

Brockton Public Schools

# Brockton High School Course of Study Guide

2019 - 2020



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## BROCKTON HIGH SCHOOL MINIMUM GRADUATION REQUIREMENTS

SUBJECT	BEFORE CLASS 2022	FROM CLASS 2022 ON
<b>ENGLISH</b>	21	24
<b>MATHEMATICS</b>	15	18
<b>SCIENCE</b>	12	15
<b>SOCIAL SCIENCE</b>	15	15
<b>WELLNESS/PE*</b>	6	6
<b>ELECTIVES</b>	26	26
<b>TOTAL NUMBER OF CREDITS REQUIRED</b>	<b>95</b>	<b>104</b>

\* General Law 71.3 states that, “Physical education shall be taught as a required subject in all grades for all students in the public schools for the purpose of promoting the physical well-being of such students.”

**CREDITS:** Credits are granted when obtaining a passing grade at the end of a course.

- A course that meets for one period, every day, for a full year equal six credits.
- A course that meets for one period, every day, for a semester equals 3 credits.
- A course that meets for a period, every other day, for a semester equals 1.5 credits
- Some courses, such as vocational courses can meet for more than one period. Credits are granted following the above parameters.

**Massachusetts Comprehensive Assessment System (MCAS):** As well as meeting all local graduation requirements, the Commonwealth of Massachusetts requires all students to pass English/Language Arts, Math, and Science, Technology/Engineering MCAS exams to receive a high school diploma. Students take these exams for the first time at the end of the sophomore year. Students will have five opportunities during their high school years to pass the ELA and math MCAS and three in Science/Technology and Engineering.

To assist students in preparing for these exams, Brockton High offers many MCAS preparation programs. Tutoring is available in the ACCESS Center (Azure) during the day and after school. Students who have not passed the MCAS may be rescheduled from Directed Academics or elective courses and assigned to MCAS classes. These classes during the day are mandatory; students will receive a grade and earn credit for these classes.

If a student does not receive a score of proficient or advanced on the MCAS exams in Math and English Language Arts (ELA), school districts are required to develop an **Educational Proficiency Plan (EPP)** to ensure a student’s progress toward proficiency.

**Students must:**

- either meet or exceed a scaled score of 240 on both grade 10 MCAS English Language Arts and Mathematics tests, OR
- meet or exceed a scaled score of 220 on both tests AND fulfill the requirements of an Educational Proficiency Plan (EPP)

Requirements of an Educational Proficiency Plan (EPP) will include:

- a review of a student's strengths and areas to improve, based on MCAS results, coursework, grades, and teacher input,
- the courses a student must take and complete in grades 11 and 12,
- assessments that the school will administer to determine and document progress toward proficiency.

For most students, an Educational Proficiency Plan will simply be a continuation of the rigorous course of study they are planning on completing.

**PERFORMANCE APPEALS PROCESS:** MCAS Performance Appeals are available for students who have not passed the tests after three tries, but who have demonstrated through their coursework and grades that they have the knowledge and skills in English and/or mathematics equal to the standards established in the grade 10 MCAS test. MCAS Performance Appeals are also available for students who have not passed the Science, Technology/Engineering MCAS exam after only one attempt.

**To be eligible for an MCAS Performance Appeal,** a student must have:

- ☐ attended school 95% of the time both last school year and the current school year,
- ☐ taken the MCAS test 3 times (one time for Science),
- ☐ participated in MCAS tutoring or other academic help that is available.

If a student has met those criteria, then the student must have demonstrated through their grades and coursework (in the subject area of the appeal) that they have performed at or above the level of other students who have taken the same series of courses AND passed the MCAS.

If the Commissioner of Education grants the appeal, it means that the student meets the state standard in English, mathematics and/or science and qualifies for a diploma if all local graduation requirements have been met.

## MINIMUM PROMOTION REQUIREMENTS\*

**\*Please note starting with the Class of 2022, promotion requirements have changed.**

For a student to be promoted from one grade to the next, the student must earn the following number of credits:

GRADE	Class of 2019, 2020, 2021	2022
<b>10</b>	21	27
<b>11</b>	43	49
<b>12</b>	66	72

## CRITERIA FOR SELECTION OF CLASS VALEDICTORIAN

- ☐ The student must have been a student at Brockton High School for the sophomore, junior, and senior years.
- ☐ The student must be ranked number one based on the calculation of the G.P.A. at the END of term THREE of the senior year.
- ☐ Any grade changes will only be counted for the re-computation of the G.P.A. for valedictorian only if they are submitted to the Dean's office no later than ten (10) school days after report cards have been issued.
- ☐ The student must have been enrolled as a full-time student at Brockton High throughout the senior year.

## CRITERIA FOR SELECTION OF THE SUPERINTENDENT'S AWARD

- ☐ The student must have been a student at Brockton High School for the sophomore and junior years,
- ☐ The student's rank in class is based on the calculation of the cumulative G.P.A. at the end of the junior year as suggested by the Massachusetts Association of School Superintendents' criteria.

## BROCKTON HIGH SCHOOL ACADEMIC LEVELS

Brockton High School sets high standards and expectations for all students at all levels. Every course is designed to provide students with the knowledge and skills needed for post-secondary education, technical training, and employment.

Course level placement for students is determined on an individual basis by examining data including assessments, teacher recommendations, grades, and other relevant information. Students must work with their parents and guidance counselors to plan a course of study over four years that will help them reach their highest potential in achieving their goals after high school.

Successful completion of courses taken at the levels described below, in addition to meeting graduation requirements will enable students to meet the recommended prerequisites for admission to a college or university.

<b>LEVELS</b>	<b>GOAL: The depth to which the content of the course is covered.</b>
<i>Honors (H)</i>	Expert mastery of key concepts with intensive examination of course content.
<i>College Prep Advanced (CPA)</i>	Advanced mastery of key concepts with an extensive examination of course content.
<i>College Prep (CP)</i>	Proficient mastery of key concepts with a comprehensive examination of course content.
<i>Non-leveled (N)</i>	Proficient mastery of key concepts with a comprehensive examination of course content. No quality points are assigned, and these courses are not factored into the GPA.

Courses at Brockton High School develop literacy skills and teach students to think critically and analytically. All courses are based on rigorous and relevant content which follow the Massachusetts Curriculum Frameworks. Courses prepare students to demonstrate successful performance outcomes including proficiency on the Massachusetts Comprehensive Assessment System (MCAS) and standardized entrance exams such as the SAT, SAT subject tests, and ACT.

Colleges, technical schools, and employers seek students who have completed a rigorous academic program. Students must work independently, take responsibility for their learning, engage in the learning process, demonstrate time-management skills, utilize effective study skills, be inquisitive, practice problem-solving strategies, use technology effectively, accept feedback, and persevere with difficult tasks. International Baccalaureate and Advanced Placement have their own standardized criteria and curricula and are distinct from the levels above. The student will have the option of participating in these programs by meeting established criteria. These programs are described on the following pages.

## **LEVEL ASSIGNMENT INFORMATION**

The criteria for placement at an academic level is based on test scores, standardized testing information, previous grades and levels, and teacher recommendations.

If a student is considering moving to a higher academic level, he or she must understand the level of commitment required of a level. If a student wishes to make a move upward during the academic year, he or she must wait until after the first marking term. Decisions will be based on the criteria listed above and space availability.

Students requesting to move down a level must exhibit serious gaps in their ability to perform successfully in any given subject. Level changes will be made only after careful consultation with the counselor, teacher and department head. Generally, students who demonstrate their best effort to try and resolve issues in a class overcome these challenges. Ways to demonstrate effort include: going for extra help, good attendance, and completion of class assignments and homework.

In semester courses, level changes should be completed by the end of the first term; in full-year courses, level changes should be completed by the end of the first semester. Lateral changes (i.e. student remains at the same level but requests a teacher change) are rarely approved; these changes will be made only in extreme circumstances and with the approval of the student's Dean.

## ADVANCED PLACEMENT

AP courses offered at Brockton High School are approved annually by the College Board. The process for approval involves a review of the course syllabus each year along with a review of textbooks, resources and materials that will be used by the classroom teacher.

### Advanced Placement Courses Offered

Biology	Environmental Science	Chinese
Calculus	European History	Environmental Science
Chemistry	Latin	European History
Chinese	Physics	Physics
Computer Science Principles	Spanish	Statistics
English Language and Composition	Statistics	US History
English Literature and Composition	Studio Art	World History
	Calculus	

## INTERNATIONAL BACCALAUREATE DIPLOMA PROGRAMME (IBDP)

The BHS IBDP is a two-year program that students may apply to be a part of during their junior and senior year. Courses consist of both internally and externally graded assessments.

Students may apply to be Certificate candidates or Diploma candidates in the BHS IBDP:

- Certificate candidates are enrolled and registered for exams in one or more BHS IBDP courses.
- Diploma candidates are enrolled and registered a full IB course load as well as the IBDP Core Components

To earn the full IB Diploma, a student must take a total of 3 Higher Level and 3 Standard Level courses from the Groups below (chosen from the school's course offerings), with at least one course from each of groups 1-5. Students must also complete the required Core Components.

Group 1: Language and Literature

Group 2: Language Acquisition

Group 3: Individuals and Societies

Group 4: The Sciences

Group 5: Mathematics

Group 6: The Arts

## Core Components—required to attain the IB Diploma

1. **Theory of Knowledge:** Theory of Knowledge is a two-year course that students complete as part of the Core requirements of the IB Diploma Programme. The course explores knowledge issues and how knowledge is constructed within various areas of knowledge (the arts, ethics, human sciences, natural sciences, history, etc.) through various ways of knowing (memory, emotion, sense perception, reason, etc.).
2. **Creativity, Activity, Service:** a cumulative 150 hours of student-driven goal-setting, reflection, and personal growth through individual and team-based work. The student must complete roughly 50 hours in approved goals of their own design within each of the fields of Creativity, Activity, and Service (these may be designed to fit many of the activities that the student already does). Students must also participate in a CAS group project, created and enacted with a team. This is a required component to earn the IB Diploma and is limited to students enrolled in the IB Diploma track.
3. **Extended Essay:** a two-year research independent research process and product in the student's choice of subject and topic. The final product is a research essay of no more than 4,000 words, with Supervision totaling from three to five hours. This is a required component to earn the IB Diploma and is limited to students enrolled in the IB Diploma track.

## Frequently Asked Questions About AP and IB

Question	Advanced Placement	International Baccalaureate
Which student will be successful in this program?	One who is highly motivated, willing to work hard, able to dedicate time, and has a recommendation from a teacher	One who is highly motivated, willing to work hard, able to dedicate time, and has a recommendation from a teacher
Where does the curriculum come from?	National Curriculum	International Curriculum
How will this course affect my schedule?	Schedule will include one or more courses in area/s of strength and interest. Courses are one-year long.	Either a single course around strength and interest or a student can enroll in the full IB Diploma Program. Courses are two years long.
What are these courses like?	Content driven Retention of large quantities of information Critical thinking is important for success	Process driven Less memory work required Critical thinking is essential
How will I be assessed?	Multiple choice and essay questions on standardized exam	A greater variety of assessment. Internal assessments (presentations and other oral assessments) and External assessments (written papers, labs, exams)
What is my score based on?	External grade from 0-5 by a qualified national examiner	Internal grades by classroom teachers and external grades by qualified examiners worldwide
Will I be required to do research?	Encouraged but not required.	Research is a requirement in most courses.



## **GUIDANCE DEPARTMENT SERVICES**

**Department Head of Guidance: Catherine Leger**

The school offers the following support services:

- Guidance counselors
- Bilingual guidance counselors
- Occupational Education counselor
- Adjustment counselors

### Guidance Counselors~

All secondary students are assigned a guidance counselor who works to prepare them to face decisions that will affect their futures. These decisions may involve personal issues, high school, college, military, or career choices. Counselors' work with students both individually and in small groups, and they often conduct larger classroom sessions or workshops. Some services are provided to all students while other academic, personal and social services are determined by need.

### School Adjustment Counselors ~ (SAC)

School adjustment counselors deal with a student's behavior or social problems. S/he works with students and their families when behavioral or adjustment problems are causing difficulties at home and/or affecting school performance. The SAC uses casework or group work approaches to problem-solving and often facilitates interventions involving outside agencies.

### Access to Counseling Services

Students can see their guidance counselors or a school adjustment counselor during their lunch and study periods, before and after school or with a pass from a teacher, counselor or administrator. Referrals from parents, teachers and administrators are welcome.

Student, parents, and teacher can also access guidance staff through:

- Telephone or email contacts
- Guidance organized parent-teacher conferences
- Teacher and counselor consultations
- Classroom guidance lessons
- Psycho-educational and/or support groups

## Developmental Guidance Calendar Group Counseling Sessions

Classroom Guidance lessons, workshops and groups are aligned with the National School Counseling Standards (ASCA), Massachusetts School Counseling Model (CDE Benchmarks) and the Massachusetts Curriculum Frameworks Common Core Standards.

### FRESHMEN

- September/October: Freshmen Seminar
- November: Early College Planning
- February: MEFA Pathway/College and Career Planning: Interest Inventory/Intro to Career Plan.

### JUNIORS

- October: Preparing for the SAT
- December: Understanding the PSAT scores
- March: College Admissions Seminar (MEFA)
- April: College/ Career Workshop
- April: College Fair

### SOPHOMORES

- January: Sophomore Workshop: Strategies for Success
- May: *MEFA Pathway* /College and Career Planning: Resume & Update of Career Plan

### SENIORS

- September: Senior College/Career Workshop
- November: Financing your Education (MEFA)
- November-January: The Common Application
- November: College Admission Counselor Panel
- November/December: Obtaining a FAFSA ID
- November/December: College Experience Panel
- December: Alumni Panel
- January: Financial Aid Seminar (STONEHILL)
- January: FAFSA DAY (MASSASOIT)
- January to March: FAFSA completion
- February: College On-Site Decision Day
- February: Scholarship Seminar
- April: Understanding my Award Letter (MEFA)

## Special Topics and Targeted Lessons Grades 9-12: October through May

<ul style="list-style-type: none"><li>• Anger Management/Conflict Resolution</li><li>• Assertiveness/Self-Esteem for Girls</li><li>• Newcomers' Program</li><li>• Mini-Career Fair Series</li><li>• S.M.A.R.T. Goals</li><li>• S.T.E.M. Career and College Fair</li><li>• Organizational Skill</li></ul>	<ul style="list-style-type: none"><li>• Success at BHS</li><li>• Motivational Group for Boys</li><li>• Substance Abuse</li><li>• Mini College Fair Series</li><li>• Small Group Course Planning Sessions</li><li>• Freshmen in Transition Group</li><li>• Calculating my GPA</li></ul>
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## GUIDANCE ACTIVITIES BY GRADE LEVEL

<p>Grade 9</p> <ul style="list-style-type: none"> <li>• Early College Planning</li> <li>• Freshmen Orientation</li> <li>• Calculating GPA Lesson</li> <li>• Student Education Plan</li> <li>• Your Plan for The Future Portfolio</li> <li>• Promotion Requirements/MCAS</li> <li>• Homework Policy</li> <li>• Academic Progress</li> <li>• Course Selection</li> <li>• Mini College Fair Series</li> </ul>	<p>Grade 10</p> <ul style="list-style-type: none"> <li>• Sophomore Presentation</li> <li>• Resume &amp; Career Plan</li> <li>• Student Education Plan</li> <li>• Promotion/Graduation Requirements</li> <li>• PSAT Registration</li> <li>• MCAS Requirements</li> <li>• Academic Progress</li> <li>• Course Selection</li> <li>• Mini Career Fair Series</li> </ul>
<p>Grade 11</p> <ul style="list-style-type: none"> <li>• PSAT Workshops</li> <li>• Taking the PSAT</li> <li>• PSAT Scores</li> <li>• Student Education Plan</li> <li>• Your Plan for The Future: College Search, Resume</li> <li>• Educational Proficiency Plans</li> <li>• Promotion/Graduation Requirements</li> <li>• SAT/ACT</li> <li>• College Process Workshop</li> <li>• Records Release Form</li> <li>• Academic Progress</li> <li>• Course Selection</li> <li>• Spring College Fair</li> <li>• Mini Career Fair Series</li> </ul>	<p>Grade 12</p> <ul style="list-style-type: none"> <li>• College Admissions Seminar</li> <li>• Mini College Fair Series</li> <li>• Student Education Plan</li> <li>• Your Plan for The Future: Application List, Paying for College Tools, Senior Survey</li> <li>• Update Educational Proficiency Plans</li> <li>• Review Graduation Requirements/Contracts</li> <li>• Senior Interview/Activity Sheet/Record Release Form</li> <li>• SAT Registration</li> <li>• Financial Aid Information</li> <li>• CSS Profile / FAFSA</li> <li>• Scholarship Information</li> <li>• Academic Progress</li> </ul>

## Your Plan for The Future Student/Parent Info Sheet

[www.yourplanforthefuture.org](http://www.yourplanforthefuture.org)



Your Plan for The Future was developed by the Massachusetts Educational Financing Authority (MEFA), in partnership with the Massachusetts Department of Elementary and Secondary Education (DESE) and the Massachusetts Department of Higher Education (DHE).

Your Plan for The Future is a secure portal that allows you to research college and career information and create post-high school goals based on your interests, values and skills. Information can be shared with your guidance counselor and parents/guardians, so they can help you research and track your academic and career goals.

### Students Can:

- Track your high school classes
- Build a resume by keeping a running list of your sports, activities and awards
- Store information about your employment and volunteer history
- Take interest, values and skills quizzes to help you determine your ideal path
- Discover careers that match your personality and interests
- Create a list of colleges that interest you and will help you reach your career goals
- Learn about college costs and how to make smart paying for college choices
- Search for scholarships based on your goals and interests
- Upload documents to share with counselors or access from anywhere
- Link to free test prep information and resources

### Parents Can:

- Track your child's progress in making post-high school plans
- Search for careers or colleges and suggest them to your child
- Research paying for college options and link to free resources

### How to log into Your Plan for the Future account

Go to [www.yourplanforthefuture.org](http://www.yourplanforthefuture.org)

Username: (the email you originally logged in with)

Password: First Letter of the first Name (capitalized)

First Letter of last name (lower case)

ID Number

EXAMPLE: Name Mike Bates Username: 123456@bpsma.org ID#: Mb123456

## ENGLISH DEPARTMENT

The English program at Brockton High School develops and extends student mastery in the literacy areas of reading, writing, speaking and reasoning. We have built our program based on the Guiding Principles for English Language Arts and Literacy Programs as outlined in the *Massachusetts Curriculum Framework for English Language Arts and Literacy*.

ENGLISH CORE COURSES				
COURSE	TITLE	YEAR	TERM	CREDITS
121	Freshman English - Honors	Freshman	Full Year	6
147	Freshman English – College Prep Advanced	Freshman	Full Year	6
187	Freshman English – College Prep	Freshman	Full Year	6
151/156C	Freshman English – Co-Taught (CPA/CP)	Freshman	Full Year	6
115	Sophomore English – Honors	Sophomore	Full year	6
125	Sophomore English – College Prep Advanced	Sophomore	Full year	6
175	Sophomore English – College Prep	Sophomore	Full year	6
152/176	Sophomore English – Co-Taught (CPA/CP)	Sophomore	Full year	6
1110	Language and Composition - Honors	Junior	Full year	6
1111	Language and Composition – College Prep Advanced	Junior	Full year	6
1112	Language and Composition – College Prep	Junior	Full year	6
1103/1104	Language and Composition – Co-Taught (CPA/CP)	Junior	Full year	6
109	Advanced Placement Language and Composition	Junior	Full year	6
1B105	International Baccalaureate English (Language A1) -HL	Junior	Full year	6
100	World Literature – Honors	Senior	Full year	6
113	World Literature – College Prep Advanced	Senior	Full year	6
114	World Literature – College Prep	Senior	Full year	6
116/117	World Literature – Co-Taught (CPA/CP)	Senior	Full year	6
105	Advanced Placement English Literature and Composition	Senior	Full year	6
IB106	Senior International Baccalaureate English (Language A1) -HL	Senior	Full-year, alternate days	6

ENGLISH ELECTIVE COURSES				
COURSE	TITLE	YEAR	TERM	CREDITS
1123	Creative Writing	All	Semester	3
1100	The American Musical	Sophomore, Junior, Senior	Semester	3
1150	Educators Rising	Sophomore, Junior, Senior	Semester	3
1124	Public Speaking	Sophomore, Junior, Senior	Semester	3
956	Aesthetics of Film	Junior, Senior	Semester	3
920	History of Theater	Junior, Senior	Semester	3
1116	Journalism	Junior, Senior	Semester	3
1136	Poetry	Junior, Senior	Semester	3

## **FRESHMAN COURSES**

**Freshman English (121, 147, 187, 151,156):** Students will focus on becoming skillful readers and writers through the close analysis of literature. Students will use the language of literary elements to generate responses to texts through discussion, projects, presentations and written assessments. Assessments measure growth in reading and writing.

Also: Creative Writing 1123

## **SOPHOMORE COURSES**

**Sophomore English (115, 125, 175, 152, 176):** Students will build upon the skills established during their first year. Students must demonstrate skill using literary elements and devices in the analysis of literature while also developing authentic writing skills to produce writing for a variety of audiences.

