater arts course and is designed for students with a serious interest in acting, directing, design, stage management and playwriting. Students will be exposed to advanced acting techniques such as Viewpoints and The Method. Activities include physical warm-ups, yoga, dance, script analysis, playwriting, vocal training, character analysis and development. This class also chooses the competition play for the METG drama festival in the spring.

Prerequisite(s): Audition Required/Interview for Non-Actors. Teacher recommendation required.

916 Musical Theater (co-taught with Choral Department)

0.5 Credit

Grades 9, 10, 11

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.

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 monologue with the choral and theater teachers.

276 Construction Technology/Arts

Grade 8

This course is designed to give students hands-on learning opportunities to gain basic skills 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 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

0.5 Credit

Grades 9, 10, 11, 12

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 own 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
Intro to 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
Intro to 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
Mud to Music (co-taught with Music)	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
Exploring the World of Art: Then & Now	0.5	Semester	9, 10, 11, 12
Ceramics (Clay) I	1.0	Full Year	9, 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

Billerica Memorial High School Program of Studies

Fine Arts: Drawing & Painting II – Honors	1.0	Full Year	11, 12
Fine Arts: Drawing & Painting III – Honors	1.0	Full Year	11, 12

Course Descriptions

705 Intro to Art **0.5 Credit**

Grades 8, 9, 10, 11, 12

This course covers the basic art principles and concepts in two-dimensional design. In this course, basic problems in drawing, painting, visual perception and aesthetics are explored with an emphasis on observational drawing and painting. Students will gain experience in both wet & dry media. Projects will focus on using line, value and color to represent volume, space and light on a two dimensional surface. Students may receive credit for up to two semesters of this course.

709 3D Studio Art (Sculpture) **0.5 Credit**

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: Intro to Art completion with B (85) average.

713 Digital Photography **0.5 Credit**

Grades 9, 10, 11, 12

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 completion with B (85) average.

716 Advanced Digital Photography **0.5 Credit**

Grades 10, 11, 12

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: Digital Photography completion with B (85) average.

Billerica Memorial High School Program of Studies

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: Intro to Art completion with B (85) average.

710 Digital Art & Design **0.5 Credit**

Grades 9, 10, 11, 12

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: Intro to Art completion with B (85) average.

715 Mud to Music (Co-taught with Music) **0.5 Credit**

Grades 9, 10, 11, 12

Students will create and play their own ceramic musical instruments. This course will give students the opportunity to explore the cultural connections of ancient ceramic instruments; by creating, playing and listening to the music of their time. Percussion, wind, string, and even unique hybrid instruments can be created in clay.

Prerequisite: Intro to Art completion with B (85) average.

714 Art as Therapy **0.5 Credit**

Grades 9, 10, 11, 12

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: Intro to Art completion with B (85) average.

711 Color & Design **0.5 Credit**

Grades 9, 10, 11, 12

In this project based course, students will learn about color theory and the impact it has on design. Through guided exercises, this course builds an understanding of visual thinking and problem solving. Emphasis will be on creating strong compositions with visual impact. 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: Intro to Art completion with B (85) average.

700 Exploring the World of Art: Then and Now **0.5 Credit**

Grades 9, 10, 11, 12

This project based course focuses on an exploration of art through history from 1950 on. Students will learn about art movements, artists, and the aspects of their lives that influenced their work. Emphasis will be on looking at art through analysis and criticism. Through art projects, students will experience the techniques and styles of various artists throughout history. The role of the artist in society will be discussed.

Prerequisite: Intro to Art completion with B (85) average.

735 Ceramics (Clay) I **1.0 Credit**

Billerica Memorial High School Program of Studies

Grades 9, 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: Intro to Art completion with B (85) average.

736 Ceramics (Clay) II – Honors

1.0 Credit

Grades 10, 11, 12

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 and Ceramics I.

740 Fine Arts: Drawing & Painting I

1.0 Credit

Grades 10, 11, 12

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: Intro to Art with B (85) average.

748 Fine Arts: Drawing & Painting II – Honors

1.0 Credit

Grades 11, 12

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, Fine Arts I.

