

**WALTHAM HIGH SCHOOL PROGRAM OF STUDEIS
2017-2018**

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NOTICE TO STUDENTS AND PARENTS

Waltham High School is a comprehensive high school offering a full range of academic and practical courses as well as after-school activities, clubs, and athletics. The opportunities for students to increase and enhance their learning by participation in after-school activities are extensive.

Waltham High School is committed to educational excellence. In order for students to achieve the optimum results of their studies, education must be the preeminent occupation, the focus of their total energies. The commitment to excellence requires that:

1. Students realize attendance in school is essential. Absence, tardiness, and dismissal should be very rare and only for extremely compelling reasons approved by the school administration. Students cannot compensate for lost class time, extensive teacher explanation, or interaction with peers.
2. Students take a balanced program of core and elective courses. Each student must schedule 30 periods per week. In grade nine each student will take four or six periods of math, six periods of English and three or four major academic subjects (four periods each), the remaining six periods will be in elective courses. In grade ten most students will take six periods of English, six periods of math and a minimum of three other four period major academic subjects; the remaining periods will be in elective courses. Students in the eleventh and twelfth grades take a minimum of 20 periods per week in major academic subjects and the remaining periods of electives.
3. Students complete all homework in a timely fashion given the high correlation between the quantity and quality of homework assignments and academic success in schools. Homework includes a variety of long and short-range tasks: reading, preparation, review, as well as written assignments.
4. Students curtail outside employment to no more than twenty hours per week.
5. Students cultivate the habit of a minimum of one-half hour of pleasure reading per day.
6. Students use discrimination when determining the amount and quality of television viewing and computer use.

WALTHAM HIGH SCHOOL ADMINISTRATION 2017-2018

Principal	Mr. Gregory A. DeMeo
Freshman Housemaster	Mrs. Amanda Brennan
Sophomore Housemaster	Mr. Joel Antolini
Junior Housemaster	Mr. Timothy McMahon
Senior Housemaster	Ms. Christopher Gelinias

Administrators/Directors

Career & Technology Education	Dr. Jennifer Smith
ESL	Ms. Catherine Carney
English	Ms. Allyson McHugh
Fine Arts	Mr. Douglas Trudeau
Health Services	Ms. Patty McCaffrey
History & Social Sciences	Mr. Derek Vandegrift
Mathematics	Ms. Valerie Alfeo
Physical Education & Athletics	Mr. Steven LaForest
Reading	Ms. Nancy Coppolino
Science & Health	Ms. Heather Metallides
Special Education	Dr. Nadene Stein
	Ms. Lynne Summerill
	Ms. Jannell Campbell
World Languages	Ms. Cynthia Piantedosi

ACCREDITATION STATEMENT

Waltham High School is accredited by the New England Association of Schools and Colleges, Inc., a non-governmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering post-graduate instruction.

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

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

NEW ENGLAND ASSOCIATION OF SCHOOLS AND COLLEGES
3 BURLINGTON WOODS DRIVE, SUITE 100
BEDFORD, MASSACHUSETTS 01803-4514

WALTHAM HIGH SCHOOL MISSION STATEMENT

At Waltham High School, we are proud of our academic programs. We provide courses to meet every student's needs: challenging standards-based courses for all students, advanced placement courses for higher achieving students, and technical certification courses for multiple vocational and technology pathways. Our fine and performing arts, vocational, and athletic programs are an integral part of Waltham High School that augment our academic program of studies. We are educating the citizens of tomorrow.

Core Values, Beliefs and Learning Expectations

Waltham High School believes that in order to succeed in the 21st century, all people must think both creatively and analytically, work with diligence both individually and in teams, and possess the ability to share ideas clearly with a variety of audiences. To prepare its graduates for success, Waltham High School provides a safe and supportive learning environment which emphasizes high academic expectations and civic and social responsibility. Our community fosters respect for the individual with an appreciation of cultural diversity, while our curriculum and programs provide a comprehensive education, opening multiple career paths and educating the whole student (mentally, physically, and emotionally). Whether students intend to pursue a college education, employment, or military service, Waltham High School has programs to facilitate their success. Graduates of Waltham High School will be prepared to think, work and share as skilled members of our 21st century global community.