Also: Creative Writing 1123, The American Musical 1100, Public Speaking 1124

## **JUNIOR COURSES**

**Language and Composition (1110, 1111, 1112, 1103, 1104):** Students will become skillful readers of prose written in a variety of rhetorical contexts and become skillful writers who compose for different tasks, purposes, and audiences. Students will study models to understand and emulate how writers use their craft. The final course assessment is a research project in which students will identify and synthesize sources to demonstrate knowledge of a topic under investigation. Through discussion, projects, presentations and written assessments, students will show growth in analytical reading and writing.

**Advanced Placement Language and Composition 109\*:** Students will engage in the careful reading and critical analysis of authors' use of language in their work. Students examine different rhetorical devices through various writing modes and media. Students will analyze authors' diction, structure, style, and context to determine the purpose and impact of these choices on the writing. Written assessments are an integral part of the AP English Language and Composition course which includes narrative, expository, analytical, and argumentative essays. Accepted students must complete a summer assignment and take the Advanced Placement Exam in the spring. **\*Application required.**

**International Baccalaureate English (Language A1) IB105\* - HL:** Students will develop an understanding of literature as art, open to a reader's interpretation and criticism. Students will complete a variety of written and oral assessments. These assessments include externally assessed papers and internally assessed (externally moderated) oral presentations. This is the first two semesters of a four-semester higher-level IB course that will culminate in five major assessments. **\*Application required.**

Also: Creative Writing 1123, The American Musical 1100, Public Speaking 1124, Journalism 1116, Poetry 1136, Aesthetics of Film 956, History of Theater 920

## **SENIOR COURSES**

**World Literature (100, 113, 114, 116, 117):** Students will read literature representing various cultures, genres, styles, periods, and aesthetic theories. Using a variety of critical lenses and analytic techniques, students will evaluate the principles, values and choices that authors present. Through discussion, projects, presentations and written assessments students will demonstrate mastery of skills in analytical reading and writing.

**Advanced Placement English Literature and Composition 109\*:** Students will engage in the careful reading and critical analysis of literature. The course will include works of literary merit from various genres and periods. Students will closely analyze a work's structure, style, and themes as well as other literary devices.

Written assessments, an integral part of the course, will include expository, analytical, and argumentative essays. Students will learn how to express knowledge of literary works clearly and persuasively in writing. Accepted students must complete a summer assignment and take the Advanced Placement Exam in the spring. **\*Application required.**

**Senior IB Language A1 (English) IB 106 – HL:** This course will culminate in the IB Language A1 exams in the spring. The course's focus is three-fold: to develop student's appreciation of literature as art; to develop student's critical thinking and communication skills in both oral and written forms; and to instill in each student an understanding and appreciation of internationalism.

Students will complete a variety of written and oral assessments which include, but are not limited to, externally assessed papers and internally assessed (externally moderated) oral presentations.

**Prerequisite:** Successful completion of Junior IB Language A1 (English) IB105.

**Also:** Creative Writing 1123, The American Musical 1100, Public Speaking 1124, Journalism 1116, Poetry 1136, Aesthetics of Film 956, History of Theater 920

## **ENGLISH ELECTIVES**

In addition to the required courses, students can choose an elective course to supplement their studies.

**Creative Writing 1123:** Students will develop and improve their technique and individual style in several forms of prose. The emphasis of the courses is on writing; however, students may study different texts as models to obtain an appreciation of form and craft.

**Aesthetics of Film 956:** This course introduces students to film analysis and teaches them to become critics and helps them gain tools to properly analyze a film both in written and oral form. Students taking film will be exposed to several classic films and films that stand out in their general. Students will receive credits in English for this course.

**The American Musical 1100:** An introduction to the history and development of the musical from its origins to the present. Students will explore and analyze distinctive musical and dramatic features of specific works. The analysis will include various topics such as the social context, themes, and literary development of multiple works.

**History of Theatre 920:** This course explores the history and evolution of Western Theatre through script reading, script analysis, and production analysis. Different types and styles of theatrical literature will be analyzed in the context of social, political, and economic conditions of the period as well as modern times. Students will receive credits in English for this course.

**Educators Rising 1150:** The goal of this course is to engage and prepare students for a career in the field of Education. Students will conduct research projects, field assignments, lesson planning, lesson implementation, and focused lectures. NOTE: Students will not receive English credits for this course.

**Public Speaking 1124:** In this course, students will develop communication skills that can be used in a variety of speaking situations. Topics will include research and organization, writing for verbal delivery, stylistic choices, visual and presentation skills, analysis and critique, and development of self-confidence.

**Journalism 1116:** The course introduces students to the concepts of newsworthiness and press responsibility; develop students' skills in writing and editing stories, headlines, and captions. The course emphasizes writing style and technique as well as production values and organization.

**Poetry 1136:** Students will develop and improve their technique and individual style in poetry. The emphasis of the course is on writing; however, students may study sample works from writers to obtain an appreciation of form and craft.



## MATHEMATICS DEPARTMENT

COURSE	TITLE	YEAR	TERM	CREDITS
410	Algebra I / Mathematics I College Prep	Freshman	Full Year	6
410C	Algebra I / Mathematics I – Co-Taught College Prep	Freshman	Full Year	6
412	Algebra I / Mathematics I College Prep Advanced	Freshman	Full Year	6
426	Geometry / Mathematics II Honors	Freshman	Full year	6
423	Geometry / Mathematics II College Prep	Sophomore	Full Year	6
424	Geometry / Mathematics II - Co-Taught College Prep	Sophomore	Full year	6
425	Geometry / Mathematics II College Prep Advanced	Sophomore	Full year	6
415	Algebra II / Mathematics III College Prep Advanced	Sophomore	Full year	6
413	Algebra II / Mathematics III Honors	Sophomore	Full year	6
405	Algebra II / Mathematics III College Prep	Junior	Full year	6
405C	Algebra II / Mathematics III - Co-Taught College Prep	Junior	Full year	6
421	Algebra II / Mathematics III College Prep Advanced	Junior	Full year	6
486	Trigonometry - CP	Senior	Semester	3
408	Pre-Calculus - Honors	Senior	Semester	3
409	Pre-Calculus – Honors	Junior	Full year	6
429	Pre-Calculus – CPA	Junior	Full year	6
431	Pre-Calculus – CPA	Senior	Semester	3
417	Calculus – Honors	Senior	Semester	3
427	Calculus – CPA	Senior	Semester	3
473	Math Review	Senior	Semester 1	3
474	Math Review	Senior	Semester 2	3
477	Math Review	Junior	Semester 1	3
478	Math Review	Junior	Semester 2	3
418	Algebra Topics	Junior-Senior	Semester	3
422	Geometry Topics	Junior- Senior	Semester	3
404	AP Computer Science Principles	Sophomore, Junior, Senior	Full Year	6
4404	AP Computer Science Applications	Junior, Senior	Full Year	6
400	AP Calculus AB	Senior	Full Year	6
456	AP Calculus BC	Senior	Full Year	6
401	AP Statistics	Junior, Senior	Full Year	6
IB410	IB Math Year 1	Junior	Full Year	6
IB 409	IB Math Year 2	Senior	Full Year	3

4501	Math Seminar – Logic	Junior, Senior	Semester	3
4502	Math Seminar – Finite Math	Freshman, Sophomore	Semester	3
4504	Math Seminar – Statistics	Junior, Senior	Semester	3

### **FRESHMAN COURSES**

**Algebra I / Mathematics I (410, 410C, 412):** The study of Algebra I/ Mathematics I includes topics listed in the Massachusetts Curriculum Framework for Mathematics. Unit design follows the Model Integrated Mathematics 1 pathway. Unit titles include: Expressions and Equations, Graphs, Lines, Exponents and Functions, Statistics and Fitting Lines, Introduction to Geometry, and Congruence and Transformations. In the college preparatory level of this course (410, 411) more time will be dedicated to reviewing prerequisite skills to make the units of study more accessible for students.

**Geometry / Mathematics II Honors 426:** This study of Geometry / Mathematics II includes topics listed in the Massachusetts Curriculum Frameworks for Mathematics. Unit design follows the Model Integrated Mathematics 2 pathway. Unit titles include: Congruence and Proof, Similarity, Circles, Using Similarity, Analytic Geometry, Real Numbers, Polynomials, Quadratics and Complex Numbers, Functions, and Applications of Probability. In the honors classrooms these topics will be covered in greater depth. In addition, some additional topics that may be explored include: The Complex Plane; Complex Numbers, Geometry, and Algebra; Matrices; Trigonometric Functions, Graphs of Trigonometric Functions, and Conics.

### **SOPHOMORE COURSES**

**Geometry / Mathematics II (423, 424, 425):** This study of Geometry / Mathematics II includes topics listed in the Massachusetts Curriculum Frameworks for Mathematics. Unit design follows the Model Integrated Mathematics 2 pathway. Unit titles include: Congruence and Proof, Similarity, Circles, Using Similarity, Analytic Geometry, Real Numbers, Polynomials, Quadratics and Complex Numbers, Functions, and Applications of Probability. In the college preparatory level of this course (423, 424) more time will be dedicated to reviewing pre-requisite skills from Mathematics I and earlier to make the units of study more accessible for students. students will show growth in analytical reading and writing.

**Algebra II / Mathematics III (415, 413):** This study of Algebra II / Mathematics III includes topics listed in the Massachusetts Curriculum Frameworks for Mathematics. Unit design follows the Model Integrated Mathematics 3 pathway. Unit titles include: Functions and Polynomials, Sequences and Series, Statistical Inference, Trigonometry, Analyzing Trigonometric Functions, Complex Numbers and Polynomials, Polynomial and Rational Functions, Exponential and Logarithmic Functions, and Optimization and Geometric Modeling. In the honors class these topics will be covered in greater depth. In addition, some additional topics that may be explored include: The Complex Plane; Complex Numbers, Geometry, and Algebra; Matrices; Trigonometric Functions, Graphs of Trigonometric Functions, and Conics.

**AP Computer Science Principles 404:** college level course for students with a deep understanding of the algebraic process and problem-solving skills, who want to explore the world of computing. No prior computer skills are required. The course, “Introduces students to the central ideas of computer science, instilling the ideas and practices of computational thinking and inviting students to understand how computing changes the world.” The course is built around 7 big ideas: creativity, abstraction, data and information, algorithms, programming, the internet, and global impact. Successful completion of the course enables students to participate in the advanced placement examination.

**AP Computer Science Applications 4404U:** AP Computer Science A is a course that addresses computer-based problem solving through the Java programming language. This course is similar to introductory college level computer science courses for computer science majors. Students who complete this course will develop skills in: problem solving, implement common computer algorithms, using data structures, developing new algorithms and data structures, writing solutions in an object-oriented paradigm, utilizing the Java programming language, reading and comprehending computer programs, understanding the design process used to develop programs, and understanding the ethical issues with computer use. Upon completion of this course students will participate in the AP Computer Science A examination. Prerequisite: Successful completion of AP Computer Science Principles.

### **JUNIOR COURSES**

Juniors who have not passed MCAS enroll in Math Review-Algebra #477 and #478

**Algebra II / Mathematics III (405, 405C):** This study of Algebra II / Mathematics III includes topics listed in the Massachusetts Curriculum Frameworks for Mathematics. Unit design follows the Model Integrated Mathematics 3 pathway. Unit titles include: Functions and Polynomials, Sequences and Series, Statistical Inference, Complex Numbers and Polynomials, Polynomial and Rational Functions, Exponential and Logarithmic Functions, and Optimization and Geometric Modeling. In the college preparatory level of this course more time will be dedicated to reviewing pre-requisite skills from Mathematics I, Mathematics II and earlier to make the units of study more accessible for students.

**Algebra II / Mathematics III College Prep Advanced 421:** This study of Algebra II / Mathematics III includes topics listed in the Massachusetts Curriculum Frameworks for Mathematics. Unit design follows the Model Integrated Mathematics 3 pathway. Unit titles include: Functions and Polynomials, Sequences and Series, Statistical Inference, Trigonometry, Analyzing Trigonometric Functions, Complex Numbers and Polynomials, Polynomial and Rational Functions, Exponential and Logarithmic Functions, and Optimization and Geometric Modeling. In the honors class these topics will be covered in greater depth. In addition, some additional topics that may be explored include: The Complex Plane; Complex Numbers, Geometry, and Algebra; Matrices; Trigonometric Functions, Graphs of Trigonometric Functions, and Conics.

**Pre-Calculus (408, 409, 429):** The objectives are to provide background skills in analytic methods, analytic geometry, trigonometry, the system of complex numbers, vector analysis, counting techniques, and elementary theory of probability. Topics focus on functions, trigonometry, complex numbers, conic sections, sequences and series. This is a demanding course that prepares students for a four-year college, with a focus on mathematics and science, as well as other major fields of study. Full-year pre-calculus courses will cover topics in greater depth and will teach units that prepare students for AP Calculus and AP Statistics.

**Math Review (477 & 478):** These courses review topics in number sense, operations, patterns, relations, algebra, geometry, measurement, data analysis, statistics and probability. This course is appropriate for students who need additional support in essential skills for MCAS preparation. Students must register for part I and II. Juniors will register for 477 first semester and 478 second semester.

**Algebra Topics 418:** This semester class is designed for students who have passed the MCAS, want to take more math courses, and have not passed Mathematics I. This course is appropriate for students who have completed Geometry but have never passed a formal Algebra course. The course will focus on five major types of equations and their solutions along with selected topics in Number Sense.

**Geometry Topics 422:** semester course designed for students who have passed the MCAS and Mathematics I course and have not passed a Mathematics II course. This course will focus on plane and solid geometric figures, similarity and proportion, measurement of area and volume, and coordinate geometry.

**AP Computer Science Principles 404:** Advanced Placement Computer Science Principles is a college level course for students with a deep understanding of the algebraic process and problem-solving skills, who want to explore the world of computing. No prior computer skills are required. The course, “Introduces students to the central ideas of computer science, instilling the ideas and practices of computational thinking and inviting students to understand how computing changes the world.” The course is built around 7 big ideas: creativity, abstraction, data and information, algorithms, programming, the internet, and global impact. Successful completion of the course enables students to participate in the advanced placement examination. Prerequisite: Excellent grades and completion of Algebra II/ Mathematics III at the honors level.

**AP Computer Science Applications 4404U:** AP Computer Science A is a course that addresses computer-based problem solving through the Java programming language. This course is similar to introductory college level computer science courses for computer science majors. Students who complete this course will develop skills in: problem solving, implement common computer algorithms, using data structures, developing new algorithms and data structures, writing solutions in an object-oriented paradigm, utilizing the Java programming language, reading and comprehending computer programs, understanding the design process used to develop programs, and understanding the ethical issues with computer use. Upon completion of this course students will participate in the AP Computer Science A examination. Prerequisite: Successful completion of AP Computer Science Principles.

**IB Math SL – Year 1 IB410:** This course includes topics in Trigonometry and Pre-Calculus. It also extends topics studied in Geometry and Algebra II. Specific topics include sequences and series, several types of functions, and coordinate geometry. Main objectives are developing problem-solving skills as well as furthering mathematical knowledge to foster success in college.

### **SENIOR COURSES**

Seniors who have not passed MCAS must enroll in Math Review 473 and 474

**Trigonometry 486:** This is the follow-up course for students who have successfully completed Algebra II CP and wish to continue in mathematics. The objectives will cover all aspects of trigonometry including trigonometric functions, graphing trigonometric functions, trigonometric identities and equations. This is a thorough course in trigonometry that will allow students to continue in pre-calculus or college algebra.

**Pre-Calculus (408, 409, 431):** The objectives are to provide background skills in analytic methods, analytic geometry, trigonometry, the system of complex numbers, vector analysis, counting techniques, and elementary theory of probability. Topics focus on functions, trigonometry, complex numbers, conic sections, sequences and series. This is a demanding course that prepares students for a four-year college, with a focus on mathematics and science, as well as other major fields of study.

**Calculus (417, 427):** introductory course in calculus for students with a good aptitude for Mathematics and above average achievement. It is planned to meet the needs of the student planning to continue the study of mathematics, physics, or engineering at a four-year college. The course covers the basics of differential and integral calculus and topics from analytic geometry.

**Math Review (473 & 474):** designed for upperclassmen who need to review topics in number sense, operations, patterns, relations, algebra, geometry, measurement, data analysis, statistics and probability. This course is appropriate for students who need additional support in essential skills for MCAS preparation. Students should register for part I and II. Seniors will register for 473 first semester and 474 second semester.

**Algebra Topics 418:** This semester class is designed for students who have passed the MCAS, want to take more math courses, and have not passed Mathematics I. This course is appropriate for students who have completed Geometry but have never passed a formal Algebra course. The course will focus on five major types of equations and their solutions along with selected topics in Number Sense.

**Geometry Topics 422:** semester course designed for students who have passed the MCAS and Mathematics I course and have not passed a Mathematics II course. This course will focus on plane and solid geometric figures, similarity and proportion, measurement of area and volume, and coordinate geometry.

**AP Computer Science Principles 404:** Advanced Placement Computer Science Principles is a college level course for students with a deep understanding of the algebraic process and problem-solving skills, who want to explore the world of computing. No prior computer skills are required. The course, “Introduces students to the central ideas of computer science, instilling the ideas and practices of computational thinking and inviting students to understand how computing changes the world.” The course is built around 7 big ideas: creativity, abstraction, data and information, algorithms, programming, the internet, and global impact. Successful completion of the course enables students to participate in the advanced placement examination. Prerequisite: Excellent grades and completion of Algebra II/ Mathematics III at the honors level.

**AP Computer Science Applications 4404U:** AP Computer Science A is a course that addresses computer-based problem solving through the Java programming language. This course is similar to introductory college level computer science courses for computer science majors. Students who complete this course will develop skills in: problem solving, implement common computer algorithms, using data structures, developing new algorithms and data structures, writing solutions in an object-oriented paradigm, utilizing the Java programming language, reading and comprehending computer programs, understanding the design process used to develop programs, and understanding the ethical issues with computer use. Upon completion of this course students will participate in the AP Computer Science A examination. Prerequisite: Successful completion of AP Computer Science Principles.

**Advanced Placement Calculus (AB) 400:** college level course for students with a high aptitude for Mathematics and an above average achievement. It is planned to meet the needs of the student planning to continue the study of mathematics, physics or engineering at a four-year college. The course covers the fundamentals of differential and integral calculus and topics from analytic geometry. Successful completion enables the student to take the Advanced Placement exam for college credit. Prerequisite: Excellent grades in previous math courses and teacher recommendations are required for enrollment. The completion of a summer assignment is also mandatory for admission.

**Advanced Placement Calculus (BC) 456:** college level course for students with a high aptitude for Mathematics and an exceptional achievement. It is planned to meet the needs of the student planning to continue the study of mathematics, physics or engineering at a four-year college. The course covers all topics in Advanced Placement Calculus and others such as parametric, polar and vector functions, and series. Successful completion enables the student to take the Advanced Placement exam for college credit. Prerequisite: Exceptional grades in previous math courses and teacher recommendations are required for enrollment. The completion of a summer assignment is also mandatory for admission.

**Advanced Placement Statistics 401:** college-level course for students with a high aptitude for mathematical analysis and an above average achievement. It is planned to meet the needs of students who plan on continuing studies in the fields of mathematics, psychology, or business. The course covers four basic principles of exploring data, sampling and experimentation, anticipating patterns, and statistical inference. This is a writing intensive course. Students will be able to take the advanced placement exam for college credit at the end of the course. Prerequisite: Excellent grades, completion of Mathematics III at the Honors Level, as well as teacher recommendations and completion of the summer assignment.

**IB Math SL– Year 2 IB409:** This is a continuation of the junior year course in which topics such as vector analysis, matrices, probability, and differential and integral calculus are studied. Students are again the focus of the learning environment and are encouraged to actively participate in their learning. International Baccalaureate requirements such as external assessments and portfolio work are completed in this year of the program.

### **MATH SEMINARS**

Math Seminar courses are math electives that allow students to explore topics in mathematics that are not in the current curriculum or to look at mathematics that is in the standard curriculum in a different way. The elective courses do not impact GPA. Any student interested in exploring mathematics can take any of our math seminar offerings.

**Math Seminar - Finite Math 4502:** This course for grade 9 or 10 students, covers number theory (how numbers interact), set theory (how things are grouped), permutations and combinations (how things are counted), probability (how likely something is happening), and logic (and why these things happen).

**Math Seminar – Logic 4501:** Logic is the formal study of what counts as appropriate reasoning. Most of us have some natural abilities at recognizing good reasoning from bad reasoning, but we are also aware that sometimes these intuitions are quite fallible – especially depending on the topic reasoned about! Logic began with the observation that there were patterns as to what counted as good arguments and what counted as bad ones – patterns of reasoning that reliably took us from some set of claims known to be true (“premises”) to other claims that are true (“conclusions”). When premises are advanced to support a conclusion, we call it an “argument” and thus, since logic studies the relations of inference between premises and conclusions, logic also helps us put together good arguments. Students will demonstrate a mastery of logic through the creation of truth tables, exploration of conditional and biconditional statements, use of deductive reasoning through logic puzzles and word problems, and the creation of logical arguments in a formal debate setting. Course designed for students in grade 11 or 12.