749 Fine Arts: Drawing & Painting III – Honors

1.0 Credit

Grades 11, 12

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, 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

Billerica Memorial High School Program of Studies

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	Year	8
Wellness I	0.5	Semester	9
Wellness II	0.5	Semester	10
Advanced Personal Health	0.5	Semester	11, 12
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

Billerica Memorial High School Program of Studies

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 I 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.

962 Advanced Personal Health

0.5 Credit

Grades 11, 12

Students will be challenged to delve deeply into current health topics relevant to issues students may face in the real world. What products are best for my skin? How do I communicate effectively with others? What is the impact of the media on food choices? Topics include media literacy, consumer health, dating violence, nutrition, effective communication, human sexuality, stress management, and the value of service-learning

Billerica Memorial High School Program of Studies

967 Beginning Ice Skating 0.25 Credit

Grades 10, 11, 12

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 10, 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 0.25 Credit

Grades 10, 11, 12

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 0.5 Credit

Grades 10, 11, 12

Explores health issues specific to women. Emphasis will be placed on developing and improving self-care. 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 0.5 Credit

Grade 12

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

Billerica Memorial High School Program of Studies

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

9968 Yoga/Cardio Dance 0.25 Credit

Grades 10, 11, 12

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 0.25 Credit

Grades 10, 11, 12

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 0.5 Credit

Grades 10, 11, 12

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 0.5 Credit

Grades 10, 11, 12

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 0.5 Credit

Grades 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.

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

World Languages

Billerica Memorial High School Program of Studies

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 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
418	French IV	1.0	Full Year	11, 12
416	French IV Pre-AP	1.0	Full Year	11, 12
419	AP French Language	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
448	Italian V	1.0	Full Year	12
446	Italian IV Pre-AP	1.0	Full Year	11, 12
447	AP Italian Language	1.0	Full Year	12
457	Spanish For Native Speakers A	1.0	Full Year	8, 9, 10, 11, 12
458	Spanish For Native Speakers B	1.0	Full Year	9, 10, 11, 12
461	Spanish I	1.0	Full Year	8, 9, 10, 11, 12

Billerica Memorial High School Program of Studies

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
475	Spanish V	1.0	Full Year	12
473	Spanish IV Pre-AP	1.0	Full Year	11, 12
476	AP Spanish Language	1.0	Full Year	12
477	AP Spanish Literature	1.0	Full Year	12
481	Mandarin Chinese I	1.0	Full Year	8, 9, 10, 11, 12
482	Mandarin Chinese II	1.0	Full Year	9, 10, 11, 12
483	Mandarin Chinese III	1.0	Full Year	10, 11, 12
484	Mandarin Chinese IV	1.0	Full Year	11, 12
485	Mandarin Chinese V	1.0	Full Year	12
491	Destination: Puerto Rico	1.0	Full Year	11,12

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.

Please note: Although students earn BMHS credit for World Language courses taken and passed during 8th grade, it is important that students investigate and consider post-graduation plans in choosing their language courses in grades 9 - 12. For college admissions most colleges expect students to have taken at least two years of world language in grades 9 - 12.

World Languages I (French, Italian, Spanish) - Introduction

1.0 Credit

Grades 8, 9, 10, 11, 12

The first year 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 both in the classroom and in the language laboratory. Structured writing and reading activities have been created to reinforce these skills. Students are assessed in a variety of ways with a focus on performance 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.

World Languages I (Mandarin Chinese) - Introduction

1.0 Credit

Grades 8, 9, 10, 11, 12

This course is for students who are new to the language or who have had little exposure to the language. This introductory course will build student skills in speaking, listening, reading, and writing Mandarin Chinese. Within a fundamental vocabulary and language structure, students will use the language in all

Billerica Memorial High School Program of Studies

communication modes and in real Chinese situations. Students will learn and practice formal and informal speech patterns, approximately 400 Chinese characters, subtleties of tone and context, and pinyin and basic grammar. Students will engage in authentic conversation around greetings and names, family and friends, numbers, pets and the zodiac, school and classroom, face and body, countries and nationalities, dates and seasons, and food. To support a broader cultural understanding and appreciation, students will also gain a general introduction to Chinese culture, including community, home and family life, work and leisure, food, and festivals.