Academic Expectations:

1. Communicate clearly and effectively
2. Read, write, and listen for understanding
3. Apply analytical, critical, and creative thinking skills
4. Effectively apply technology
5. Solve problems effectively

Social/Civic Expectations:

1. Value community and diversity
2. Advocate for self and others
3. Set Goals
4. Demonstrate an understanding of physical and emotional wellness
5. Exhibit responsible citizenship

COURSE REQUIREMENTS FOR GRADUATION

1. Every student must take and pass 4 years of **ENGLISH**. Ninth and tenth grade students will take six periods of English per week.
2. Every student must take and pass 4 years of **MATH**
3. Every student must take and pass **WORLD HISTORY, UNITED STATES HISTORY I and UNITED STATES HISTORY II**.
4. Every student must take and pass **PHYSICAL EDUCATION and WELLNESS** each year.
5. Every student must take and pass 3 years of a Lab **SCIENCE**
6. Every student must take and pass 5 credits of **FINE ARTS** and 5 credits of **PRACTICAL ARTS**.
7. All college prep students must take and pass 2 years of a single **WORLD LANGUAGE**.
8. Every student must have a schedule that has thirty (30) class periods per week.
9. Every student must have a schedule with at least 5 courses that meet a minimum of four times each week. At least four of those five courses must be in the following subjects: English, Mathematics, World Language, Social Studies, Science, or Business.
10. Courses meet either two, four, five, or six periods per week. Two period courses earn 2.5 credits, four period courses earn 5 credits, five period courses earn 6.25 credits, and six period courses earn 7.5 credits.
11. All graduating seniors must accrue a minimum of 120 credits in order to graduate.

MASSACHUSETTS COMPREHENSIVE ASSESSMENT SYSTEM (MCAS)

In order to receive a high school diploma, students are required to take and pass the State MCAS tests in the spring of sophomore year in English Language Arts and Mathematics. Students are also required to take and pass a Science test in either their freshman or sophomore year. MCAS measures the extent to which students have acquired the skills, concepts, and knowledge identified in the Curriculum Frameworks for those subjects. The tests items include multiple choice, short answer, open-ended questions, and an essay. There are four levels of achievement, and the descriptors for each level are clearly defined by the state. Proficiency/Advanced is the goal for each student; course selection should reflect the necessary preparation for those exams.

MASSCORE

The Massachusetts High School Program of Studies (MassCore) is intended to help students be college and career ready by taking a rigorous course of study. Students will arrive at college or the workplace well-prepared and the number of students taking remedial courses in college will be reduced. MassCore recommends a comprehensive set of subject area courses and units to be completed before graduating high school.

The recommended program of studies includes: four years of English, four years of math (to include Algebra II), three years of lab-based science, three years of history, two years of the same foreign language, one year of an arts program, and five additional "core" courses such as business, health, and/or technology. MassCore recommendations are aligned with Massachusetts University admission requirements beginning with the Class of 2017

PLACEMENT OF STUDENTS

Promotion or re-entry of a student to WHS is based on previous credits earned and on the ability of a student to fulfill core and graduation requirements. Thus, at a minimum, a student must have earned 20 credits to enter sophomore year, 45 credits to enter junior year, and 82.5 credits to enter senior year. The housemasters will meet annually to determine the "house" status of the students.