**Math Seminar – Statistics 4504:** Students will collect, analyze, and draw conclusions from data. This course draws connections between all aspects of the statistical process, including design, analysis, and conclusions. Additionally, using the vocabulary of statistics this course will teach students how to communicate statistical methods, results and interpretations. Students will learn how to use graphing calculators and read computer output to enhance the development of statistical understanding. Course designed for students in grade 11 or 12.

## SCIENCE DEPARTMENT

COURSE	TITLE	YEAR	TERM	CREDITS
518	Biology - Honors	Freshman	Full year	6
508ST	Introduction to Biotechnology STEM - Honors	Freshman	Full year	6
507ST	Introduction to Biotechnology STEM - CPA	Freshman	Full year	6
560	Introduction to Biotechnology - CPA	Freshman	Full year	6
565	Sustainable Urban Environment I - CP	Freshman	Full year	6
554	Environmental Earth Science - CPA	Freshman	Full year	6
555A	Environmental Earth Science A- CP	Freshman	Semester	3
555B	Environmental Earth Science B- CP	Freshman	Semester	3
542	Biology – CPA	Sophomore	Full year	6
590	Biology – CP	Sophomore	Full year	6
521STH	Biotechnology II STEM - Honors	Sophomore	Full year	6
521ST	Biotechnology II STEM - CPA	Sophomore	Full year	6
521	Biotechnology II - CPA	Sophomore	Full year	6
566	Sustainable Urban Environment II - CP	Sophomore	Full year	6
514	Chemistry - Honors	Sophomore	Full year	6
522ST	Biotechnology III STEM - CPA	Junior	Semester	3
522	Biotechnology III - CPA	Junior	Semester	3
504	Physics - Honors	Junior	Full year	6
518CP	Applied Biology - CP	Jr, Sr	Full year	6
598	BioReview I - CP	Jr, Sr	Semester	3
599	BioReview II - CP	Jr, Sr	Semester	3
524	Human Physiology - Honors	Jr, Sr	Semester	3
525	Human Physiology - CPA	Jr, Sr	Semester	3
520	Horticulture - CP	Jr, Sr	Semester	3
540	Oceanography - CPA	Jr, Sr	Semester	3
541	Oceanography - Honors	Jr, Sr	Semester	3
502	Bioethics – CPA	Jr, Sr	Semester	3
557	Bioethics - CP	Jr, Sr	Semester	3
506	Urban Landscape and Design - CPA	Jr, Sr	Semester	3
511	Urban Landscape and Design - CP	Jr, Sr	Semester	3
589	Advanced Topics in Modern Science - CP	Jr, Sr	Semester	3
531	Astronomy - Honors	Jr, Sr	Semester	3
532	Astronomy - CPA	Jr, Sr	Semester	3
536	Ecology - Honors	Jr, Sr	Semester	3
535	Ecology - CPA	Jr, Sr	Semester	3
547	Earth and Space Science - CPA	Jr, Sr	Semester	3
595	Earth and Space Science - CP	Jr, Sr	Semester	3
533	Physics - CPA	Jr, Sr	Semester	3
503	Physics - CP	Jr, Sr	Semester	3
534	Chemistry - CPA	Jr, Sr	Semester	3
509	Chemistry - CP	Jr, Sr	Semester	3



IB507	IB Biology I - HL	Junior	Full year	6
IB508	IB Biology II - HL	Senior	Full year	6
5527	Biotechnology IV - Honors	Senior	Full year	6
527	Biotechnology IV - CPA	Senior	Full year	6
5529	Advanced Laboratory Research - Honors	Senior	Full year	6
501	AP Physics C	Senior	Full year	6
505	AP Chemistry	Senior	Full year	6
507	AP Biology	Senior	Full year	6
553	AP Environmental Science	Senior	Full year	6

## SCIENCE PATHWAYS

The chart below is designed to assist parents and students in selecting one or more courses that align with science interest areas. Please note that it is not necessary to take ALL THE COURSES listed under a specific pathway. Please see the BCTE Department for Technology and Engineering Pathways.

Grade	Honors Pathway	CPA/CP Pathway	Biotechnology (CPA) or Interdisciplinary STEM Program (CPA/H)	Sustainability Pathway (CP)
9	Biology 518 Biology MCAS 9 <sup>th</sup> Grade Science Expo	Environmental Earth Science 554 or 555 9 <sup>th</sup> Grade Science Expo	Intro to Biotech 560 or 507ST or 508ST 9 <sup>th</sup> SynBio Expo	Sustainable Urban Environment I 565 9 <sup>th</sup> Grade Science Expo
10	Chemistry 514 SAT II recommended Science Fair	Biology 542 or 590 Biology MCAS Science Fair	Biotech II 521 or 521ST Biology MCAS Science Fair	Sustainable Urban Environment II Biology MCAS Science Fair
11	Physics 504 or IB Biology I IB507 Science Fair	Chemistry 509 or 534	Biotech III/ Chemistry 529 or 522ST or STEM Elective	Horticulture 520 or Chemistry 509 or 534
12	IB Biology II—IB 508 AP Physics—501 AP Biology—507 AP Chemistry—505 AP Environmental. Sci.—553 Science Fair	Physics 503 or 504 or Science Elective Science Fair	Biotech IV 527 or 5527 or STEM Elective Science Fair	Urban Landscape and Design 506 or 511 or Science Elective

## **FRESHMAN COURSES**

**Biology 518:** Course for students who have a strong foundation in Earth Science and Physical Science by the end of grade eight. In addition to the focus on biochemistry, cell structure and function, photosynthesis, cellular respiration, reproduction, genetics, and the human body systems, this course includes topics and principles that prepare students for the SAT II Biology Examination. Students are required to develop and present a 9th Grade Science Expo project. Students will take the Biology MCAS at the end of this course. Prerequisite: Teacher recommendation and a grade of B- or better in 8th-grade Advanced Science or an A- or better in 8th grade Honors Science.

**Introduction to Biotechnology (508ST, 507ST, 560):** This introduction to the world of biotechnology is the first course in a four-year biotechnology program. Students will be introduced to the four major fields of biotechnology: forensics, energy, health and agriculture. Students will learn using modern laboratory techniques and debate from diverse positions. Students are required to develop and present a 9<sup>th</sup> Grade Science Expo project.

**Sustainable Urban Environment 565:** This course will focus on sustainability. We will explore and analyze concepts in the earth, physical and life sciences. The greenhouse, courtyard and garden plots will be the environments in which students use hands-on approaches to learn about hydroponics, alternative energy, environmental issues and solutions such as endangered species, interdependence and food production. Students are required to develop and present a science fair project. This is the 1st course in the “sustainability” pathway. Development and presentation of a 9th Grade Science Expo project is required.

**Environmental Earth Science (554, 555A & 555B):** This course explores links between the Earth and all the organisms that inhabit this planet. The course will emphasize the origin of the Earth and its crust, plate tectonics, evolution, ecology, meteorology, and the distribution of life on Earth, energy use and conservation. Using laboratory experiments, multimedia, hands-on learning activities, and projects students will make connections between the biosphere, its biomes, and the living and nonliving parts of the environment. Students will gain a better understanding of the world around them through an emphasis on scientific inquiry skills and application. Students are required to develop and present a 9th grade Science Expo project. Students who enroll in the CP sections are expected to take both 555A and 555B.

## **SOPHOMORE COURSES**

**Biology (518, 542, 590):** This course will focus on biochemistry, cell structure and function, photosynthesis, cellular respiration, reproduction, genetics, and the human body systems. Students will gain a better understanding of themselves and basic life processes by participating in laboratory experiments, multimedia, hands-on learning activities, and projects. Students will take the Biology MCAS at the end of this course. Prerequisite for Honor level: Teacher recommendation from 9<sup>th</sup> grade science teacher and approval from the department head.

**Biotechnology II 521, Biotechnology II ST (521ST, 521STH):** Second course in the biotechnology program focusing on the biotechnological applications of biochemistry, cell structure and function, photosynthesis, cellular respiration, reproduction, evolution, genetics, and the human body systems. Students will gain a better understanding of themselves and the basic life processes participating in laboratory experiments, multimedia, hands-on learning activities,

and projects. Students will take the Biology MCAS at the end of this course. Students are required to develop and present a science fair project. Prerequisite: Biotechnology I

**Sustainable Urban Environment II 566:** Second course in the Sustainability Program will build on the lessons of sustainability in a continuation of Sustainable Urban Environment I. We will explore and analyze concepts in the earth, physical and life sciences. The greenhouse, courtyard and garden plots will be the environments in which students use hands-on approaches to learn about hydroponics, alternative energy, environmental issues and solutions such as endangered species, interdependence and food production. Students are required to develop and present a science fair project. Prerequisite: Sustainable Urban Environment I

**Chemistry 514:** This course presents properties of matter, atomic structure, chemical bonding, stoichiometry, solutions, chemical equilibrium, acid/base reactions, nuclear chemistry and an introduction to organic chemistry. Students are required to develop and present a science fair project. Prerequisites: Students in honors chemistry should have a grade of C minus or better in Honors Biology or teacher recommendation. Geometry/Math II should be taken concurrently.

### **JUNIOR AND SENIOR COURSES**

**Biotechnology III/Chemistry (522, 522ST):** This course, the third in the biotechnology program will focus on the biotechnological applications of matter, atomic structure and bonding, periodicity and chemical reactions. An emphasis on Forensic Science will guide students through these topics. Prerequisite: Biotechnology II

**Physics 504:** This course provides problem-based investigations of thermodynamics, mechanics, motion, optics and electricity. Students are required to develop and present a science fair project. Pre-requisite: Algebra II/Math III Recommendation: Honors Math

**Applied Biology 518CP:** This post-MCAS course will focus on the application of life science principles in society. Students will apply their learning about genetics, evolution and ecology through research and project-based learning to understand how these concepts impact students' lives, the local community and the greater world. This course is intended for students who have passed the MCAS but failed their Biology course.

**Human Physiology (525, 524):** This introductory course provides an overview of the structure and function of human body systems and how each system depends on the others. Students will dissect various specimens to explore the true nature of body systems and organs. Principles of biology, chemistry and physics are often applied. The course is recommended for students interested in pursuing healthcare or biological fields of study, as well as students interested in understanding their own anatomy and physiology.

**Horticulture 520:** This elective focuses on the differences between plant and animal cells, an in-depth description of photosynthesis and respiration, and the study of plants commonly associated with human activity. Production of plants in the greenhouse, gardens and hydroponics systems will emphasize current horticultural practices.

**Oceanography (540, 541)** This elective focuses on the world's oceans and processes that underlie their physical, chemical, biological and geological features.

**Bioethics (502, 557):** This elective focuses on the ethical implications of biotechnology. Students will engage with the concepts of how to understand and develop ethical arguments, the progression of bioethics through history, today's technology and future issues. Issues such as genetic testing and engineering, cloning, equality and others will be addressed.

**Urban Landscape and Design (506, 511):** This elective will focus on landscape design in an urban setting. This class is composed of two segments. The first segment will focus on landscape design, planning, and budgeting. The second segment will be the creation of gardens for both aesthetic and harvesting purposes. The emphasis of this class will be about minimizing our impact on the environment and finding "green solutions". This class will feature a working garden where methodologies learned in the class will be applied in the field.

**Advanced Topics in Modern Science 589:** Students will have an opportunity to explore the real science behind the headlines in this elective. The popular press often presents conflicting opinions including the danger of epidemics, the threat of global warming or forensic evidence in a court case. Students will read the popular press coverage and identify scientific journal articles that support various positions. Students will also conduct experiments to determine the validity of evidence and gain a deeper understanding of the connection between the scientific process and the resulting data and conclusions that lead to the statements seen in the press. Upon completion of this course students will be able to apply learned strategies to evaluate evidence and make decisions based on valid scientific evidence rather than popular opinions.

**Astronomy (532, 531):** This elective emphasizes the fundamentals of astronomy including cosmology, the solar system, universe and emerging discoveries in the field. Activities include student research, group projects and presentations in the planetarium.

**Ecology (535, 536):** This elective focuses on the interrelationships between organisms and their habitats. Human influences on ecological dynamics are emphasized. Activities include individual and collaborative research, laboratory exercises and fieldwork.

**Earth and Space Science (547, 595):** This elective focuses on concepts in geology, meteorology, oceanography, and astronomy with an emphasis on the interactions of the Earth's various spheres and human activities. Students analyze data to learn about direct and indirect evidence used in evaluating competing theories about the origin of stars and planets. Students will study the current state of our earth through laboratory experiments, multimedia, hands-on learning activities, and projects while emphasizing scientific inquiry skills and application of other core sciences.

**Physics (533, 503):** This course provides problem-based investigations of measurement, motion, mechanics, optics and electricity. Prerequisite: Algebra II should be taken either prior to or in the same semester as CPA Physics.

**Chemistry (534, 509):** Students in these courses explore the properties of matter, atomic structure and bonding, periodicity and chemical reactions.

**International Baccalaureate Biology I – HL IB507:** This course outlined by the International Baccalaureate Organization for HL Biology features a strong emphasis on individual and/or team research involving real-world biology related projects. Students are expected to advance to IB Biology II in their senior year. Students are required to develop and present a science fair project.

**International Baccalaureate Biology II – HL IB508:** This course outlined by the curriculum established by the International Baccalaureate Organization for HL Biology. Students are required to complete written labs for Internal Assessment and to take the IBHL Biology exams at the end of the course. Students are required to develop and present a science fair project.

**Biotechnology IV (527, 5527):** Fourth course in biotechnology program will focus on the applications and engineering principals of biotechnology. This course will build upon the concepts and skills learned in previous biotechnology courses and allow students to design, develop and run experiments that are similar to those in today's biotechnology labs. Students are required to develop and present a science fair project. Prerequisite: Biotechnology III and approval of the department head

**Advanced Laboratory Research 5529:** This course will focus on the applications and engineering principals of biotechnology. This course will build upon the concepts and skills learned in the BHS/MLSC Apprenticeship Challenge and allow students to design, develop and run experiments that are similar to those in today's biotechnology labs. Students are required to develop and present a science fair project. Prerequisite: Apprenticeship Challenge and approval of the department head.

**AP Physics C 501:** This course outlined by the Advanced Placement Program of the College Board. Students who complete the course are required to take the AP Physics Exam. This course will help students learn critical thinking skills through topics in mechanics, electricity and magnetism. Introductory calculus will be learned and used in this course. Students are required to develop and present a science fair project. Prerequisite: A grade of B or better in Honors Physics, Chemistry and Algebra II/Math III. AP Calculus is recommended.

**AP Chemistry 505:** This course outlined by the Advanced Placement Program of the College Board. Students who complete the course are required to take the AP Chemistry Exam. This course is equivalent to college-level introductory Chemistry and is a laboratory course. Students are required to develop and present a science fair project. Prerequisite: A grade of B or better in Honors Chemistry or a grade of A- or better in CPA Chemistry and a grade of B or better in Algebra II/Math III.

**AP Biology 507:** This course outlined by the Advanced Placement Program of the College Board. Students who complete the course are required to take the AP Biology Exam. Students are required to develop and present a science fair project. Prerequisite: A grade of B or better in both Honors Biology, Chemistry and Physics.

**AP Environmental Science 553:** This course outlined by the Advanced Placement Program of the College Board. Students who complete the course are required to take AP Environmental Science Exam. This course will provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems and to examine alternative solutions for resolving or preventing them. Students are required to develop and present a science fair project. Prerequisite: A grade of B or better in both Honors Biology, Chemistry and Physics.

## SOCIAL SCIENCE DEPARTMENT

The Brockton High School Social Science Department has incorporated the Core Concept of the Massachusetts History and Social Science Curriculum Framework as its foundation:

*The goal of a history and social science curriculum is to enable students, by systemic study, to acquire the knowledge, skill, and judgment to continue to learn for themselves; to participate intelligently, justly, and responsibly in civic life, and in deliberation about local, national, and international issues; and to avail themselves of historical and cultural resources - historic sites, museums, parks, libraries, multimedia information sources - wherever they may live or travel.*

The Brockton High School Social Science Department strives to prepare our students to live in a democratic society in an interdependent world with the knowledge and skills necessary to become rational, humane, and contributing citizens in our world.

SOCIAL SCIENCE CORE COURSES				
COURSE NO.	TITLE	YEAR	TERM	CREDITS
<b>220</b> <b>253</b>	Freshmen World History- CPA Freshmen World History- CP	9	Full Year	6
<b>206FR</b> <b>206FRST</b> <b>206FRSTC</b>	US History I- Honors US History I-STEM Honors US History I – STEM CPA	9	Full Year	6
<b>206</b> <b>206ST</b> <b>229</b> <b>229ST</b> <b>252</b>	US History I- Honors US History I- STEM Honors US History I- CPA US History I- STEM CPA US History I- CP	10	Semester	3
<b>202</b> <b>225</b> <b>283</b>	US History II- Honors US History II- CPA US History II- CP	11	Full Year	6

SOCIAL SCIENCE ELECTIVES				
COURSE NO.	TITLE	YEAR	TERM	CREDITS
<b>237</b>	Art History	9-12	Semester	3
<b>241</b>	American Government	9-10	Semester	3
<b>2251</b>	Modern Middle East	11-12	Semester	3
<b>2233</b> <b>2234</b> <b>2235</b>	Modern Chinese History-Honors Modern Chinese History-CPA Modern Chinese History-CP	11-12	Semester	3
<b>211</b> <b>231</b> <b>247</b>	Ancient American Civilizations-Honors Ancient American Civilizations-CPA Ancient American Civilizations-CP	12	Semester	3
<b>215</b> <b>248</b> <b>250</b>	African American History-Honors African American History-CPA African American History-CP	12	Semester	3
<b>245</b> <b>255</b> <b>256</b>	Psychology-Honors Psychology- CPA Psychology- CP	12	Semester	3
<b>200</b> <b>226</b> <b>254</b>	Sociology and Anthropology -Honors Sociology and Anthropology -CPA Sociology and Anthropology -CP	12	Semester	3
<b>218</b> <b>243</b> <b>249</b>	Economics-Honors Economics- CPA Economics- CP	12	Semester	3
<b>212</b>	AP US History	10-11	Full Year	6
<b>205</b>	AP European History	11-12	Full Year	6
<b>216</b>	AP World History	11-12	Full Year	5
<b>2052IB</b>	IB I: History of Europe	11	Full Year (1 of 2)	6
<b>2283IB</b>	IB II: History of the Americas	12	Full Year (2 of 2) Alt. Days	6

## FRESHMAN COURSES

**Freshman World History: 1400-Present (220, 220ST, 253):** Course focuses on key academic and study skills. Students will embark on the study of world history beginning with the Renaissance. Students will gain an insight into the political and economic roots of the modern world, establishing a solid foundation for the further study of United States history and its place on the world stage.

**United States History I (206FR, 206FRST, 206FRSTC):** Course examines the establishment of the nation and its struggles including the American Revolution, the development of the government, issues surrounding slavery, and events leading up to and including the Civil War and Reconstruction.

**American Government 241:** This course is designed to provide a comprehensive understanding of the principles of American government. The course will support digital literacy, as students use interactive technology to explore a citizen's civic responsibilities through political participation.

**Art History 237:** Students will look at who is creating art and who they are creating it for to examine power structures, politics and culture from Prehistoric art to major art movements of today. Historical analysis skills will be used to critically evaluate a variety of visual arts from canonical pieces, such as the Mona Lisa, to contemporary political cartoons and graffiti.

## SOPHOMORE COURSES

**United States History I (206, 206ST, 229, 229ST):** Course examines the establishment of the nation and its struggles including the American Revolution, the development of the government, issues surrounding slavery, and events leading up to and including the Civil War and Reconstruction.

**Advanced Placement United States History 212:** This is a college-level course, which follows the National College Board Curriculum and examines the history of the United States from its beginnings to the present. Students must take the national AP exam at the end of the course.

***\*Application required. NOTE: Due to the Social Science course content of the International Baccalaureate Program (IB), enrollment in AP US History is a prerequisite for grade 10 students considering IB History their junior year.***

**American Government 241:** This course is designed to provide a comprehensive understanding of the principles of American government. The course will support digital literacy, as students use interactive technology to explore a citizen's civic responsibilities through political participation.

**Art History 237:** Students will look at who is creating art and who they are creating it for to examine power structures, politics and culture from Prehistoric art to major art movements of today. Historical analysis skills will be used to critically evaluate a variety of visual arts from canonical pieces, such as the Mona Lisa, to contemporary political cartoons and graffiti.



## JUNIOR COURSES

**United States History II (202, 225, 283):** United States History II, the required course for all juniors, examines the history of the United States from the Reconstruction to the present, including many outstanding achievements as well as the nation's major challenges. Participation in National History Day is a required component of this course for all students.

**Advanced Placement United States History 212:** This is a college-level course, which follows the National College Board Curriculum and examines the history of the United States from its beginnings to the present. Students must take the national AP exam at the end of the course.