457 Spanish For Native Speakers A

1.0 credit

Grades 8, 9, 10, 11, 12

This course is for Spanish-speaking students demonstrating interest and motivation to pursue the formal study of Spanish. Students develop all modes of communication (interpretive, interpersonal, and presentational). Student learning centers on audio, visual, and written sources intended for native speakers. Students move beyond talking about themselves and their immediate community to talking about ideas and problems that affect society and the Spanish-speaking world and its cultures. Students in this course will develop their Spanish literacy. A communicative approach to language learning is used to improve students' listening, speaking, reading, writing, and study skills. Students explore the diverse cultures and peoples of the Spanish-speaking world. Students complete several projects pertaining to Spain and Latin America. In class, Spanish is the primary language spoken by the teacher and students. Upon successful completion of this course, students are prepared to enter Spanish III or IV and perform at a high level. This course does satisfy one year of the graduation requirement in World Languages.

Prerequisite: Native Spanish speaker and permission of the Humanities Coordinator

458 Spanish For Native Speakers B

1.0 Credit

Grades 9, 10, 11, 12

This course is for students demonstrating interest and motivation to pursue more in-depth Spanish studies, emphasizing an interactive and communicative approach. Designed for native Spanish speakers, the course is conducted entirely in Spanish. It strengthens students' language skills by communicating in all modes, including reading Spanish texts, interpreting works of art, and presenting ideas to an audience. Students interact with materials from Spanish television, movies, literary works, news articles, and song, supporting their command of grammar and stimulating critical thinking skills in Spanish. Upon successful completion of this course, students are prepared to enter AP Spanish Language and Composition.

Prerequisite: Native Spanish speaker and permission of the Humanities Coordinator

World Languages II (French, Italian, Spanish)



1.0 Credit

Grades 9, 10, 11, 12

At the end of the second year of the world language program, students should be able to function in the low- to mid-intermediate 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: school, home, friends and family, basic interests.

Prerequisites: Passing Grade in Introductory French, Spanish, or Italian.

World Languages II (Mandarin Chinese)



1.0 Credit

Grades 9, 10, 11, 12

This course is for students who have basic skills of Mandarin I. This course will continue to build student skills in speaking, listening, reading, and writing Mandarin Chinese. Within a fundamental vocabulary and language structure, students will use the language in all communication modes and in real Chinese situations. Students will learn and practice formal and informal speech patterns, Chinese characters and

Billerica Memorial High School Program of Studies

grammar, sentence structures, effective conversation, and approximately 400 Chinese characters. To support a broader cultural understanding and appreciation, students will also continue with a general introduction to Chinese culture, including dates and birthdays, time and daily routines, location and home, clothing and shopping, dishes and restaurant, and festivals.

Prerequisite: *Passing grade in Introductory Mandarin Chinese.*

World Languages III (French, Italian, Spanish)

1.0 Credit

Grades 10, 11, 12

At the completion of the third year of the world language program, students function within the Intermediate Mid-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 begin 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: *C- in year II and recommendation of your present language teacher.*

World Languages III (Mandarin Chinese)

1.0 Credit

Grades 10, 11, 12

This course is for students who have mastered the basic skills of Mandarin II. Students will develop communication in the four language skills: listening, speaking, reading, and writing. Emphasis will be placed on accurate pronunciation, correct usage of sentence structures, being able to listen, responding to and asking questions, and knowing approximately 400 Chinese characters. To support a broader cultural understanding and appreciation, students will also continue learning Chinese culture, including Starting a New Semester, Dorm Life, Renting an Apartment, Choosing Classes, Shopping, At a Restaurant, Computer and Internet, and Working Part-time. In addition to learning the language, students will explore culture through various activities. Students will be assessed in the following standards: Speaking, Listening, Reading, Writing, and Culture.

Prerequisite: *Successful completion of Mandarin Chinese II*

World Languages IV (French, Italian, Spanish)

1.0 Credit

Grades 11, 12

Year IV of a world language provides students with the opportunity to develop proficiency at the Intermediate High level 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: *C- in year III of the language and recommendation of your present language teacher.*

World Languages IV Honors (Mandarin Chinese)

1.0 Credit

Grades 11, 12

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,

Billerica Memorial High School Program of Studies

Writing, and Culture.