GRADING SYSTEM

A+	97 - 100	B	83 - 86	C-	70 - 72	I	Incomplete
A	93 - 96	B-	80 - 82	D+	67 - 69	N	Grade withheld due to absence
A-	90 - 92	C+	77 - 79	D	63 - 66	X	Excuse
B+	87 - 89	C	73 - 76	D-	60 - 62	Audit	Audit (no credit)
				F	0 - 59 Failing	W	Withdrawn

COURSE SELECTION

For leveled courses, teacher recommendations will determine placement. Please note the recommendations and pre-requisites in the course descriptions under all leveled courses. If students or parents/guardians are in disagreement with the recommended placement, the parent/guardian must contact their student's guidance counselor.

SCHEDULE CHANGES

Schedule changes are disruptive to a student's education. Once the school year has begun, changes to class schedules are discouraged. Students are expected to select courses carefully: spring sign-ups are used to determine schedules and staffing. Please consult the recommendations for placement and pre-requisite course(s) in the course description. The High School Guidance Office will be open two weeks in August to all students who wish to change a course or level. Appointments are welcome, but students are encouraged to drop in.

Changing one course often results in the need to move other courses; and even if appropriate approval is granted for the original request, there may not be the flexibility to move the other affected courses. Please follow the procedure in the student handbook to initiate schedule changes.

- After 10 school days no elective course changes will be honored.*
- Requests to change teachers are not allowed.*
- All courses dropped after October 1 will result in the appearance of a Withdrawal "W" on the student's transcript.*
- Changes approved in 1st quarter, but after progress reports are issued, will not be made until the start of 2nd quarter.*
- No changes will be made after the first quarter unless extenuating circumstances exist.*

GPA DETERMINATION

Major academic courses carry a weighted grade point average (GPA). The higher the level of an academic course, the higher the GPA weight. Thus, Honors/AP level courses carry a 5.3 value for an A+, College Prep I courses carry a 4.3 value, and College Prep II courses carry a 3.3 value. A weighted GPA is computed at the end of the junior year.

COURSE IDENTIFICATION

AP	Advanced Placement	College Level Courses
H	Honors Program	College Preparatory
C1	College Prep I	College Preparatory
C2	College Prep II	College Preparatory

ENGLISH DEPARTMENT

“Those who do not become proficient in English Language Arts are enormously disadvantaged in school and out of school, as well.” ... Ernest Boyer, The Carnegie Report, c. 1983

080 ENGLISH 9

Grade 9

Honors

7.5 credits

This course provides a challenging and rigorous program to further develop student thinking skills with the goal of becoming advanced readers, writers, listeners, and speakers. Literary selections will focus on the theme of *Coming of Age* and will include the following major texts: *Romeo and Juliet*, *The Odyssey*, *Of Mice and Men*, and *Great Expectations*. Additional readings will include nonfiction, poetry, traditional literature, drama, and short stories by such authors as Atwood, Hinton, Orwell, Cormier, Jackson, Vonnegut, Capote, Walker, Heaney, Hughes, and Frost. Students who select this course will be expected to do assigned homework, which might include daily learning log entries, reading and taking notes on readings, and writing in response to literary selections. Students will be expected to participate in class discussion, respond to daily writing-to-learn activities, write frequent “think” papers, and deliver several oral presentations throughout the year. Students will continue to develop their vocabulary through their reading and through the use of the Sadlier-Oxford vocabulary workshop series. A minimum of two major essays will be required each quarter. Students will learn the colored criteria system that focuses on the criteria of effective writing, using anchor papers and having students learn to assess their own and others’ writing, and analyzing close reading sets. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of one quarter’s grade. This course meets the recommendation for an English class as outlined in MassCore