***\*Application required. NOTE: Due to the Social Science course content of the International Baccalaureate Program (IB), enrollment in AP US History is a prerequisite for grade 10 students considering IB History their junior year.***

**Advanced Placement European History 205:** This college-level course follows the National College Board Curriculum and examines the history of western civilization from 1450 to the present. Students must take the national AP exam at the end of the course. ***\*Application required.***

**Advanced Placement World History 216:** This college-level course follows the National College Board Curriculum and is structured around the investigation of five-course themes and 19 key concepts in six different chronological periods, from approximately 8000 B.C.E. to the present. Students must take the national AP exam at the end of the course. ***\*Application required.***

**IB Year I: History of Europe 2052IB:** In the first year of this two-year course, students will use historical evidence to critically evaluate, analyze, and comprehend the major social, political, and economic challenges facing European nations from the 19<sup>th</sup> century to the present. Other topics of study include the move to the global war, the rise and rule of 20<sup>th</sup> century authoritarian states, and the causes and effects of 20<sup>th</sup> century wars. ***\*Application required. NOTE: Advanced Placement United States History is a prerequisite for IB History. This will enable students to fulfill their United States History requirement. This course is restricted to students within the IB program. This is a 2-year course.***

**Modern Middle East 2251:** This course is designed to increase students' knowledge of the Middle East's socioeconomics, politics, history, geography and cultures. The course requires students to apply a variety of social studies skills and concepts to gain an understanding of the region's cultural diversity, values, and lifestyles as well as an appreciation for its contributions to the arts and sciences. Students will evaluate relations between the United States and the Middle East.

**Art History 237:** Students will look at who is creating art and who they are creating it for to examine power structures, politics and culture from Prehistoric art to major art movements of today. Historical analysis skills will be used to critically evaluate a variety of visual arts from canonical pieces, such as the Mona Lisa, to contemporary political cartoons and graffiti.

**Modern Chinese History (2233, 2234, 2235):** This course examines the history of China as well as the impact of China's role in the world today. Course topics include US-China relations, globalization, human rights, China's modern economic miracle, Tibet, Taiwan, and the one-child policy. Overall goals of the course include improving communication and critical thinking skills.

## SENIOR COURSES

**Advanced Placement European History 205:** This college-level course follows the National College Board Curriculum and examines the history of western civilization from 1450 to the present. Students must take the national AP exam at the end of the course. *\*Application required.*

**Advanced Placement World History 216:** This college-level course follows the National College Board Curriculum and is structured around the investigation of five-course themes and 19 key concepts in six different chronological periods, from approximately 8000 B.C.E. to the present. Students must take the national AP exam at the end of the course. *\*Application required.*

**Sociology and Anthropology (200, 226, 254):** This course will examine the behavioral sciences of Sociology and Anthropology. Sociology is the study of social contexts such as groups, neighborhoods, cities, and whole societies, which influence individual ideas and behaviors. Anthropology is the study of cultures, or the behavior of people in various environments, focusing on both the diversity of cultures as well as the common characteristics that people share.

**African American History (215, 248, 250):** This is a one-semester senior elective designed to provide students with a comprehensive understanding of the history of African Americans. Students will explore questions relating to the experiences of people of African descent, contributions of African Americans in the development of the nation, and the evolution of African American culture.

**Economics (218, 243, 249):** This is a one-semester senior elective designed to provide students with an understanding of the American economic system to help them participate in the business world as workers, consumers, and investors.

**Ancient American Civilizations (211, 231, 247):** This is a one-semester senior elective designed to examine the geography, history, and culture of early Americans. Students will explore the techniques used by archeologists and anthropologists to study various civilizations including the Inca, Aztec, Maya, and Olmec from their origin through the era of exploration.

**Psychology (245, 255, 256):** This is a one-semester senior elective designed to examine the behavioral science concerned with the description, prediction, and control of the behavior and mental processes of the individual.

**IB Year II: History of the Americas 22831IB:** The second year of this two-year course is designed to help students use historical evidence to critically evaluate, analyze, and comprehend the social, political, economic, and cultural developments of the twentieth century. Topics include the emergence of America in global affairs, the World Wars, political developments in the United States including the Great Depression and Civil Rights Era, and the impact of the Cold war. ***NOTE:** This course is restricted to current IB history students.*

**Modern Middle East 2251:** This course is designed to increase students' knowledge of the Middle East's socioeconomics, politics, history, geography and cultures. The course requires students to apply a variety of social studies skills and concepts to gain an understanding of the region's cultural diversity, values, and lifestyles as well as an appreciation for its contributions to the arts and sciences. Students will evaluate relations between the United States and the Middle East.

**Art History 237:** Students will look at who is creating art and who they are creating it for to examine power structures, politics and culture from Prehistoric art to major art movements of today. Historical analysis skills will be used to critically evaluate a variety of visual arts from canonical pieces, such as the Mona Lisa, to contemporary political cartoons and graffiti.

**Modern Chinese History (2233, 2234, 2235):** This course examines the history of China as well as the impact of China's role in the world today. Course topics include US-China relations, globalization, human rights, China's modern economic miracle, Tibet, Taiwan, and the one-child policy. Overall goals of the course include improving communication and critical thinking skills.

## BILINGUAL EDUCATION DEPARTMENT

BILINGUAL / ESL SERVICES COURSES				
COURSE	TITLE	YEAR	TERM	CREDITS
<b>ENGLISH AS A SECOND LANGUAGE</b>				
840	ESL Through Content-Beginner - CP	All	Full year	6
841	ESL Through Literature-Beginner - CP	All	Full year	6
840SP	ESL Through Content Co-Taught-Beginner-CP	All	Full year	6
844E	ESL Through Content – Emerging – CP	All	Full year	6
845ES	ESL Through Literature – Emerging – CP	All	Full year	6
844	ESL Through Content – Intermediate – CP	All	Full year	6
845	ESL Through Literature – Intermediate – CP	All	Full year	3
844SP	ESL Through Literature Co-Taught-Intermediate CP	All	Full year	6
8849A	ESL Through Literature- Advanced CPA	9,10	Full Year	6
849A	ESL Through Literature – Advanced – CP	9,10	Full Year	6
8849B	ESL Through Literature-Advanced-CPA	11,12	Full year	6
849B	ESL Through Literature-Advanced-CP	11,12	Full year	6
849SP	ESL Through Literature Co-Taught-Advanced CP		Full Year	6
848E	ELD4 Literature - CP	All	Full year	6
849E	ELD4 Literature CP	All	Full year	6
848ES	ESL Content Through Current Events - CP	All	Semester	3
849ES	ESL Literature through Movies - CP	All	Semester	3
848SPK	ESL Through Public Speaking	All	Semester	3
<b>MATHEMATICS</b>				
811	CV Algebra - CP	9	Full year	6
827	HT Algebra - CP	9	Full year	6
803	SP Algebra - CP	9	Full year	6
7740I	IM Algebra - CPA	9	Full year	6
740I	IM Algebra - CP	9	Full year	6
740SP	IM Algebra – CP Co-Taught	9	Full year	6
812	CV Geometry - CP	10	Full year	6
828	HT Geometry - CP	10	Full year	6
7742I	IM Geometry CPA	10	Full year	6
742I	IM Geometry CP	10	Full year	6
742SP	IM Geometry CP Co-Taught	10	Full year	6
473B	IM Math Review CP	11,12	Semester	3
474B	IM Math Review CP	11,12	Semester	3
474C	CV Math Review CP	11,12	Semester	3

SCIENCE				
796FY	CV Introduction to Biology CP	9	Full year	6
746FY	HT Introduction to Biology CP	9	Full year	6
800FY	SP Introduction to Biology CP	9	Full year	6
792FY	IM Introduction to Biology CP	9	Full year	6
816	CV Biology CP	10	Full year	6
832	HT Biology CP	10	Full year	6
785I	IM Biology CPA	10	Full year	6
785SP	IM Biology CPA Co-Taught	10	Full year	6
796I	IM MCAS Biology Review - CP	11,12	Semester	3
819I	IM Chemistry CPA	11,12	Full year	6
8819I	IM Chemistry CP	11,12	Full year	6
SOCIAL SCIENCE				
810I	CV World History	9	Full year	6
77739I	IM World History CPA	9	Full year	6
7739I	IM World History CP	9	Full year	6
808	CV US History I	10	Semester`	3
7737I	IM US History I CPA	10	Semester	3
737I	IM World History CP	10	Semester	3
809	CV US History II CP	11	Full year	6
825	HT US History II CP	11	Full year	6
7738I	IM US History II CPA	11	Full year	6
738I	IM US History II CP	11	Full year	6
LITERACY				
878C	ESL Literacy Through Content CP	9	Full year	6
878L	ESL Literacy Through Literature CP	9	Full year	6
893	Literacy Math CP	9	Full year	6
887	Literacy Science CP	9	Full year	6
879	Literacy Social Science CP	9	Full year	6
COMPUTER LITERACY				
8893A	ESL Through 21st Century Computer Applications	9	Semester AD	1.5
8893B	ESL Through 21st Century Computer Applications	10,11,12	Semester	3

**ESL Directed Academics 839: Assigned by guidance counselors.**

#### ENGLISH AS A SECOND LANGUAGE

**ESL Through Content – Beginner (840, 840SP):** The course is designed for students with little or no English language proficiency. All four domains of second language acquisition (listening, speaking, reading, and writing) are emphasized through content-based instruction and the teaching of learning strategies.

**ESL Through Literature – Beginner 841:** This course is designed for students with little or no English language proficiency. All four domains of second language acquisition (listening, speaking, reading, and writing) are emphasized through theme-based literature instruction.

**ESL Through Content – Intermediate (844, 844SP):** The course is designed for students with a Developing English Proficiency Level. All four domains of second language acquisition (listening, speaking, reading, and writing) will continue to be developed through content-based instruction.

**ESL Through Literature – Intermediate 845:** This course is designed for students with a Developing English Proficiency Level. All four domains of second language acquisition (listening, speaking, reading, and writing) will continue to be developed through theme-based literature instruction.

**ESL Through Literature - Advanced 9-10 (849A, 8849A), ESL Through Literature - Advanced (11-12) (849B, 8849B):** This course is designed for students with an Expanding English Proficiency Level. It stresses the more difficult academic language skills in reading and composition through literature-based instruction using authentic texts.

**ESL Content Through Current Events 849ES:** Designed for students at Entering through Developing English proficient levels, this elective course promotes language development through the analysis of current events.

**ESL Literature Through Movies 848ES:** Designed for students at Entering through Developing English proficient levels, this elective course promotes language development through the analysis of movies.

**ESL Through Public Speaking 848SPK:** Designed for English Learners with an Intermediate language proficiency, this course offers students the skill of speaking clearly and effectively on both social and academic topics.

## **MATHEMATICS**

**Algebra I (CV 811, HA 827, SP 803, IM 7741I, IM 741I, IM 740SP):** This study of Algebra 1 includes topics listed in the Massachusetts Curriculum Frameworks for Mathematics. Topics include: Expressions and Equations, Graphs, Lines, Exponents and Functions, Statistics and Fitting Lines, Introduction to Geometry, Introduction to Geometry, Congruence and Transformations. Additionally, students will develop proficiency in the language of Mathematics.

**Geometry (CV 812, HA 828, IM 742I, IM 7742I, IM 742SP):** This study of Geometry includes topics listed in the Massachusetts Curriculum Frameworks for Mathematics. Topics include: Congruence and Proof, Similarity, Circles, Using Similarity, Analytic Geometry, Real Numbers, Polynomials, Quadratic and Complex Numbers, Functions, Applications of Probability. Additionally, students will develop proficiency in the language of Mathematics.

**Immersion Math Review 473B (1<sup>st</sup> semester), Immersion Math Review 474B (2<sup>nd</sup> semester), CV 474C:** These courses are designed for students who need additional support in essentials skills for MCAS preparation. Topics include: number sense, operations, patterns, relations, algebra, geometry, measurement, data analysis, statistics and probability.

## **SCIENCE**

**Intro to Biology (CV 796FY, HA 746FY, SP 800FY, IM 792FY, IM 785SP):** This course is specifically designed to introduce freshmen English Learners to the scientific vocabulary and major concepts that will be further developed in the sophomore biology curriculum.

**Biology (CV 816, HA 832, SP 800, IM 785I):** This course focuses on biochemistry, cell structure and function, photosynthesis, cellular respiration, reproduction, genetics, and the human body systems. Students will participate in laboratory experiments, multimedia, hands-on learning activities, and projects. Students will take the Biology MCAs at the end of this course. Additionally, students will develop proficiency in the language of Science.

**IM MCAS Biology Review 796I:** This semester course is designed for students who have passed a full year biology course but need additional review to successfully pass MCAS. This course follows the curriculum of a full year Biology course at an accelerated pace. Students will expand upon their multiple choice and open response test-taking skills.

**Immersion Chemistry (8819I, 819I):** This course reflects the Massachusetts Curriculum Framework. Students are introduced to the fundamentals of chemical theory. The understanding of the theory of atomic and molecular behavior, formulas, and equations are presented so that the practical aspects of the importance of chemicals and chemical behavior may be realized. Laboratory work is an integral part of the program.

## **SOCIAL SCIENCE**

**World History (CV 810I, IM 739I, IM 7739I):** Required course for all sophomores that examines United States history during 1763-1877, the establishment of the nation and its struggles including the American Revolution, the development of the government, issues surrounding slavery, the Civil War, and the Reconstruction.

**US History I (CV 808, IM 737I, IM 77373I):** This required course for all juniors examines United States history from 1877 to the present, including many outstanding achievements as well as the nation's major challenges.

**CV US History II 809, HA US History II 825, IM US History II 738I, IM US History II 7738I:** This required course for all freshmen explores the economic and political roots of the modern world, the causes and consequences of the great military and economic events, the rise of nationalism and the continuing persistence of the political, ethnic and religious conflicts around the world.

## **LITERACY**

**ESL Literacy Through Content 878C:** Designed for SLIFE students and English Learners with limited literacy skills, the focus of these courses will be the development of communicative language skills through vocabulary development, oral communication, reading and writing through content-based and theme-based literature instruction. A major goal of this class is to prepare students for entry into Beginner ESL classes. **Approval by the head of the Department of Bilingual/ESL Services is required to enroll.**

**ESL Literacy Through Literature 878L:** Designed for SLIFE students and English Learners with limited literacy skills, the focus of these courses will be the development of communicative language skills through vocabulary development, oral communication, reading and writing through literature-based instruction. A major goal of this class is to prepare students for entry into Beginner ESL classes. **Approval by the head of the Department of Bilingual/ESL Services is required to enroll.**

**Literacy Social Science 879:** Designed for SLIFE students and English Learners with limited literacy skills, this course teaches basic information about the history of America, from the first Americans to today's 21st-century society, while promoting English literacy in the content area. Students will learn important dates and events in American history, as well as information about the Constitution, the Bill of Rights, and responsible citizenship. A major goal is to prepare students for future entry into US History I classes. **Approval by the head of the Department of Bilingual/ESL Services is required to enroll.**

**Literacy Math:** Designed for SLIFE students and English Learners with limited literacy skills, this course offers remediation in basic mathematics concepts while promoting the development of English literacy in the content area. A major goal is to prepare students for future entry into Algebra I classes. **Approval by the head of the Department of Bilingual/ESL Services is required to enroll.**

**Literacy Science 887:** Designed for SLIFE students and English Learners with limited literacy skills, this course provides an overview of the three branches of science with an emphasis on the basic science skills of measurement and the scientific method, while promoting the development of English literacy in the content area. A major goal is to prepare students for entry into Biology classes. **Approval by the head of the Department of Bilingual/ESL Services is required to enroll.**

## **COMPUTER LITERACY**

**ESL through 21ST Century Computer Applications 8893A:** This course introduces students to Microsoft ® (MS) Office using automated technologies. Students will learn to format business and personal document. Additionally, students will receive an introduction to the various Microsoft Office applications (Word, Excel, Publisher, Power Point, Office 365).

**ESL through 21ST Century Computer Applications 8893B:** This course introduces students to Microsoft ® (MS) Office using automated technologies. Students will learn to format business and personal document. Additionally, students will receive an introduction to the various Microsoft Office applications (Word, Excel, Publisher, Power Point, Office 365).



## CLASSICAL AND MODERN LANGUAGE DEPARTMENT

The Brockton High School Classical and Modern Languages Program incorporates the five strands of the National World-Readiness Standards for Learning Languages and the revised Massachusetts Foreign Languages Curriculum Frameworks: Communication, Cultures, Comparisons, Connections and Communities and in conjunction with the Common Core State Standards. **All modern language courses will be conducted primarily in the target language utilizing the three modes of communication: interpersonal, interpretive and presentational.**

Classical and Modern Language classes are designed for non-native speakers of the language. Heritage language speakers may enroll in the first year of a **different** language class from their native language. Those students wishing to pursue studies in their native language must take a placement exam with the Department Coordinator. Heritage Spanish speakers may elect Spanish 1 Heritage Honors or Spanish 2 Heritage Honors by application to the Department Coordinator. Students who are bilingual in English plus Haitian Creole/French, Cape Verdean Creole/Portuguese and/or Spanish may apply to the Medical Interpretation and Translation Program. Students may also take a placement test through the Department Coordinator to determine the level. All questions should be referred to the Coordinator.

To remain in Honors, a student must maintain a B– or better average, CPA, students must maintain a C– or better average, and all other students will be placed in the CP level. If a student receives an F for a final course grade, he/she may repeat the course only if space allows but ***may NOT take the same course more than twice.***

MANDARIN CHINESE				
COURSE	TITLE	YEAR	TERM	CREDITS
1364	Mandarin Chinese I CP	9,10,11	Full year	6
364	Mandarin Chinese I CPA	9,10,11	Full year	6
365	Mandarin Chinese I H	9,10,11	Full year	6
1366	Mandarin Chinese II CP	9,10,11,12	Semester	3
366	Mandarin Chinese II CPA	9,10,11,12	Semester	3
368	Mandarin Chinese II H	9,10,11,12	Semester	3
1378	Mandarin Chinese III CP	9,10,11,12	Semester	3
378	Mandarin Chinese III CPA	9,10,11,12	Semester	3
379	Mandarin Chinese III H	9,10,11,12	Semester	3
1394	Mandarin Chinese IV CP	10,11,12	Semester	3
394	Mandarin Chinese IV CPA	10,11,12	Semester	3
395	Mandarin Chinese IV H	10,11,12	Semester	3
1397	Mandarin Chinese V CP	10,11,12	Semester	3
1398	Mandarin Chinese V CPA	10,11,12	Semester	3
1399	Mandarin Chinese V H	10,11,12	Semester	3
3399	AP Mandarin Chinese	12	Full Year	6
IB398	IB Mandarin Chinese Year 1	11	FY/AD	3
IB1399	IB Mandarin Chinese Year 2	12	Full Year	6

## **CHINESE**

**Mandarin Chinese I (1364, 364, 365):** The primary goal of modern foreign language study is communicative proficiency. To achieve this, students who study Mandarin Chinese I will learn to communicate in Chinese through practice and presentation in all four skill areas: reading, writing, listening, and speaking. Course content is presented thematically. Units of study include vocabulary, grammar, conversation, reading passages, writing samples, listening activities, and videos. The culture of China will be studied through readings, videos, and class discussions.

**Mandarin Chinese II (1366, 366, 368):** Students will continue learn to communicate in Chinese through practice and presentation. Students will listen to, read, comprehend, write, and speak Chinese with increasing accuracy and fluency. Course content is presented thematically. Units of study include vocabulary, grammar, conversation, reading passages, writing samples, listening activities, and videos. The study of Chinese culture will continue through readings, videos, and class discussions.

**Mandarin Chinese III (1378, 378, 379):** Students who study Mandarin Chinese III will continue to learn to communicate in Chinese through practice and presentation in all four skill areas: reading, writing, listening, and speaking. Students will listen to, read, comprehend, write, and speak Chinese with increasing accuracy and fluency. Course content is presented thematically. Units of study include vocabulary, grammar, conversation, reading passages, writing samples, listening activities, and videos. The study of Chinese culture will continue through reading, videos, and class discussions.

**Mandarin Chinese IV (1394, 394, 395):** Students who study Mandarin Chinese IV will continue to learn to communicate in Chinese through practice and presentation in all four skill areas: reading, writing, listening, and speaking. Students will listen to, read, comprehend, write, and speak Chinese with increasing accuracy and fluency. Course content is presented thematically. Units of study include vocabulary, grammar, conversation, reading passages, writing samples, listening activities, and videos. The study of Chinese culture will continue through reading, videos, and class discussions.

**Mandarin Chinese V (1397, 1398, 1399):** Students who study Mandarin Chinese V will continue to learn to communicate in Chinese through practice and presentation in all four skill areas: reading, writing, listening, and speaking. Students will listen to, read, comprehend, write, and speak Chinese with increasing accuracy and fluency. Course content is presented through a selection of Chinese reading and the focus of instruction is on reading, writing, and speaking Chinese. The study of Chinese culture will continue through reading, videos, and class discussion.