Prerequisite: *Successful completion of Mandarin Chinese III with at least a C recommended.*

World Languages V (Italian, Spanish) – Honors **1.0 Credit**

Grade 12

Year V of a world language provides students with the opportunity to develop proficiency toward the Advanced 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: *B in year IV of the language and recommendation of your present language teacher.*

World Languages V Honors (Mandarin Chinese) **1.0 Credit**

Grade 12

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: *Successful completion of Mandarin Chinese IV with at least a C recommended.*

491 Destination: Puerto Rico - Honors **1.0 credit**

Grades 11, 12

This course is a yearlong elective course that focuses on the global forces that connect our world. Students spend the year conducting in-depth research on a variety of topics related to the target destination (Puerto Rico for the '23-'24 school year). In April, students will continue their investigations first-hand by traveling to the target destination as a class to engage with people and complete service activities that benefit the local community. Upon their return, students compile their findings and experiences to share with the greater Billerica community. The opportunity to conduct in-depth research, travel abroad and present their work gives students a global lens on the challenges that face our world. Honors weighting reflects the need for student independence and initiative throughout the year, but the course is open to all juniors and seniors.

Prerequisite: *Completion of Year III of any of the world languages. This course does NOT fulfill graduation requirements in world language*

THE ADVANCED PLACEMENT PROGRAM IN WORLD LANGUAGES

Year IV – French, Italian, and Spanish Honors /Pre-AP **1.0 Credit**

Grades 11, 12

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

Billerica Memorial High School Program of Studies

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: A- for Semester 1, Semester 2 and the end-of-year grade in the previous two years of language study and approval of the instructor. See the section “Advanced Placement” under Academic Expectations for additional details.

AP Spanish, Italian, or French Language & Culture

1.0 Credit

Grade 12

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 Honors/Pre-AP, permission of the AP Spanish, Italian, or French Language instructor. See the section “Advanced Placement” under Academic Expectations for additional details

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 Spanish IV Honors/Pre-AP or AP Spanish Language & Culture, permission of the instructor. 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:

NOVICE (Novice Low, Novice Mid, and Novice High): Speakers can communicate only in common, highly predictable daily situations using memorized and formulaic speech. They may be difficult to understand, even by those accustomed to interacting with non-native speakers.

INTERMEDIATE (Intermediate Low, Intermediate Mid, and Intermediate High): Speakers can ask and answer simple questions and can maintain simple conversations on familiar topics using sentences and strings of sentences. They can usually be understood by those accustomed to non-native speakers, although some repetition may be needed.

ADVANCED (Advanced and Advanced High): Speakers can converse fluently and discuss topics of

Billerica Memorial High School Program of Studies

personal and public interest. They can describe and narrate events in the past, present, and future using paragraph-like discourse. They can be understood without difficulty, even by those unaccustomed to non-native speakers.

SUPERIOR: Speakers can participate effectively in most formal and informal conversations on practical, social, professional, and abstract topics. They can explain in detail, hypothesize, and support their opinions. At this level, errors virtually never interfere with communication.

-American Council of the Teaching of Foreign Languages, 1986

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. Students are encouraged to join multiple activities.

ADL Peer Leader Program	FIRST Robotics Competition Team – FRC 4909 Bionics	Photography/Art Club
Billerica Beat	Fitness Center	Poetry Club
Billerica Clean-Up Club	French Club	Science and Engineering Fair
BMHS Pride Alliance	Garden Club	Ski and Snowboard Club
Chemistry Club	The History Mission	Spanish Club
Club D’Italiano	Key Club	Student Government
Community Service Club	The Literary Club	Television Production Club
DECA	The Literary Magazine	Unified Basketball
Drama Club	Math League	The Writing Center
Dungeons & Dragons Club	Mock Trial	Yearbook Club
Educators Rising Club	Model UN	Yoga Club
Environmental Club		

Athletic Offerings

	FALL	WINTER	SPRING
B O Y S	Cross Country	Basketball	Baseball
	Football	Ice Hockey	Lacrosse
	Golf	Indoor Track	Tennis
	Soccer	Wrestling	Track & Field
	Swimming/Diving		Volleyball
G I R L S	Cheerleading	Basketball	Lacrosse
	Cross Country	Cheerleading	Softball
	Soccer	Gymnastics	Tennis
	Swimming/Diving	Ice Hockey	Track & Field
	Volleyball	Indoor Track	