**AP Chinese Language and Culture 3399:** The goal of the Advanced Placement Chinese class, as set forth by the College Board, is for students to achieve a high level of proficiency in the four language skills established by the ACTFL Proficiency and the World-Readiness Standards for Learning Languages. Upon completing the course, students are expected to be able to speak, listen, and read and write characters with a high level of proficiency. The course challenges able students while providing them with a means of obtaining college credit and/or advanced standing in college placement. The class will be conducted in Chinese. Students will be required to take the Chinese Language and Culture Advanced Placement Exam in May. **Prerequisite:** A B+ or better in fourth and fifth year Honors classes or an A- or better in fourth or fifth year College Preparatory Advanced level language classes. Teacher recommendation, application and Coordinator approval.

**IB Mandarin Chinese IB398 (IB Year 1—Language B—Standard Level/High Level):** In the first year of this two-year course, students will study a variety of topics to develop their Mandarin Chinese-language skills and cultural awareness. Students will explore aspects of the Chinese world as they study language, literature, films, culture, and current issues around the globe. Students will acquire and develop critical thinking skills necessary for various written tasks including formal essays, letters and news articles. They will also develop their speaking skills by means of oral presentations. Listening skills will be practiced through discussion, music, and film. The understanding and use of correct grammar and appropriate language in both spoken and written Mandarin Chinese will be emphasized throughout the course. Students will work to become proficient communicators of Chinese and will be encouraged to expand their views of the world and its peoples. **Prerequisite:** B+ or better in fourth or fifth year Honors classes or an A- or better in fourth or fifth year College Preparatory Advanced level language classes, teacher recommendation, application, and Coordinator approval.

**IB Mandarin Chinese IB 399 (IB Year 2—Language B—Standard Level/High Level):** In the second year of this two-year course, students will continue their studies of the Chinese speaking world and their development of language skills. In addition, they will develop a sense of self-awareness and the skills to become lifelong learners and contributing members of our ever-changing world. **Prerequisites:** Completion of junior IB Mandarin Chinese, teacher recommendation, and Coordinator approval.

LATIN				
COURSE	TITLE	YEAR	TERM	CREDITS
1340	Latin I CP	9,10,11	Full Year	6
340	Latin I CPA	9,10,11	Full Year	6
341	Latin I H	9,10,11	Full Year	6
1343	Latin II CP	9,10,11,12	Semester	3
343	Latin II CPA	9,10,11,12	Semester	3
344	Latin II H	9,10,11,12	Semester	3
1345	Latin III CP	9,10,11,12	Semester	3
345	Latin III CPA	9,10,11,12	Semester	3
346	Latin III H	9,10,11,12	Semester	3
1347	Latin IV CP	10,11,12	Semester	3
347	Latin IV CPA	10,11,12	Semester	3
348	Latin IV H	10,11,12	Semester	3
1373	Latin V CP	10,11,12	Semester	3
373	Latin V CPA	10,11,12	Semester	3
374	Latin V H	10,11,12	Semester	3
342	AP Latin	12	Full Year	6
IB342	IB Latin Year 1	11	FY/AD	3
IB343	IB Latin Year 2	12	Full Year	6

**Latin I (1340, 340, 341):** The primary goal of classical language study is reading comprehension. To achieve this, the study of Latin I will emphasize vocabulary, grammar, reading, analysis of sentence structure, translating, and word derivation. Students will also learn to listen to, write, and use Latin orally. Roman history and culture, geography, and mythology will be studied through readings, videos, and class discussions.

**Latin II (1343, 343, 344):** The primary goal of classical language study is reading comprehension. To achieve this, the study of Latin II will continue to emphasize vocabulary, grammar, reading, analysis of sentence structure, translating, and word derivation. Students will listen to, write, and use Latin orally at increasing levels of difficulty. The study of Roman history and culture, geography, and mythology will continue through readings, videos, and class discussions.

**Latin III (1345, 345, 346):** A primary goal of classical language study is reading comprehension. To achieve this, the study of Latin III will continue to emphasize vocabulary, grammar, reading, analysis of sentence structure, translating, and word derivation. Students will listen to, write, and use Latin orally at increasing levels of difficulty. The study of Roman history and culture, geography, and mythology will continue through readings, videos, and class discussions. Challenging authentic readings will be introduced.

**Latin IV (1347, 347, 348):** At this level, students will develop their skills in reading, writing, and Latin translation through original texts of selected Latin authors and literature, including history and mythology. The course includes extensive new vocabulary and advanced grammatical structures.

**Latin V (1373, 373, 374):** Students will continue to develop reading, writing, and translating skills in Latin through original texts of selected Latin authors and literature, including history and mythology. The course includes extensive new vocabulary and review of advanced grammatical structures.

**Advanced Placement Latin 342:** The goal of the Advanced Placement Latin class, as set forth by the College Board, is for students to achieve a high level of proficiency in the language skills established by the National Standards for Foreign Language Learning. Upon completing the course, students are expected to be able to comprehend, interpret and translate Latin, and to read and write with a high level of proficiency. The course challenges able students while providing them a means of obtaining college credit and/or advanced standing in college placement. Students will be required to take the Latin Language Advanced Placement Exam in May.

**Prerequisite:** A B+ or better in fourth or fifth year Honors classes or an A- or better in all fourth or fifth year College Preparatory Advanced level language classes, teacher recommendation, application, and Coordinator approval.

**IB Latin IB342 (IB Year 1 – Language B – Standard Level/High Level):** The goal of IB Latin is for students to gain an understanding and appreciation of the language, literature and culture of the classical age and its impact on modern cultures and languages through the reading and analysis of both epic literature and love poetry. In the Junior year, students are expected to examine, comprehend, interpret and translate the writings of Ovid, specifically *Metamorphoses* and *Amores*. *This course will prepare students for the second full year in which students will participate in the external assessment given by the International Baccalaureate Diploma Programme.* **Prerequisite:** B+ or better in fourth or fifth year Honors classes or an A- or better in all fourth or fifth year College Preparatory Advanced level language classes, teacher recommendation, application and Coordinator approval.

**IB Latin IB343 (IB Year 2 – Language B – Standard Level/High Level):** The goal of IB Latin is for students who have completed IB Latin-Junior Year to gain an understanding and appreciation of the language, literature and culture of the classical age and its impact on modern cultures and languages through the reading and analysis of both epic literature and love poetry. In the senior year, students are expected to examine, comprehend, interpret and translate the writings of Vergil, Catullus and Horace. Students will be required to sit for the IB Latin B Standard Level examination in May. **Prerequisites:** Completion of Junior IB Latin, teacher recommendation and Coordinator approval.

SPANISH				
1351	Spanish I College Prep	9,10,11	Full Year	6
351	Spanish I College Prep Advanced	9,10,11	Full Year	6
352	Spanish I Honors	9,10,11	Full Year	6
1354	Spanish II College Prep	9,10,11,12	Semester	3
354	Spanish II College Prep Advanced	9,10,11,12	Semester	3
355	Spanish II Honors	9,10,11,12	Semester	3
1357	Spanish III College Prep	9,10,11,12	Semester	3
357	Spanish III College Prep Advanced	9,10,11,12	Semester	3
358	Spanish III Honors	9,10,11,12	Semester	3
1359	Spanish IV College Prep	10,11,12	Semester	3
359	Spanish IV College Prep Advanced	10,11,12	Semester	3
360	Spanish IV Honors	10,11,12	Semester	3
1370	Spanish V College Prep	10,11,12	Semester	3
370	Spanish V College Prep Advanced	10,11,12	Semester	3
372	Spanish V Honors	10,11,12	Semester	3
376	AP Spanish	10,11,12	Full Year	6
IB376	IB Spanish Year 1	11	FY/AD	3
IB 1377	IB Spanish Year 2	12	Full Year	6
1352	Spanish Heritage I	9,10,11,12	Semester	3
1353	Spanish Heritage II	9,10,11,12	Semester	3
3350	Spanish Cinema	10,11,12	Semester	3

**Spanish I (1351, 351, 352):** The primary goal of modern foreign language study is communicative proficiency. Students who study Spanish I will learn to communicate in Spanish through practice and presentation in all four skill areas: reading, writing, listening, and speaking. Course content is presented thematically. Units of study include vocabulary, grammar, conversation, reading passages, writing samples, listening activities, and videos. The cultures of Spanish-speaking countries will also be studied through readings, videos, and class discussions.

**Spanish II (1354, 354, 355):** Students who study Spanish II will continue to learn to communicate in Spanish through practice and presentation in all four skill areas: reading, writing, listening, and speaking. Students will listen to, read, comprehend, write, and speak Spanish with increasing accuracy and fluency. Course content is presented thematically. Units of study include vocabulary, grammar, conversation, reading passages, writing samples, listening activities, and videos. The study of Spanish-speaking cultures will continue through readings, videos, and class discussions.

**Spanish III (1357, 357, 358):** Students will continue to learn to communicate in Spanish through practice and presentation in all four skill areas: reading, writing, listening, and speaking. Students will listen to, read, comprehend, write, and speak Spanish with increasing accuracy and fluency. Course content is presented through a selection of Spanish readers, and the focus of instruction is on reading, writing, and speaking Spanish. The study of Spanish-speaking cultures will continue through readings, videos, and class discussions. The class will be conducted in Spanish.

**Spanish IV (1359, 359, 360):** Students will develop their reading, writing, listening, and oral discussion skills in Spanish through readings related to the art and literature of Spanish-speaking countries and from videos selected for their cultural and/or historical content. The course includes extensive new vocabulary and advanced grammatical structures. The class will be conducted in Spanish.

**Spanish V (1370, 370, 372):** Students will study the culture of Spain and Latin America, including geography, government, customs, food, literature, art, music, and dance. Students will read, discuss, write, and view videos about these topics in Spanish. They will compare cultures, while continuing to improve reading, writing, speaking, and listening skills in Spanish. Extensive new vocabulary and advanced grammatical structures will be presented and reviewed. The class will be conducted in Spanish.

**Advanced Placement Spanish 376:** The goal of the Advanced Placement Spanish class, as set forth by the College Board, is for students to achieve a high level of proficiency in the four language skills established by the ACTFL Proficiency Guidelines and the National Standards for Foreign Language Learning. Upon completing the course, students are expected to be able to comprehend formal and informal Spanish, and to speak, read and write with a high level of proficiency. The course challenges able students while providing them a means of obtaining college credit and/or advanced standing in college placement. The class will be conducted in Spanish. Students will be required to take the Spanish Language Advanced Placement Exam in May. **Prerequisite:** B+ or better in fourth or fifth year Honors classes or an A- or better in all fourth or fifth year College Preparatory Advanced level language classes, teacher recommendation, application, and Coordinator approval.

**IB Spanish IB376 (IB Year One – Language B – Standard Level/High Level):** In the first year of this two-year course, students will study a variety of topics to develop their Spanish-language skills and cultural awareness. During their time in class, students will explore aspects of the Hispanic world as they study language, literature, films, culture, and current issues around the globe. Students will acquire and develop critical thinking skills necessary for various written tasks including formal essays, letters and news articles. They will also develop their speaking skills by means of oral presentations, both informal and formal. Listening skills will be practiced through various means, such as discussion, music, and film. The understanding and use of correct grammar and appropriate language in both spoken and written Spanish will be emphasized throughout the course. Students will work to become proficient communicators of Spanish and will be encouraged to expand their views of the world and its peoples. The class will be conducted in Spanish. **Prerequisites:** Completion of Spanish 3, teacher recommendation, and Coordinator approval.

**IB Spanish IB1377 (IB Year Two – Language B – Standard Level/High Level):** In the second year of this two-year course, students will continue their studies of the Spanish speaking world and their development of language skills. In addition, they will develop a sense of self-awareness and the skills to become lifelong learners and contributing members of our ever-changing world. Students will be required to sit for the IB Spanish B Standard Level examination in May. The class will be conducted in Spanish. **Prerequisites:** Completion of IB Spanish 1, teacher recommendation, application, and Coordinator approval.

**Spanish 1 Heritage Honors 1352: This course is for native Spanish speakers.** Students who study Spanish I Heritage will learn to communicate effectively in Spanish through practice and presentation in all four skill areas: reading, writing, listening and speaking. This high level, intensive course is designed to develop and refine linguistic and cultural skills while formally advancing students' knowledge of extended vocabulary, mechanics of the language and grammatical structures. Hispanic culture will be addressed beginning with U.S. Hispanic Culture and extending to Europe and the Americas. Authentic materials will be used. The goal of the heritage language learners' sequence is to provide students the opportunity to become fully bilingual and biliterate in today's global environment and eventually advancing to the IB, AP or Medical Interpretation courses offered at BHS. **Admission to this course is by application to the Foreign Language Department Coordinator for Grade 8 students. High School students may be admitted with permission from the Coordinator.**

**Spanish 2 Heritage Honors 1353: This course is for native Spanish speakers.** Students who study Spanish 2 Heritage will learn to communicate effectively in Spanish through practice and presentation in all four skill areas: reading, writing, listening and speaking. This high level, intensive course is designed to further develop and refine linguistic and cultural skills while formally advancing students' knowledge of extended vocabulary, mechanics of the language and grammatical structures. Hispanic culture will be addressed, and authentic materials will be used. The goal of the heritage language learners' sequence is to provide students the opportunity to become fully bilingual and biliterate in today's global environment and eventually advancing to the IB, AP or Medical Interpretation courses at BHS. **Prerequisite: Spanish 1 Heritage Honors**



MEDICAL INTERPRETATION				
MD320	French/Haitian Medical Interpretation I	11	Semester	3
MD321	Portuguese/Cape Verdean Medical Interpretation I	11	Semester	3
MD322	Spanish Medical Interpretation I	11	Semester	3
MD323	French/Haitian Medical Interpretation II	12	Full Year	6
MD324	Portuguese/Cape Verdean Medical Interpretation II	12	Full Year	6
MD325	Spanish Medical Interpretation II	12	Full Year	6
MD326	10-Hour Medical Interpretation Internship	12		1.5

### **Medical Interpretation and Translation I**

#### **French/Haitian Creole MD320, Portuguese/Cape Verdean Creole MD321, Spanish**

**MD322:** The goal of this course is to prepare bilingual high school students for interpreting in the workforce. Students will develop an understanding of interpreting standards of practice, concepts and protocols, consistently improve interpreting skills, and learn to self-assess linguistic and cultural knowledge and limitations. Units of study include ethics, local and national laws governing interpreting practice, the culture of medicine, the ethnic cultures of the populations being served, and the culture of being a professional interpreter. These topics will be studied through readings, videos, class discussions and simulated interpreting practice. **NOTE:** Students will begin the study of Medical Interpretation and Translation semester two of the junior year and will continue for a full year of senior year. Application for Coordinator Approval. **\*Internship participation is mandatory for this course.**

### **Medical Interpretation and Translation II**

#### **French/Haitian Creole MD323, Portuguese/Cape Verdean Creole MD324, Spanish MD325:**

This course is a continuation of Medical Interpretation and Translation I. Students will continue to develop an understanding of interpreting standards of practice, concepts and protocols, consistently improve interpreting skills, and learn to self-assess linguistic and cultural knowledge and limitations. **Prerequisite:** Medical Interpretation and Translation I with teacher recommendation and Coordinator approval. **\*Internship participation is mandatory for this course.**

**Medical Interpretation Internship MD326:** Placement at a local medical facility is available for a ten-hour job shadow/internship for one-half credit to be completed in conjunction with Medical Interpretation II.

**Spanish Cinema 3350:** students will view Spanish and Latin American cinema, considering these cultural productions in conjunction with current events and social issues. Students will analyze the cinematic and technical style of the films, write reviews, and debate and discuss the social issues presented. **Prerequisite: Spanish 4 Honors or above**

## ART DEPARTMENT

	Course No.	Course Title	Level AP, IB, H, CPA CP, N	Year of Students Fr, So, Jr, Sr	Sem (S) or Full Year (FY)	Meets Every Day (ED) or Alternate Day (AD)	Credits
*	906	Ceramics	N	Fr, So, Jr, Sr	S	AD	1.5
	906 FS			Fr, So			
*	914	Sculpture	N	So, Jr, Sr	S	AD	1.5
	923	Drawing and Painting I	N	Fr, So, Jr, Sr	S	AD	1.5
	923FS			Fr, So			
*	924	Drawing and Painting II	N	So, Jr, Sr	S	AD	1.5
*	925	Advanced Drawing and Painting	H	So, Jr, Sr	S	ED	3
*	927	Advanced Placement Art Studio	AP	Jr, Sr	FY	ED	3
*	912	Art Studio	H	Jr, Sr	S	ED	3
*	964	Illustration	N	Fr, So, Jr, Sr	S	AD	1.5
*	931	Printmaking	N	So, Jr, Sr	S	AD	1.5
	953	Digital Photography	N	Fr, So, Jr, Sr	S	AD	1.5
	953 FS			Fr, So			
*	918	Digital Photography II	N	So, Jr, Sr	S	AD	1.5
	957	Digital Imaging	N	Fr, So, Jr, Sr	S	AD	1.5
	957FS			Fr, So			
*	954	Digital Imaging II	N	So, Jr, Sr	S	AD	1.5
	943	Acting	N	Fr, So, Jr, Sr	S	AD	1.5
	943 FS			Fr, So			
*	917	Acting II	N	So, Jr, Sr	S	AD	1.5
*	941	Theatrical Set Design	N	Fr, So, Jr, Sr	S	AD	1.5
*	929	Musical Theatre Production Workshop	N	Fr, So, Jr, Sr	S	AD	1.5
*	945	Play Production	N	Fr, So, Jr, Sr	S	AD	1.5
	920	History of Theatre	N	Jr, Sr	S	ED	3 English
	956	Aesthetics of Film	N	Jr, Sr	S	AD	3 English
	963	Producing Television Programs	N	Fr, So, Jr, Sr	S	AD	1.5
*	985	Television Documentaries	N	Fr, So, Jr, Sr	S	AD	1.5
*	1960	Advanced Television and Media Production	N	So, Jr, Sr	S	ED	3
	IB927	IB Art I	IB	Jr	FY	AD	1.5
	IB928	IB Art II	IB	Sr	FY	AD	1.5
*	948	Visual Arts- Independent study	N	Jr, Sr	S	AD	1.5
*	988	Educational Television Service – Independent study	N	Jr, Sr	S	AD	1.5
*	926	Theatre Arts - Independent Study	N	Jr, Sr,	S	AD	1.5

\* Indicates the course may be taken more than once for credit.

○ Course requires prerequisites – see course guide.

○ Course requires application and department head approval.

○ Course requires individual student/teacher contract and department head approval.

**Drawing and Painting I (923, 923FS):** In this course students will develop basic drawing and painting skills using a variety of materials. Students will learn about composition, design, sketching, drafting and color theory. Students will explore methods of realistic drawing, shading and color mixing. Students will learn how to render 3D objects on a flat 2D surface. Students will demonstrate learned skills creatively through the completion of observational drawing and paintings. Additionally, students will analyze their work critically through verbal and written evaluations.

**Illustration 964:** In this course students will be introduced to many styles and techniques associated with the art of illustration, such as colored pencil, pen and ink, and watercolor. Students will learn to enhance their own drawings and problem-solving skills. Students will learn the importance of the illustrator in communicating stories, reactions, thoughts, and ideas both real and imaginary. Written and oral work will be assigned in conjunction with projects.

**Printmaking 931:** Printmaking is the process of transferring an image from one surface (a printmaking plate or stamp) onto another surface (often paper). Students will be introduced to a variety of reduction and intaglio printmaking techniques including linoleum, collagraph, dry point, and monoprint methods. Students will create visually dynamic prints taking into account composition, design and color theory. Students will participate in oral and written critiques throughout the course. This class can be taken more than once for credit. **Prerequisite:** 923 Drawing and Painting I, or 964 Illustration

**Drawing and Painting II 924:** Students will build on the skills learned in Drawing and Painting I and be challenged to achieve a more advanced level of drawing and painting skills. Students will explore multiple mediums, work on a larger scale and develop a more in-depth understanding of the creative process. Students will develop personal interpretations of sources through a reflective process of various written assessments. **Prerequisite:** 923, Drawing and Painting I or 964 Illustration

**Advanced Drawing and Painting 925:** This course is an extension of Drawing and Painting II. Students will be challenged to achieve a sophisticated level of drawing and painting skills. Students will work through the creative process to develop original ideas and move forward in developing their personal style. Students will participate in verbal, written and visual correspondence on a regular basis. **Prerequisite:** 923, 924 Drawing and Painting I and II

**Art Studio 912:** This studio art course challenges and inspires students to progress and master a sophisticated level of artistic skill. Each student receives personal attention in the development of their work and will show a high level of commitment and initiative that is expected of a serious art student. Students will participate in verbal, written and visual correspondence on a regular basis. **Prerequisite:** 923, 924 Drawing and Painting I and II

**Advanced Placement Art Studio 927:** This full-year college-level advanced placement course emphasizes the development of an extensive portfolio of work. Students must demonstrate proficiency and an advanced level in a variety of materials and techniques while still maintaining a concentration under a concept/theme. Portfolios are sent to a national panel for judgment and grading on the AP scale. This conforms to the Princeton directives. **Prerequisite:** **Portfolio review and Department Head approval**

**Photography I (953, 953FS):** Students will learn camera functions, composition techniques and computer technical skills in this introduction to photography. Students will use Adobe Photoshop as a tool to edit, manipulate and create original works of art. In addition to their visual projects, students will participate in oral critiques and written assessments of their work and the creative process. **Students will be required to take photos both inside and outside of class.**

**Photography II 918:** students will continue their exploration of photographic techniques. Students will explore DSLR cameras, with an emphasis on composition techniques and creative expression via photographs. Adobe Photoshop's editing capabilities will be explored in greater depth. In addition to their visual projects, students will participate in oral critiques and written assessments of their work and the creative process. **In this advanced course students are required to take photos outside of class.** **Prerequisite: 953 Photography I**

**Digital Imaging I (957, 957FS):** In this introductory course student will use Adobe Photoshop and Illustrator to create imaginative and original fine art through manipulation, alteration, and digital enhancement. In addition to their visual projects, students will participate in oral critiques and written assessments of their work and the creative process.

**Digital Imaging II 954:** In this advanced course students will build on the Adobe skills they learned in Digital Imaging I and expand their creative process to integrate studio art skills, like drawing and painting, into computer-based artwork. Experimentation, development of technical skill and craftsmanship are emphasized. The creative process is emphasized through visual, oral and written methods. **Prerequisite: 957 Digital imaging I**

**Ceramics I (906, 906FS):** Students will be introduced to the basic principal methods of working with clay. Various techniques include pinch pot, slab and coil forming, as well as other techniques. Students will respond to works of art in written and oral critiques, specific ceramic assignments, and analysis of historical art contexts. Students will learn to relate aspects of design principals to both functional and sculptural art forms. Mastery of introductory techniques will transition to working on assignments with increasing levels of complexity based on each student's aesthetic directions. This course may be taken more than once for credit.

**Sculpture 914:** Students will explore the conceptual art world through the study and practice of sculpture and site-specific art. Students will be introduced to historic and contemporary sculpture and will study the history and creation of these famous works. In class students will work with wire, plaster, recycled materials, clay, as well as objects found in nature. Students will create pieces that communicate ideas around identity, social issues, current events, and abstract thoughts. Class critiques will allow students to speak about their work, as well as give constructive criticism and feedback to their peers. Students will learn the importance of visual literacy and will develop a body of work that demonstrates an understanding of techniques, craft, and language within three-dimensional design and installation. **Prerequisite: 906 Ceramics**

**Acting I (943, 943FS):** This performance-based course is designed to teach students the fundamentals of stage performance. Students will work on monologues, scenes, and improvisational exercises. Students may take this class several times as each semester new material will be worked on. Students will evaluate their own performance and the performances of their classmates through journal writing, open response, and oral discussion. Research projects on theatre history and written reviews of theatrical performance may be included as part of the class.

**Acting II 917:** This course is an extension of Acting I. Students will expand their knowledge of acting techniques, the role of the actor in interpreting literature for performances, as well as explore theatrical conventions. This course requires reading, researching, analyzing, and evaluating various types of literature. Group and solo performances in class will be mandatory during the year. Both scripted assignments and improvisational assignments will be the primary focus for performance. A dominant objective of the course is to continue to develop the self-discipline and self-confidence of the student along with his/her cultural awareness in the realm of the performing arts. **Prerequisite:** [943 Acting I](#)

**Aesthetics of Film 956:** This course introduces students to film analysis and teaches them to become critics and helps them gain tools to properly analyze a film both in written and oral form. Students taking film will be exposed to several classic films and films that stand out in their general. Students will receive credits in English for this course.

**History of Theatre 920:** This course explores the history and evolution of Western Theatre through script reading, script analysis, and production analysis. Different types and styles of theatrical literature will be analyzed in the context of social, political, and economic conditions of the period as well as modern times. Students will receive credits in English for this course.

**Theatrical Set Design 941:** In this course students will be introduced to the artistic, theoretical, historical and mechanical elements of the set design process. Through research-based projects and script analysis, students will gain an understanding and appreciation of theatre scenic design as an art form. Oral and written critiques will augment the hands-on approach.

**Play Production 945:** Students selecting this workshop will be engaged in the production aspects of the December Play. Individual and group projects will be assigned with an emphasis on stage terminology, play analysis, scenic construction, lighting, props creation, and stage maintenance. Students will also participate in written and oral critiques. Research and written assignments are given at appropriate intervals. This course may be taken more than once for credit

**Musical Theatre Production Workshop 929:** Students selecting this workshop will be engaged in the production aspects of the Spring Musical. Individual and group projects will be assigned with an emphasis on stage terminology, musical play analysis, scenic construction, lighting, props creation, and stage maintenance. Students will also participate in written and oral critiques. Research and written assignments are given at appropriate intervals. This course may be taken more than once for credit.

**Theatre Arts 926:** This independent study course is for advanced or difficult to schedule students who are serious theatre students (hand scheduled). Reading and writing assignments will be given on an individual basis. Prerequisite: Teacher Referral, Department head approval needed. This is an individual contract between teacher and student.

**Producing Television Programs 963:** Students will learn to operate television equipment, edit a video, write scripts and produce TV programs in this introduction to the basics of television. Students will participate in producing programs to be aired on Brockton's educational cable channel.

**Television Documentaries 985:** Introduction to the basics of writing and producing news documentaries. Students will learn how to write for television, edit stories, interview subjects and field produce. Students will work on independent as well as group projects. **Prerequisite: 963**

**Producing Television Programs**

**Advanced Television and Media Production 1960:** students will expand upon skills from previous television classes to write, direct and produce BHS television shows such as "School Scene", "Boxer High- lights" and other special projects to air on Brockton's education channel 98. Students will gain experience in studio production and portable production techniques. Students will work on independent as well as in groups to write scripts, develop interviewing skills, and edit video in Final Cut Pro and iMovie. This course may be taken more than once.

**Prerequisite: 963 Producing Television Programs or 985 Television Documentaries**

**Independent Study in Educational Television Service 988:** one-semester senior course allows students who have demonstrated ability and interest in the Television Studio to work one period a day for 3 credits. A student may work first, second, or both semesters and must receive approval from the department head to enroll. **Prerequisite: 963 Producing Television Programs and 985 Television Documentaries. Teacher recommendation and department head approval are required for enrollment**

**IB Art I IB927:** Studio-based course emphasizes both the creative process and the final artistic product in 2-dimensional and 3-dimensional art forms. As students develop their craft they will conduct a thoughtful inquiry into their own thinking and art-making processes recording this learning in written and visual formats. Students are introduced to the historical, social, and analytical components of the art-making process as they research the history and practice of various art forms across cultures. They will learn how to connect their research to their own work, creating art that expresses personal meaning within a cultural context. In addition to learning how to appreciate and evaluate their own work and that of others, students will be encouraged to broaden their scope and explore their own work, with an emphasis on the communication of ideas through exhibitions and presentations.

**IB Art II IB928:** studio-based course emphasizes both the creative process and the final artistic product in 2-dimensional and 3-dimensional art forms. As students develop their craft they will conduct a thoughtful inquiry into their own thinking and art-making processes –recording this learning in written and visual formats. Students are introduced to the historical, social, and analytical components of the art-making process as they research the history and practice of various art forms across cultures. They will learn how to connect their research to their own work, creating art that expresses personal meaning within a cultural context. In addition to learning how to appreciate and evaluate their own work and that of others, students will be encouraged to broaden their scope and explore their own work, with an emphasis on the communication of ideas through exhibitions and presentations. **Prerequisite: IB Art I**

**Visual Arts I 948:** This independent study course is for advanced or difficult to schedule students who are serious art students (hand scheduled). Reading and writing assignments will be given on an individual basis. **Prerequisite: Teacher Referral, Department head approval. This is an individual contract between teacher and student.**



**BUSINESS, CAREER, VOCATIONAL AND TECHNICAL EDUCATION  
DEPARTMENT (BCVTE)**

<b>COURSE</b>	<b>TITLE</b>	<b>YEAR</b>	<b>TERM</b>	<b>CREDITS</b>
<b>BUSINESS: FINANCE, MARKETING, AND MANGEMENT</b>				
620	Introduction to Business	9,10,11,12	Semester	1.5
646	Personal Finance and Consumer Education	9,10,11,12	Semester	1.5
606	Financial Market Analysis	11,12	Semester	3.0
675	Banking Training	12	Semester	3.0
677	Banking Internship	12	Semester	3.0
601	Principles of Marketing and Entrepreneurship	10, 11, 12	Semester	3.0
604	Marketing Analytics	11, 12	Semester	3.0
650	DECA	12	Full Year	6.0
664	Accounting I	11, 12	Semester	3.0
665	Accounting II	11, 12	Semester	3.0
607	Operations Management	11,12	Semester	3.0
608	People Management	11, 12	Semester	3.0
609	Data Management	11, 12	Semester	3.0
696	Sports Management	12	Semester	3.0
<b>MEDIA COMMUNICATIONS</b>				
707	Graphic Experience	9, 10, 11	Semester	1.5
666	Web Design I	10, 11	Semester	1.5
613	Web Design II	10, 11	Semester	1.5
610	Website Development	11, 12	Semester	3.0
611	Web Capstone Seminar	12	Semester	3.0
663	Desktop Publishing I	10, 11	Semester	1.5
662A	Desktop Publishing II	11, 12	Semester	1.5
662	Desktop Publishing III: Yearbook Production Capstone	12	Full Year	6.0
<b>INFORMATION TECHNOLOGY</b>				
770T	IT Essentials: CISCO Networking Academy	11, 12	Semester	3.0
682	A+ Software: CISCO Networking Academy	11, 12	Semester	3.0
771	A+ Hardware: CISCO Networking Academy	11, 12	Semester	3.0
697	Cyber Security: CISCO Networking Academy	11, 12	Semester	3.0
<b>AUTOMATION</b>				
7710	Auto CAD (Computer Aided Design)	10, 11, 12	Semester	3.0
7712	3-D Modeling I	11, 12	Semester	3.0
7713	3-D Modeling II	11, 12	Semester	3.0
7714	Architectural Design and BIM	11, 12	Semester	3.0
<b>COMPUTER SCIENCE AND PROGRAMING</b>				
661	Intro to Programming	10, 11, 12	Semester	1.5
7715	Code Lab	10, 11, 12	Semester	1.5
6670PLTW	Computer Science Essentials (PLTW)	9	Semester	6.0
767T	Engineering the Future (Sc. and Tech MCAS)	10	Full Year	6.0



<b>ENGINEERING TECHNOLOGIES</b>				
7716	Engineering Lab I	9, 10	Semester	1.5
780PLTW	Introduction to Engineering Design (PLTW)	9	Full Year	6.0
7718	Introduction to Electronic Technology	10, 11, 12	Semester	1.5
7719	Electronic Engineering Systems	11, 12	Full Year	6.0
7720	Electrical Engineering Principles	11, 12	Full Year	3.0
7721	Technical Drawing Essentials (MACWIC)	9, 10, 11	Semester	3.0
7725	Engineering Drawing: Blue Prints (MACWIC)	11, 12	Semester	3.0
7728T	Engineering and Manufacturing (MACWIC)	10, 11, 12	Semester	3.0
7717	Engineering Lab II: Engineering Capstone	12	Semester	3.0
723	Auto Care and Maintenance	11, 12	Semester	1.5
<b>OFFICE TECHNOLOGIES</b>				
690	21 <sup>ST</sup> Century Computer Applications	9	Semester	1.5
688	MOS Word	11, 12	Semester	3.0
689	MOS Excel	11, 12	Semester	3.0
<b>EXPLORING HEALTH ASSISTING PROFESSIONS</b>				
766	Exploring Health Assisting Professions I	9, 10	Semester	1.5
767	Exploring Health Assisting Professions II	10, 11	Semester	1.5
768	Health Assisting Training	12	Semester	3.0
749	Health Assistant Externship	11, 12	Semester	1.5
<b>HOSPITALITY AND RESTAURANT FOOD PRODUCTION</b>				
880	Food and Nutrition Lab.	9, 10	Semester	1.5
734	Hospitality and Restaurant Food Production I	11	Semester	6.0
735	Hospital and Restaurant Food Production II	12	Semester	12
<b>VOCATIONAL EDUCATION</b>				
700	Exploratory Program	9	Semester	1.5
713T	CTE-CCED- College and Career Education I	9	Semester	1.5
714T	CTE-CCED- College and Career Education II	10	Semester	1.5
715T	CTE-CCED- College and Career Education III	11	Semester	1.5
716T	CTE-CCED- College and Career Education IV	12	Semester	1.5
701	Automotive Technology I	10	Full Year	6.0
702	Automotive Technology II	11	2 x SEM	6.0
702T	Automotive Technology III	12	2 x SEM	6.0
703	Construction Technology I	10	Full Year	6.0
704	Construction Technology II	11	2 x SEM	6.0
704T	Construction Technology III	12	2 x SEM	6.0
710	Graphics Design and Printing Technologies I	10	Full Year	6.0
711	Graphics Design and Printing Technologies II	11	Full Year	6.0
711T	Graphics Design and Printing Technologies III	12	Full Year	6.0

The charts following are designed to assist parents and students in selecting courses that align with specific careers. Students do not need ALL THE COURSES as the chart represents suggested courses.

Students are encouraged to take dual enrollment courses while in high school to further advance their education and/or their career exploration. Between junior and senior year dual enrollment courses can help students earn up to 12 college credits which can count towards a degree or a professional certificate. In addition, students obtain high school credits. These opportunities are offered at various colleges, including our local community college. In some instances, courses are offered on-site at BHS. Ask your counselor.

## Business and Consumer Education

Career Interest	Marketing	Finance	Accounting	Management Business Administration
Recommended Courses	Intro to Business Principles of Marketing and Entrepreneurship Marketing Analytics DECA	Intro to Business Personal Finance Financial Analytics <b>DECA</b> Banking Training Banking Internship	Intro to Business Automated Accounting I Automated Accounting II (**)	Intro to Business Operations Management People Management Data Management Sports Management (Capstone)
Useful courses	21 <sup>st</sup> Century Computer Applications	21 <sup>st</sup> Century Computer Applications Automated Accounting	21 <sup>st</sup> Century Computer Applications	21 <sup>st</sup> Century Computer Applications

(\*\*) Interested Students can pursue a Tax Preparer Certification through Massasoit Community College

**Introduction to Business 620:** This course helps students learn about the many branches of business education, such as accounting, finance, marketing and management. The course will cover some aspects of financial literacy and consumer education. This course has been aligned in accordance with NCTM Standards, NBEA Computation Standards, National Education Technology Standards (NETS), and the Massachusetts Curriculum Framework Standards.

**NOTE: this course is required to pursue additional Business courses.**

**Personal Finance and Consumer Education 646:** Students will become familiar with banking services, consumer credit, student loans, and savings and checking accounts. They will also learn the basics about borrowing money, renting, and home ownership. This course has been aligned in accordance with NCTM Standards, NBEA Computation Standards, National Education Technology Standards (NETS), and the Massachusetts Curriculum Framework Standards. The course can be taken with Intro to Business.

**Financial Market Analysis 606:** Using modern marketing analysis techniques, including statistical analysis and digital tools, students will learn to analyze financial market trends. Students will practice with day to day real data to make predictions (forecast and predictive financial analysis) and make informed decisions about investments. This course will introduce students to Finance Theory and the concepts of stocks and portfolios. **Pre-requisite:** B or better in Personal Finance or Accounting and Algebra II.

## **Banking Training 675**

## **Banking Internship 677**

These two one-semester courses are designed to prepare students for employment as bank tellers or entry-level positions within the banking or finance industry. Students will learn skills and tasks which are relevant to handling banking and personal finance transactions and work in the HarborOne branch at BHS. This course has been aligned in accordance with the NCTM Standards, NBEA Computation Standards, and the Massachusetts Curriculum Framework Standards. Students must take BOTH courses to participate in the program. Ask your counselor for an application.

### **Prerequisites: \* seniors only**

1. Personal Finance approved with at least a B
2. Proficient in grade 10<sup>th</sup> MCAS Math
3. Excellent attendance

Personal interview and instructor's approval.

**Principles of Marketing and Entrepreneurship 601:** This one-semester course introduces students to entrepreneurship and marketing. This course gives students the opportunity to evaluate service, retail, and manufacturing businesses and to develop a business plan. **Pre-requisite:** C or better in Introduction to Business

**Marketing Analytics 604:** In this one-semester course students learn practical methods used to measure, manage and analyze consumer information to maximize marketing performance effectiveness and optimize return on investment (ROI). Students will explore web (internet based) marketing analyzing tools such as Google Analytics. Through project-based learning students will develop skills around modern marketing practices. **Pre-requisite:** A B or better in Principles of Marketing and Entrepreneurship. Algebra II (C or better) highly suggested.

**DECA 650:** DECA Education is a full year course for seniors designed to provide students with an opportunity to explore the management process of planning, organizing, promoting and controlling a school-based enterprise (SBE). Students accept full responsibilities for this operation, using a team-based approach. Students also agree to affiliate with DECA, a national organization for high school students enrolled in Marketing, Finance, Hospitality and Management courses, and to attend the DECA conferences held throughout the school year. Students are required to submit a research project structured by National DECA or to create a business plan based on their SBE. This course has been aligned in accordance with the NCTM Standards, NBEA Computation Standards, and Massachusetts Curriculum Framework Standards. **Prerequisite:** At least two courses with B or better in Business and Consumer Education: Marketing, Finance, Hospitality and or Business Management, plus teacher recommendation. An interview with the DECA advisor is required.

**Automated Accounting I 664:** The course teaches basic accounting practices to students to record and analyze business transactions and to prepare financial statements for businesses organized as proprietorships, partnerships, or corporations. Students learn to do accounting manually and then enter data electronically via the computer using Excel and Peachtree™ accounting software. This course has been aligned in accordance with the NCTM Standards, NBEA Computation Standards, and the Massachusetts Curriculum Framework Standards.

**Automated Accounting II 665:** The course teaches basic accounting practices to students to record and analyze business transactions and to prepare financial statements for businesses organized as proprietorships, partnerships, or corporations. Students learn to do accounting manually and then enter data electronically via the computer using Excel and Peachtree™ accounting software. This course has been aligned in accordance with the NCTM Standards, NBEA Computation Standards, and the Massachusetts Curriculum Framework Standards.

**Prerequisite:** B or better in Automated Accounting I or teacher recommendation.

**Operations Management 607:** Students will learn about Systems Theory as it applies to the concept of Operation Systems in Business Administration. Students will learn the impact that decision making has at every step of the production chain. Students will become familiar with the various components of a chain supply. They will learn various strategies from control charts to business applications and digital tools to illustrate operations. *Intro to Business highly recommended.*

**People Management 608:** Students will learn the difference between People Management in Business Administration and Human Resources Management. Students will identify their strengths as well as those aspects that require significant personal development and growth for a potential manager position in the future. Students will gain a deeper understanding of this role by developing critical and reflective skills. *Intro to Business highly recommended.*

**Data Management 609:** Students will learn the importance of data collection, data storage and data management and its impact on the business decision-making process. The course will introduce students to the core concepts of data analytics and expose them to a comprehensive number of tools and applications from accounting tools to statistics using digital business applications. Using real data students will gain hands-on experience with data collection, its management, and analysis and report preparation. **Prerequisite:** This course requires the application of higher level math. Student should have passed Algebra II with at least a B. Accounting and or Statistics highly recommended.

**Sports Management Capstone 696:** This course will use a Sports Management Model to give students the opportunity to apply what they have learned. Students will be assigned and expected to do research, collect data, and complete independent and team work under the supervision of their instructor/teacher. The Capstone course culminates with a final written report and a visual presentation. **Prerequisite:** Application and approval from instructor. At least B or better in one management course or instructor approval.

<b>Career Interest</b>	<b>WEB DESIGN</b>	<b>WEB DEVELOPMENT</b>	<b>DIGITAL MEDIA PUBLISHING</b>	<b>DIGITAL MEDIA ADVERTISING</b>
<b>Recommended courses</b>	Graphic Design Experience Web Design Code Lab Web Capstone Seminar	Graphic Design Experience Web Development Code Lab Web Capstone Seminar	Graphic Experience Desktop Publishing I Desktop Publishing II Desktop Publishing III (YEARBOOK)	Graphic Experience <b>Intro to Digital Advertising</b>
<b>Useful courses</b>	21 <sup>st</sup> Century Computer Applications Digital Imaging Code Lab	21 <sup>st</sup> Century Computer Applications Intro to Programming Code Lab	21 <sup>st</sup> Century Computer Applications Graphic Design Experience Digital Photography Digital Imaging	21 <sup>st</sup> Century Computer Applications Graphic Design Experience Digital Photography Digital Imaging Marketing Principles

### **Media Communication**

**Graphics Experience 707:** This course is designed to provide students with an introduction to graphics theory and design using computer software. Using Photoshop and other graphics tools, students will be challenged to create mock advertisements for magazines, packaging, books and other graphics projects. Students will also learn to cooperate in a team setting.

**Website Design I 666:** Students will be introduced to the basic HTML and CSS languages, as well as basic tools to design a website. Students will learn how to develop a website brand from both visual (artistic) and messaging perspectives (content). Students will be introduced to both: web design software and authoring tools such as: Adobe Photoshop, Illustrator, Notepad, Dreamweaver and more. Students should enroll in Code Lab for additional practice. Front end tools: Adobe Photoshop, Adobe Illustrator and Dreamweaver

**Prerequisite:** Graphic Design Experience or Digital Imaging required

**Website Design II 613:** This course will focus on the front-end aesthetic and usability of Web Design. Students will continue developing their skills in the construction of a website brand from both visual (artistic) and messaging perspectives (content). The following web design software and authoring tools will be covered: Adobe Photoshop, Illustrator, and Dreamweaver. Students should enroll in Code Lab for additional practice. Front end tools: covered: Adobe Photoshop and Dreamweaver. **Prerequisite:** B or better in Web Design.

**Website Development 610:** This course will introduce students to the basic elements of several tools and programs in the backend of a WordPress site including website design layouts and making a functioning website. Students should benefit if enrolling in Code Lab for additional language practice. Backend tools: JavaScript, MySQL, PHP etc. **Prerequisite:** Web Design or Graphic Experience highly suggested. Intro to Programing or Code Lab required.

**Website Capstone Seminar 611:** In this project-based seminar students will develop skills learned in Web Design and/or Web Development. With the support and guidance of their instructors, students will work in production teams to design and develop a website from concept to creation. This is an intense course which may require that students also enroll in Code Lab to further develop their digital language skills. Participants will learn first-hand the various roles and responsibilities in a production team. The goal is to generate a final capstone and explore specifics careers in web design and web development. **Prerequisite:** B or better in Web Design I and II or in Web Development; B or better in Code Lab or instructor recommendation. Written statement indicating interest, instructor interview and approval. Students will sign an Independent Study Contract.

**Desktop Publishing I 663:** This course is designed to teach Desktop Publishing through Microsoft Publisher, Adobe Illustrator and Adobe InDesign. Students will learn about typesetting to produce published documents such as brochures, newspapers, business cards, flyers, magazines, catalogs, newsletters, and web page content. This course has been aligned in accordance with the NCTM Standards, NBEA Computation Standards, and the Massachusetts

**Desktop Publishing II 662A:** This is the second out of two courses designed to teach Desktop Publishing through Microsoft Publisher, Adobe Illustrator and Adobe InDesign. Students will learn about typesetting to produce published documents such as brochures, newspapers, business cards, flyers, magazines, catalogs, newsletters, and web page content. This course has been aligned in accordance with the NCTM Standards, NBEA Computation Standards, and the Massachusetts

**Desktop Publishing III 662–Yearbook Production (Capstone):** Throughout this full year capstone course, students who passed a minimum of two courses in the Media Communications Pathway with a B or better will have the opportunity to work as a team in the production of the graduating class yearbook. Students will use the software and assume several roles and responsibilities to produce the yearbook. **Prerequisite:** Application Statement and approval from instructor. B or better in Desktop Publishing I and II

Career Interest	INFORMATION TECHNOLOGY CISCO Networking Academy	COMPUTER SCIENCE and PROGRAMING	COMPUTER AIDED DESIGN (CAD)	COMPUTER AIDED MANUFACTURING (CAM) MACWIC
Recommended courses	CISCO IT Essentials Software A+ Hardware A+ Cyber Security	*PLTW (NEW) Computer Science Essentials  CODE LAB Intro to Programing	Technical Drawing Essentials AutoCAD 3-D Modeling I 3-D Modeling II Architectural Design and BIM	Technical Drawing Essentials Engineering and Manufacturing Engineering Drawing (Blue Print Reading) Auto CAD The following MACWIC courses will be available from 20-21 on: <b>CAM-CNC Lathe Concepts</b> <b>CAM-CNC Mill Concepts</b> <b>CAM-- G &amp; M Code Beginner</b>
Useful courses	21 <sup>st</sup> Century Computer Applications Electronics Intro to Programing Code Lab	21 <sup>st</sup> Century Computer Applications	21 <sup>st</sup> Century Computer Applications	21 <sup>st</sup> Century Computer Applications Intro to Programing Engineering Manufacturing

### Automation (CAD/CAM), Computer Science and Information Technology

\*We are proud to have been awarded a “**Project Lead the Way**” (PLTW) grant that will allow our students to progress through a high-quality curriculum in Computer Science. Additional PLTW courses to be offered later will be: Computer Science Principles, Computer Science A and Cyber Security. These courses require a strong commitment as students are held to high standards and cannot be dropped. A final exam is required. Final exam scores may grant students college credits at participant schools such as and U. Mass Lowell and Worcester Institute of Technology.

We are a proud **MACWIC Partner School**: This allows BHS to offer its students high quality curriculum, the same used by **MassMEP** across the state for training employees in Advanced Manufacturing Technologies. Students can obtain industry credentials when passing their final exams with 80 or better.

**IT Essentials 770T (CISCO Networking Academy):** This course is taught by a **CISCO Networking Academy** certified instructor. The course covers the fundamentals of computer hardware and software. Students learn how to install components to build, repair, and upgrade personal computers; perform preventive maintenance and troubleshooting, install, perform, and maintain Windows operation systems, configure computers and devices to connect and communicate on a network. This course requires daily, extensive, technical readings. Students must be willing to study daily and memorize terminology. **Prerequisite:** Application, interview and instructor approval.

**A+ Software 682 (CISCO Networking Academy):** This is an intensive course designed to take students from the user level to understanding customizing, optimizing and troubleshooting a Windows Operating System and the most common software applications. Students will learn all the differences between Windows, Unix, Linux, and the Mac OS, understanding the boot process, supporting and installing Windows, managing memory, printers and I/O devices, and the responsibilities of a PC technician. **Students will be required to complete approximately 30 additional hours of training in addition to the regular class to prepare for the certification test (A+ Core Software Exam).** **Prerequisite:** Successful completion of A+ Hardware, and CISCO IT Essentials (B or better) and successful completion of pre-test and approval of instructor.

**A+ Hardware 771 (CISCO Networking Academy):** This is an intensive course designed to take students from the just-a-user level to the I-can-fix-it level for most common PC hardware issues. Students will learn all aspects of computer hardware including identifying components, electricity and power supplies, motherboards, memory, hard drives, supporting I/O devices, modems and networks, laptops and PDA's, printers, building a PC, troubleshooting, and the responsibilities of a PC technician. **Students will be required to complete approximately 30 additional hours of training in addition to the regular class to prepare for the certification test (A+ Core Hardware Exam).** **Prerequisite:** Successful completion of pre-test, Cisco Essentials, and approval of instructor. **Note:** Students MUST also take course 682 (A+ Software)

**Cyber Security (CISCO Networking Academy) 697:** Students will learn how to protect their personal privacy online while gaining additional insight on the challenges companies, and governmental and educational institutions face today. This course develops an understanding of cybercrime, security principles, technologies, and procedures used to defend networks. **Prerequisite:** B or better in Cisco Essentials.

**Auto CAD 7701:** AutoCAD or Automated Computer Aided Design is the gateway course for students who would like to pursue engineering in the future. AutoCAD introduces students to computer drawing skills that will be the basis for the understanding of more complex 3-D modeling programs. This course focuses on the concept of visualization- commonly called Engineering Graphics. **Prerequisite:** passed Technical Drawing Essentials with at least a B.

**3-D Modeling I 7712:** In this course students will explore 3-D modeling software and learn the essential skills needed to design multi-part consumer products. Typical projects will include toy and jewelry design, timepieces and historical mold designs. This course will allow students to generate digital portfolios by using image rendering, animations and 3-D PDF files. 3-D printing will be also introduced. **Prerequisite:** Passed AutoCAD or Introduction to Computer Aided Design with a C or better.

**3-D Modeling II 7713:** Students will focus on designing multi-parts-mechanical devices, using gears and differentials. Advanced functions such as 3-D sketching, freeform sculpting and derived parts will be studied. Students will also be introduced to virtual material testing (loads, pressure, moment, and eco- materials) and 3-D printing, including troubleshooting will be studied in more detail at this level. **Prerequisite:** Passed successfully Auto CAD and 3-D Modeling I with at least a C.

**Architectural Design and BIM 7714:** The course will focus on the forms of residential architecture in the United States. The following topics will be supported using online curriculum: architectural styles, basic house designs, preparing for a career in architecture and residential architectural design. Designs for health, safety and sustainability, using BIM for house design, and plan development. **Prerequisite:** Passed AutoCAD with at least a C.

**Computer Science and Programming 661:** In this introductory course students will learn about what programming is about; benefits of learning code, how coding works, coding languages, its classifications, applications and benefits. Through concrete examples students will become familiar with important concepts such as algorithm, machine language, assembly language, and binary code. Learning to code will help students develop critical thinking and problem-solving skills and be ready for the career demands of the 21st Century.



**Code Lab 7715:** This is a course for the student is familiar with coding and who is interested in further developing skills. In this semester course, students will be able to practice one code/language. The Code Lab teacher and the student will establish personalized goals and identify the best plan of action for the further development of the student’s coding skills. Students will work independently using tutorials and online lessons and move at their own pace. Students can enroll in this lab multiple times throughout high school to either continue improving skills in one code or to explore various codes. To re-enroll in Code Lab students must demonstrate effective progress by obtaining at least a C in the previous code lab.

**Computer Science Essentials (Project Lead the Way) 6670PLTW:** This course exposes students to computational thinking concepts. Students will use visual and block-based programming using Python. They will apply computational thinking practices, build vocabulary, and collaborate as computing professionals to create products that address topics and problems.

### Engineering Technologies Pathway

Career Interest	Manufacturing Engineering	Electronics/Electrical Engineering	Mechanical Engineering	Architecture and Civil Engineering
Recommended courses	Technical Drawing Essentials Engineering Lab 1 Engineering & Manufacturing Engineering Drawing (Blue Print Reading) Engineering Lab 2 Capstone	Technical Drawing Essentials Engineering Lab 1 Intro. to Electronics Electronic Engineering Concepts Electrical Engineering Principles Engineering Lab 2 Capstone	Technical Drawing Essentials Engineering & Manufacturing Engineering Drawing Intro to Electronics Electrical Engineering Principles Engineering Lab 2 Capstone	Technical Drawing Essentials AutoCAD 3-D Modeling I 3-D Modeling II Architectural Design & BIM Engineering Lab 2 Capstone
Useful courses	21 <sup>st</sup> Century Computer Applications AutoCAD 3-D Modeling I 3-D Modeling II	21 <sup>st</sup> Century Computer Applications AutoCAD 3-D Modeling I 3-D Modeling II	21 <sup>st</sup> Century Computer Applications AutoCAD 3-D Modeling I 3-D Modeling II	21 <sup>st</sup> Century Computer Applications AutoCAD 3-D Modeling I 3-D Modeling II

**Engineering the Future: Science and Technology 767T:** Students take on the role of engineers themselves and apply the design process to define and solve problems using this hands-on, project-based curriculum. Students will understand the relationships among science, technology, engineering and math. Engineering the Future maps directly to the Standards for Technological Literacy (ITEA 2012) and the Massachusetts Science and Technology/Engineering Frameworks (2016) **NOTE:** Students will receive science credit for this course and will take the ***Science and Technology/Engineering MCAS exam*** as their science requirement for graduation.

**Prerequisite:** Students should have sophomore status and should have passed Algebra I with C or better.

**Engineering Lab I 7716:** Project based introductory engineering course in which students will explore the diverse pathways in engineering through the application of the Engineering Design process. Students are challenged to solve real life, day to day, world problems and are encouraged to apply critical thinking and problem-solving skills to reach solutions. This course is a requirement for students seeking to take additional engineering courses.

**Introduction to Engineering Design (Project Lead the Way) 780PLTW:** Students will learn in depth about the engineering design process, applying math, science, and engineering standards. They will work both, individually and in teams designing solutions for a variety of problems using 3D modeling software and documenting their work daily in a notebook. This is an honors course for the highly committed student. **Prerequisite:** Proficient in MCAS ELA and Math grade 8<sup>th</sup>. B or better in Algebra I.

**Engineering Lab II 7717- Capstone:** Engineering Lab II is a higher-level project-based engineering course in which higher level engineering students work as engineering teams. Students will have the opportunity to put to the test the knowledge and skills they have acquired in previous engineering courses. Students will be expected to be ready to apply mathematical concepts and engineering principles learned either in manufacturing, electronics or any of their engineering design courses. **Prerequisite:** Successful completion of Engineering Lab I, and Engineering Drawing or Engineering Manufacturing. Teacher recommendation.

**Introduction to Electronic Technology 7718:** This is an exploratory course with a lab component that introduces students to the basic concepts of electronics and electronic devices including diodes, transistors, transistor biasing, rectifiers, and amplifiers. The emphasis is first on understanding the characteristics of basic circuits, and the math used in circuit analysis. Skills covered involve electric soldering, basic repair and maintenance of electronic equipment, reading schematics, identifying components and building breadboard circuits. The course will also include an examination of career opportunities in electrical engineering as well as electronic technologies. Students will participate in individual and group projects.

**Electronics Engineering Systems 7719:** This is a full year higher level course for students interested in advancing knowledge in the field of electronics and electronic engineering. During the first semester students will learn about the use of electronic components in fields of communication, automation and control, computer, and space technology. During the second-semester students continue delving into theory, terminology, equipment, and practical experience to develop the skills needed for careers in electronic engineering. Students will work in engineering teams to construct robotic arms and compete. Students enrolled in this course should also enroll in Engineering Lab 2. **Prerequisite:** Students should have successfully passed Algebra II/Mathematics III with a B or better (Pre-Calculus a plus) and have obtained a B or better in Introduction to Electronic Technology. Instructor approval is required.

**Electrical Engineering Principles 7720:** This course is an exploratory course aimed to help students understand the basic electrical theory and the concepts and applications associated with electrical engineering. Students will learn basic electrical principles applicable to various fields and explore the many applications of an electrical engineering degree. This course is recommended for those students planning to major in electrical engineering.

**Technical Drawing Essentials 7721:** This course is designed for students who want to develop the basic skills needed to become architects, civil, mechanical or manufacturing engineers or machinist. Students will be challenged to visualize three dimensions and to execute drawings with freehand perspectives using accurate measurements and scales. This course will teach students about drawing three-dimensional objects with the appropriate coordinates and perspective. Isometric and trimetric drawings will also be discussed. Basic concepts in technical blueprint reading will also be covered. Shop Math and Lean Concepts are an integral part of the course.

**Engineering Drawing 7725 (Blue Print Reading):** Engineers communicate their ideas through pictures and drawings. They also must be able to understand (read) technical drawings. This is a higher-level course specifically for students interested in furthering their technical drawing knowledge and skills, so they can apply them to mechanical, manufacturing, and robotics designs. The course will review concepts such as Isometric and Orthographic drawings, dimensioning, sectioning, drawing tools, assembly drawings, cross-sectional views, half-sections, and sections of objects with more complex surfaces holes, ribs, etc. This course uses MACWIC Curriculum for Manufacturing. Technologies. **Pre-requisite: C or better in Technical Drawing Essentials**

**Engineering and Manufacturing 7728T:** This is a competency-based, standardized engineering and manufacturing curriculum developed by Worcester Polytechnic Institute (WPI). It includes Principles of Lean Manufacturing and Metrology among other concepts. Students completing this course will be able to test their knowledge at the end of the course by taking the level one MAC (MA-Manufacturing Advanced Center) exam. Acceptable scores will confer students a level 1 Manufacturing Certification. **Prerequisites:** C or better in Technical Drawing Essentials.

**Automobile Care and Maintenance 723:** This course will provide students with a basic understanding of how an automobile operates, how to select and purchase a quality automobile, how to care for it, and how to research and purchase quality repairs. Instruction will include safety, proper use of automotive tools and equipment, and so-called ‘Do-it-Yourself’ repairs. Auto Care and Maintenance students may participate in demonstrations on live vehicles must provide for themselves a pair of an instructor approved shoes with leather uppers and oil resistant soles prior to working on any vehicles.

## Office Technologies

Career Interest	Computer Applications	MS Word	MS Excel
Recommended courses	21 Century Computer Applications MS Word*** MS Excel***	MS Word ***	MS Excel ***
Useful courses		21 <sup>st</sup> Century Computer Applications	21 <sup>st</sup> Century Computer Applications Intro to Business Accounting 1

\*\*\*Students interested in obtaining certifications as Microsoft Office Specialist (MOS) in either application (Word or Excel) must register independently for the certification test (there is an associated fee for each test) and must have transportation arranged for the day of the test to and from the test location.

**21st Century Computer Applications 690:** This course introduces students to keyboarding and Microsoft® (MS) Office using automated technologies. Students will reinforce keyboarding skills using correct finger positioning to gain speed and accuracy. Following successful completion of the touch-type method; students will learn how to format business and personal documents preparing them for professional life. Additionally, students will receive an introduction to the various MS Office applications [Word, Excel, Publisher, PowerPoint, Access and Office 365]. Students will gain an understanding of Acceptable Use Policies via a Digital Literacy overview. This course has been aligned to NCTM standards, NBEA computation standards and the Massachusetts Technology Literacy standards.

**Microsoft Office Specialist (MOS) Word 688:** This course will introduce all aspects of Word included in the Microsoft Specialist exam. For the Word 2016 exam students must be able to create and manage documents, format texts, paragraphs and sections, create tables and lists, create and manage references, insert and format graphic elements. **Prerequisite:** C or better in 21<sup>st</sup> Century Computer Applications.

**MOS (Microsoft Office Specialist) Excel 689:** This course will introduce all aspects of Excel included in the Microsoft Specialist exam. For the Excel 2016 exam, students create and manage worksheets and books, manage data cells and ranges, create tables, perform operations with formulas and functions, and create charts and objects. **Prerequisite:** C or better in 21<sup>st</sup> Century Computer Applications

## Health Care Assisting

**Exploring Health Assisting Professions I 766:** An introductory course that will help students understand the skills, attitudes and behaviors needed in health assisting and related professions. In health and medical assisting professions students must have a good understanding of clinical terms, human physiology, pathological diseases, procedures and protocols.

**Exploring Health Assisting Professions II 767:** This course explores health assisting and its related tasks as it walks students through the study of body systems and their common diseases and disorders. The students will gain an understanding of the specific health assisting skills associated with these conditions. **Prerequisite:** Students should have successfully completed course 766 with a C+ or better.

**Health Assisting Training 768:** Students will explore diseases, disorders, and connected with select body systems with an emphasis on the specialized nursing assistant. Students will learn procedures and skills in order to pass the *Home Health Aide* test with *CPR & First Aid* and enable them to become eligible to take the CNA test. Prepares students to test for the Massachusetts Department of Public Health Certification exam for Nursing Assistants and gain a Certified Nursing Assistant (CNA) Certificate.

To become eligible for the *CNA practicum* students must achieve a 100% level of care rating in each of the nursing competencies by demonstrating approved methods of patient care and delivery procedures, passing the course requirements with no less than an 80% (B-) for a final grade, and have a recent tuberculosis test with negative results. This practicum will be offered off-site during non- school hours. This course is registered by the Department of Public Health and must comply with regulations including limiting enrollment to ten students per instructor. Seniors will be given priority status. Students will be selected by the highest grade point average earned in course 767 in case of a tie. Students who take this course commit to the clinical training (practicum).

Expenses related to acquiring the CNA Certification such as clinical apparel, examination fee, tuberculosis test, and any additional practicum fees (i.e., transportation) are the responsibility of the student.

**Prerequisite:** Students must have successfully passed **Body Systems and Disease Pathology with at least a B (80%)**. In addition, given the intense nature of this training and its related clinical practicum students should have good behavior (cannot have an F in deportment) and good attendance.

**\*\*This course can be used to satisfy health graduation requirements.**

**Heath Assistant Externship 749:** The goal of this course is to provide an opportunity for Junior/Senior students who have completed courses 767 and 768 to become teaching assistants in either 766 or 767. Assistants will serve as an extension of the classroom teacher. The extern will be responsible for the preparation and demonstration of procedures. Students will also provide feedback and support to students for individual student-procedure demonstrations under the supervision of the teacher. **Prerequisite:** To have completed **767** and **768** and instructor approval.

## Hospitality and Restaurant Food Production

**Food & Nutrition Lab 880:** Introduces students to basic skills in food handling and preparation while applying nutrition education concepts. Students will learn fundamental cooking principles for maintaining a healthy lifestyle. While preparing a variety of food products, students apply the knowledge of mathematics, science, health and language arts.

**NOTE:** This course is a pre-requisite to be considered for Restaurant and Food Production Training. Interested students **MUST** take this course between freshman and sophomore year.

**Hospitality and Restaurant Food Production I 734:** Students enrolled in Food Production I will experience various aspects of the foodservice industry, as part of the National Restaurant Association ProStart Program. The goal is to learn both culinary essentials and basic food service management, preparing students to fill the need for skilled managers. Students will operate the Fine Arts Café. The students will use hand tools, learn knife skills and operate larger food preparation equipment. Safety and Sanitation will be the most important aspect of this program. Students must take the year-end NRAEF ProStart exam. **Pre-requisite:** Foods & Nutrition Lab (or similar courses) and instructor approval.

**Hospitality and Restaurant Food Production II 735:** Students will experience various aspects of the food service industry, as part of the National Restaurant Association ProStart Program. The goal is to learn culinary essentials and basic foodservice management, preparing students to fill the need of skilled managers. Students will participate in the operation of the Fine Arts Café student-operated restaurant. Students will be required to complete a 400-hour paid internship within the hospitality industry to gain ProStart Certification. Students must take the year-end NRAEF ProStart exam. **Prerequisite:** Food Production I must be successfully completed with a final grade of 80% or better before Food Production II may be taken.

## VOCATIONAL EDUCATION

Major	Graphic Design and Printing	Construction Technology	Automotive Technology
Required courses	Freshman Exploratory Graphic Design I Graphic Design II Graphic Design III	Freshman Exploratory Construction Technology I Construction Technology II Construction Technology III	Freshman Exploratory Automotive Technology I Automotive Technology II Automotive Technology III
Highly Recommended courses	21 <sup>st</sup> Century Computer Applications Intro to Business Personal Finance Drawing and Painting Illustration Digital Imaging Digital Photography Web Design/Web Development	21 <sup>st</sup> Century Computer Applications Intro to Business Personal Finance Technical Drawing Essentials Auto CAD Architectural Design & BIM	21 <sup>st</sup> Century Computer Applications Intro to Business Personal Finance Intro to Electronic Technology

The Vocational Program is designed to prepare students for profitable employment or further education through a four-year program of vocational training, plus related and academic activities aligned with the student's vocational objectives.

Any student in 9<sup>th</sup>, 10<sup>th</sup>, or 11<sup>th</sup> grade is eligible to apply for fall admission or admission during the school year subject to the availability of openings to the Vocational programs. Transfer students will be evaluated using the selection criteria contained in the Admission Policy.

Training in all selected areas will consist of structured time schedules each day during the second, third and fourth year of the program for in-depth vocational training. Each area is planned to teach the fundamental skills required for a specific area and its related fields of work, which will provide the students with skills necessary for job entry.

As in all vocational programs, the major part of the school day will be involved in shop practice, while the remainder of the school day will comprise of related subject areas and the academic subjects.

**Freshman Vocational Exploratory 700:** Freshmen who participate in the Exploratory Program will receive instruction in the three majors offered in our vocational program: Automotive, Carpentry and Graphics. Students will be exposed to three rotations of thirty (30) days each in which they will experience increased duties and project difficulty as the rotation progresses. Career exploration activities will help students learn more about their interests, personalities, skills/values and how these relate to potential careers. Students can make an informed decision about continuing in the Career and Technical program and receive training for sophomore, junior and senior years.

**CTE - College and Career Education (713T, 714T, 715T, 716T):** This is a college and career education course that runs along with the vocational program courses. It is aimed to provide students with career literacy. Students will complete activities for career exploration and post-secondary options and planning. Students will take a battery of tests including interest, personality, skills and values inventories to explore careers that match their profiles. Students will generate academic, personal and career goals and evaluate them as they move through high school. Students will learn how to find jobs, create a resume, a cover letter, have a successful interview, and complete applications. The courses will be supported by MEFA Pathways and MASSCIS. Students will be trained in OSHA 10 to obtain certification. This is a mandatory course for students in the Vocational Program.

**Automotive Technology I 701:** Sophomores will be introduced to automotive repair technology. They will be exposed to five different areas of instruction including engine mechanical, suspension, brakes, electrical, and engine performance. **Prerequisite:** Successful completion of Exploratory. Students must fill out an application.

**Automotive Technology II 702:** Juniors will receive additional instruction in automotive repair technology include engine mechanics, suspension, brakes, electrical, and engine performance. **Prerequisite:** Successful completion of Automotive Technology I.

**Automotive Technology III 702T:** Seniors will receive in-depth instruction in automotive repair technology with hands-on experience. Students will apply knowledge acquired in the five different areas of instruction including engine mechanical, suspension, brakes, electrical, and engine performance. Upon completion of this course students can seek entry-level employment, however we recommend students pursue an Automotive Technology Certificate, Associate or Bachelor Program. Articulation agreements with post-secondary institutions to allow credit for successful completion of all courses in this program with a passing grade of B or better. **Prerequisite:** Successful completion of Automotive Technology II.

**Construction Technology I 703:** Sophomores who participate in the Construction Technology I program will gain awareness of the woodworking industry and career opportunities. Students will use hand tools, small power tools, and power woodworking equipment with support from the instructor. Students will undertake individual and group community projects. It is believed by the instructor that SAFETY is the most important aspect of the shop experience and will be stressed. **Pre-requisite:** Successful completion of Exploratory. Students must fill out an application.

**Construction Technology II 704:** Juniors who participate in the Construction Technology II program will continue to experience a greater awareness of the woodworking industry and career opportunities. Students will use hand tools, small power tools, and power woodworking equipment with only occasional support from the instructor. The student will undertake individual and group community projects that are more complicated and maybe student designed. SAFETY is the most important aspect of the shop experience and will be stressed at all times. **Prerequisite:** Successful completion of Construction Technology I.

**Construction Technology III 704T:** Seniors who participate in the Construction Technology III program will experience work conditions relating to the carpentry trade in the shop as well as school and community. The instructor will assign individual or group woodworking projects. SAFETY is the most important aspect of the shop experience and will be stressed at all times. **Prerequisite:** Successful completion of Construction Technology II.



**Graphic Design/Printing I 710:** Sophomores will be introduced to employable skills in the graphics/publishing field. Students will learn computer skills on both PCs and iMacs. Desktop publishing programs will be taught. Plate making techniques will be explored along with Risograph digital printing. Bindery operations is an entry level job in printing facilities. Students will learn how to use the folding machine, automatic stitcher, collator binding equipment, laminator, shrink wrapper and packaging and wrapping skills. Entrepreneurship, customer relations and SHOP SAFETY will be stressed. **Prerequisite:** Successful completion of Exploratory and fill out an application.

**Graphic Design/Printing II 711:** Juniors will continue with and more extensive study of skills in the graphics/publishing field. Students will continue to fine-tune their computer skills on both PCs and iMacs. Desktop publishing programs will be taught. Plate making techniques will be explored along with Risograph digital printing. Students will learn how to use the folding machine, automatic stitcher, collator binding equipment, laminator, shrink wrapper packaging and wrapping skills. Entrepreneurship, customer relations and SHOP SAFETY will be stressed. **Prerequisite:** Successful completion of Graphic Design/Printing I

**Graphic Design/Printing III 711T:** Seniors who have successfully completed Graphics Design II will continue to develop into skilled craftsmen in Graphic Design III. Major emphasis will be placed on multi-color printing jobs. Students will continue to refine their trade using Pc's and iMacs to work with industry standard graphic design software Adobe Creative Suite. Color scanning and advanced bindery techniques will be taught. Multicolor printing will be done on the Heitelberg Printmaster. **Prerequisite:** Successful completion of Graphic Design/Printing II

### **BCTVE ADVANCED OPPORTUNITIES**

**Independent Study 686:** Students who have successfully completed (B or better) at least two or more courses in a career pathway and desire to further advance their knowledge can request permission to conduct an Independent Study. The student must identify a teacher willing to mentor and together complete an Independent Study Agreement stipulating the following: Course Objectives, Methods of Study, Methods of Evaluation, Resources, Frequency and place of meetings, and the signatures of the student, the parent/guardian and the teacher. Students must be self-motivated, demonstrate responsibility, and can work independently. **Prerequisite:** Completed Independent Study Proposal Form (signed by the student, parent and teacher). Interview and approval by Department Chair are required.

**Work Experience 7724:** Juniors and seniors in BCVTE programs, who have completed at least two courses in a given career concentration or pathway can obtain 3 credits for work experience provided:

1. Secures a position (paid or unpaid) related to career concentration.
2. Completes 100 hours of work experience.
3. Attends workshops/seminars in: Resume/Cover Letter Building, Job interview Do's and Don'ts, Important Legal Topics for Teen Workers.
4. Updates Career and Academic Plan.
5. The employer will certify the student's employment status and is working with a school designated work experience coordinator to evaluate the Massachusetts Work-Based Learning Plan.

NOTE: Work experience credits will be granted only once throughout the student's high school career.

## **JUNIOR RESERVE OFFICER TRAINING CORPS (JROTC)**

JROTC is a character and leadership development program. Its mission is to “motivate young citizens to become better citizens”. A student who participates in the JROTC program is not obligated to serve in any of the Armed Services. However, a student who plans on enlisting into the Armed Services may be eligible for advanced rank. Although each of the Armed Services has a different policy, each one normally requires the student to complete a minimum of two years of JROTC. Please note these policies are subject to change.

The JROTC curriculum addresses national academic standards including the Common Core State Standards (CCSS), offers coursework on leadership, civics, geography/global awareness, health/wellness, language arts, life skills, and U.S. history. The curriculum is based on the principles of performance-based, learner-centered education and promotes the development of core abilities: the capacity for life-long learning, communication, responsibility for actions and choices, good citizenship, respectful treatment of others, and critical thinking and critical thinking techniques.

JROTC classes meet alternating days over a semester. To participate in the JROTC program students must:

1. be physically and medically eligible to participate in BHS Physical Education classes
2. maintain a grade of C- or higher in JROTC
3. agree to wear the JROTC uniform once per week

Any exceptions must be approved by the JROTC Senior Army Instructor.

<b>COURSE</b>	<b>TITLE</b>	<b>YEAR</b>	<b>TERM</b>	<b>CREDITS</b>
040	Leadership Education and Training (LET) IA	Fr, So, Jr, Sr	SEMESTER	1.5
041	Leadership Education and Training (LET) IB	Fr, So, Jr, Sr	SEMESTER	1.5
042	Leadership Education and Training (LET) IIA	So, Jr, Sr	SEMESTER	1.5
045	Leadership Education and Training (LET) IIB	So, Jr, Sr	SEMESTER	1.5
052	Leadership Education and Training (LET) IIIA	Jr, Sr	SEMESTER	1.5
043	Leadership Education and Training (LET) IIIB	Jr, Sr	SEMESTER	1.5
044	Leadership Education and Training (LET) IVA	Sr	SEMESTER	1.5
053	Leadership Education and Training (LET) IVB	Sr	SEMESTER	1.5

**Leadership Education and Training (LET) IA 040: LET IA)** focuses on motivating students to be better citizens through character and leadership development. Specific areas of study include foundations of Army JROTC, leadership skills, knowing yourself, self-awareness, study skills, communication skills, conflict resolution, and service learning.

**Leadership Education and Training (LET) IB 041:** LET IB continues areas of study covered in LET IA.

**Leadership Education and Training (LET) IIA 042:** LET IIA continues the JROTC focus on motivating students to be better citizens through leadership and character development. Specific areas of study include wellness, fitness, first aid, map skills, citizenship in American history, government, and service learning. Students fill junior leadership positions in the Corps of Cadets.

**Leadership Education and Training (LET) IIB 045:** LET IIB continues areas of study covered in LET IIA.

**Leadership Education and Training (LET) IIIA 052:** LET IIIA continues the JROTC focus of motivating students to be better citizens through leadership and character development. Specific areas of study include foundations of Army JROTC, leadership theory and application, presenting skills, managing conflict, career planning, planning skills/social responsibility, basic financial planning, critical thinking and service learning. Students fill mid-level leadership positions in the Corps of Cadets.

**Leadership Education and Training (LET) IIIB 043:** LET IIIB continues areas of study covered in LET IIIA.

**Leadership Education and Training (LET) IVA 044:** LET IV continues the JROTC focus on motivating students to be better citizens through leadership and character development. Specific areas of study include service to the nation, leadership principles, financial planning, teaching skills, and service learning. Students fill top leadership positions in the Corps of Cadets.

**Leadership Education and Training (LET) IVB 053:** LET IVB continues areas of study covered in LET IVA.

## MUSIC DEPARTMENT

Courses reflects the Massachusetts Arts Curriculum Framework and the Standards of the Massachusetts Music Educators Association.

COURSE	TITLE	YEAR	TERM	Meets Every day or alternate days.	CREDITS
971	Repertory Chorus	Fr, So, Jr.	FY	ED	3.0
972	Concert Choir	So, Jr, Sr.	FY	ED	3.0
973	Concert Band	Fr, So, Jr, Sr	FY	ED	3.0
974	Advanced Concert Band	So, Jr, Sr.	FY	ED	3.0
976	Jazz Band	Fr, So, Jr, Sr	FY	All classes meet at night	1.5
978	Music Theory I	So., Jr., Sr.	S	AD	1.5
979	Music Theory II	So., Jr., Sr.	S	AD	1.5
983	Piano I	So., Jr., Sr.	S	AD	1.5
984	Piano II	So., Jr., Sr.	S	AD	1.5

**Repertory Chorus 971:** This performing ensemble is open to all Freshman students who have successfully completed requirements in the Junior High Vocal Program. The Repertory Chorus is for singers who have a Soprano or Alto range. Students with Tenor or Bass range should audition for Concert Choir. All students must be recommended by their junior high school choral teacher. The high school choral director must recommend all students for continuation in or entry into the Repertory Choir. The course covers knowledge of choral concepts, vocal production, sight-reading, performance experience, three-part singing, choral technique.

**Required performances include a Holiday Concert, Spring Concert, and Pops Concert.**

**Concert Choir 972:** This performing ensemble course is open to all students that have successfully completed the Repertory Chorus Program and students presently in the Concert Choir. Freshman Tenor and Bass must be recommended by their junior high choral director. The High School choral director must recommend all students for continuation in or entry into the Concert Choir. The course continues choral concepts, four-to-five part-singing, musical performances from major musical periods, higher standard of literature, advanced sight-reading.

**Required performances include the Holiday Concert, Spring Concert and Pops Concert.**

**Concert Band 973:** This performing ensemble course is open to 9<sup>th</sup> grade students who have successfully completed requirements in the Junior High Instrumental Program. All students entering Concert Band must be recommended by the junior high instrumental teacher. The high school band director must recommend all students for continuation in or entry into the Concert Band. The course covers tonal production, phrasing, articulation, performance concepts, band literature. Students are required to have their own instruments unless they are using school-owned instruments. **Required performances include the Holiday Concert, Spring Concert and Pops Concert.**

**Advanced Concert Band 974:** This advanced performing ensemble is open to all students who have successfully completed the Concert Band Program and students presently in the Advanced Concert Band. The high school band director must recommend all students for continuation in or entry into the Advanced Concert Band. This program strives to attain a quality of learning for all students with a higher level of proficiency in our instrument program. The course covers performance concepts, history of music and performers as students develop higher standards of literature, individual performance, and aesthetic values of music. **Required performances include the Holiday Concert, Spring Concert and Pops Concert.**

**Jazz Band 976:** In this performance course, participants will perform the best in jazz and jazz-rock music. Improvisation and arrangement techniques will be an important part of the course. The course covers jazz literature, improvisation, performance concepts, and history. An audition is required. **This Ensemble meets after school.**

**Music Theory I 978:** This course is geared to the serious music student who intends to continue music study in college or has the desire to better understand the study and structure of music. The course covers the rudiments of music, musical terminology, scales and keys, intervals, chords, and progressions, transpositions, harmonization, music form, composition.

**Music Theory II 979:** This course is a continuation of Music Theory I. **Prerequisite: Music Theory I**

**Piano I 983:** Students will learn fundamentals of how to read music using both hands in this piano course. The student will develop good hand position, correct fingering and ability to read music of the treble and bass clef staves. All students will have the opportunity to use midi computer technology, including Garage band.

**Piano II 984:** In this advanced piano course students will continue to study piano repertoire, improve on skills, and further study chords and scales. All students will learn to improvise and create their own composition using the Garage band sequencing program on the computer. **Prerequisite:** Piano I or at least one year of piano lessons.

## WELLNESS

COURSE	TITLE	YEAR	TERM	CREDITS
007W	Intro to Wellness	9	S	1.5
007E	Intro to Wellness ELL	9	S	1.5
012W	Project Boxer	Jr, Sr	S	1.5
009W	Physical Education	So, Jr, Sr	S	1.5
019	Strength and Conditioning	So, Jr, Sr	S	1.5
034	Aerobic Water Fitness/First Aid	So, Jr, Sr	S	1.5
061W	Stress Management/Yoga	Jr, Sr.	S	1.5
064	Healthy Living	Jr, Sr	S	1.5
031	Health Advocacy for Today's Youth	Jr, Sr	S	1.5
033	Peer Mediation	So, Jr, Sr	S	1.5
035	Peer Mediation II	Jr, Sr	S	1.5

**Introduction to Wellness (007W, 007E):** This course is a requirement for all freshmen and provides students with the opportunity to expand their knowledge and performance skills in both current health topics and personal fitness. Each student will assess their current fitness levels using state of the art technology and equipment and set personal goals for self-improvement. The study and practice of fitness assessment, character education, cooperative games and trust-building activities will help students develop the skills, knowledge and attitudes necessary for a successful introduction to high school. Students will learn and develop strategies that will enable them to take control of their own wellness and developing sound decision-making skills pertaining to relevant health topics facing young adults.

**Introduction to Wellness ELL 007E:** This course serves as an introduction to physical Education to all incoming English language learners. This course will provide students with the opportunity to expand their knowledge and performance skills in both current health topics and personal fitness. Each student will assess their current fitness levels using state of the art technology and equipment and set personal goals for self-improvement. The study and practice of fitness assessment, character education, cooperative games and trust-building activities will help ELL students develop the skills, knowledge and attitudes necessary for a successful introduction to high school.

**Physical Education 009W:** Physical Education emphasizes health-related fitness and develop the skills and habits for a lifetime of activity. These courses provide students with opportunities to achieve and maintain a health-enhancing level of physical fitness and increase their knowledge of fitness concepts. The students receive instruction in rules, skills, and strategies associated with the different sports as well as learning experiences involving physical conditioning activities and life-long physical activities. The program includes skill development and the application of rules and strategies of complex difficulty in the following different movement forms: health-related fitness activities (cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition), aerobic exercise, team sports, individual and dual sports, and recreational games. The program promotes the spirit of cooperation, leadership, fair play, and friendly competition. Ongoing assessment includes both written and performance-based skill evaluations.

**Strength and Conditioning 019:** This class is designed for students who are interested in shaping up and feeling great while improving their heart, lungs and circulatory system. By experimenting with a variety of aerobic and anaerobic activities, students will be able to monitor their heart rates, assess cardio and strength progress and learn the language and benefits of cardiovascular and muscular fitness. Strength training is important to overall health. Students will apply the concepts of muscle development to tone their bodies and improve their strength. By the end of this program, students will feel confident in their knowledge of anatomy and their ability to workout in any fitness facility.

**Aerobic Water Fitness/First Aid-CPR 034:** Students will learn to perform the six primary swimming strokes using hydrodynamic principles to improve their abilities. Students will apply the principles of cardiovascular endurance, muscular strength and flexibility. By experimenting with a variety of aerobic activities in and outside the pool, students will be able to monitor their heart rates, assess their cardio progress and learn the language and benefits of cardiovascular fitness. Students will be able to perform life-saving water skills as well as basic rescue techniques. Basic First Aid and CPR skills will be included within this course. Upon successful completion, students will qualify for an American Red Cross Certification course that will be offered multiple times after school throughout the year.

**Peer Mediation 033:** Students who have successfully completed the Peer Mediation training and have participated in the program for at least one-year prior will be recommended for this course. Students will serve as mediators, participate in classroom presentations and organize and implement school-wide activities that focus on anti-violent themes. Students will be expected to model and mentor mediation techniques with other mediators. Students must be self-motivated, demonstrate responsibility and can work independently. **Pre-requisite: Interview and approval by Peer Mediation Advisors is required**

**Stress Management / Yoga 061W:** Adolescence is considered a very stressful time, in this course students will recognize signs of stress and develop “coping strategies” which will help with the daily demands and pressures of everyday life. Students will practice yoga, mindfulness exercises and breathing techniques to control tension. This course will focus on classroom application to bring the mind and body into balance.

**Healthy Living 064W:** In this wellness course, students will analyze the impact of their own responsibility in relation to making healthy decisions and taking actions to increase life expectancy. Students will gain knowledge in all areas of health and practice preventative health skills, through accessing reliable health information and resources, students will also develop advocacy skills which will impact their wellness into adulthood.

**Health Advocacy for Today’s Youth 031:** This course offers students the opportunity to analyze current health issues relevant to today’s youth. Students will explore positive and negative health behavior patterns that impact short and long-term wellness while investigating reliable health resources to address these health issues. Development of leadership skills and community service-learning projects will be a significant component of this course.

**Peer Mediation II 035:** Juniors and Seniors who have completed Peer Mediation I will be recommended for this course. Students will serve in a leadership role assisting with planning and implementing Freshman Wellness lessons, preparing and executing the peer mediator training as well as assisting with mediation office practices. **Pre-requisite: Interview and approval by Peer Mediation Advisors is required**

**Project Boxer 012W:** Cooperative and collaborative skills are an essential part of a student's education. This class helps students learn how to work with others more through character building, skill building, and social skills activities in the gym and in the community. Cooperative activities help students learn how individual efforts unite to help the team accomplish goals. Perseverance is key in teamwork, and students learn that failure is an important foundational step, as it gives them the opportunity to review, reflect, reorganize strategies, and redirect their efforts toward the successful outcome.