081 ENGLISH 9

Grade 9

College Prep I

7.5 credits

This course is designed to further develop student thinking skills through becoming proficient or advanced readers, writers, listeners, and speakers. Literary selections will focus on the theme of *Coming of Age* and will include the following major texts: *Romeo and Juliet*, *The Odyssey*, *Of Mice and Men*, and *Great Expectations*. Additional readings will include nonfiction, poetry, traditional literature, drama, and short stories by such authors as Atwood, Hinton, Orwell, Cormier, Jackson, Vonnegut, Capote, Walker, Heaney, Hughes, and Frost. Students who select this course will be expected to do assigned homework, which might include daily writing-to-learn entries, reading and taking notes on readings, and writing in response to literary selections. Students will learn to write compositions focusing on literary analysis. Students will be expected to participate in class discussion, respond to daily writing-to-learn activities, write frequent “think” papers, and deliver one oral presentations throughout per quarter. A minimum of two major essays will be required each quarter. Modeling the colored criteria system that focuses on the criteria of effective writing, using anchor papers and having student learn to assess their own and others’ writing, and analyzing close reading sets for the MCAS will be embedded into the curriculum. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of one quarter’s grade. **This course meets the recommendation for an English class as outlined in MassCore**

082 ENGLISH 9

Grade 9

College Prep II

7.5 credits

This course is designed to further develop student thinking skills through reading, writing, listening, and speaking. The goal is for all students to achieve proficiency in their English skills, to enjoy reading, and to write fluently. Topics for writing will be based on literary selections, career interests, and contemporary issues. Readings will revolve around the theme of *Coming of Age* and will include the following major texts: *Romeo and Juliet*, *The Odyssey*, *Of Mice and Men*, and *Great Expectations* and selections from the anthology *The Interactive Reader*. Students will learn to write compositions focusing on expository writing and literary analysis. Students will be

expected to do the assigned homework, participate in class discussion, respond to daily writing-to-learn activities, and make frequent oral presentations. Use of the color criteria system, writing-to-learn strategies, and learning-centered, small group activities will be incorporated into daily classroom practice. A minimum of two compositions will be required each quarter. Modeling the colored criteria system that focuses on the criteria of effective writing, using anchor papers and having student learn to assess their own and others' writing, and analyzing close reading sets for the MCAS will be embedded into the curriculum. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of one quarter's grade. **This course meets the recommendation for an English class as outlined in MassCore**

002 ENGLISH 10

Grade 10

Honors

5 credits

This course provides a challenging and rigorous program for students to continue developing into proficient or advanced thinkers through reading, writing, listening, and speaking. Literary selections will revolve around the major theme of "What is a Quest?" and will include the following major texts: *Beowulf*, *Sir Gawain and the Green Knight*, *The Alchemist*, *Jane Eyre*, *The Lost City of Z*, *The Catcher in the Rye*, *A Raisin in the Sun*, and *Shakespeare's Macbeth or Julius Caesar*. Additional readings will include a variety of selections by such authors as Hemingway, Saki, Vonnegut, Poe, Twain, and Steinbeck. In addition to analyzing character and theme, students will examine the author's craft in more detail including tone, figurative language, symbolism, imagery, and point of view. Students who select this course will be expected to do assigned homework, which might include journal entries, reading, and taking notes on readings, and various types of writing. Students will be expected to participate in class discussion, respond to daily writing-to-learn activities, write frequent "think" papers, and deliver several oral presentations throughout the year. A minimum of two major essays will be required each quarter. Pre-AP strategies will be integrated into both curriculum and instruction. Modeling the colored criteria system that focuses on the criteria of effective writing, using anchor papers and having student learn to assess their own and others' writing, and analyzing close reading sets for the MCAS will be embedded into the curriculum. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of one quarter's grade. **This course meets the recommendation for an English class as outlined in MassCore**

012 ENGLISH 10

Grade 10

College Prep I

5 credits

This course concentrates on further development of the core thinking skills by having students become proficient or advanced in reading, writing, listening, and speaking. Promoting student proficiency will be done through challenging literary selections, practicing effective writing techniques, responding to daily writing exercises, and participating in oral presentations. Literary selections will revolve around the major theme of "What is a Quest?" and will include the following major texts: *Beowulf*, *Sir Gawain and the Green Knight*, *The Alchemist*, *Jane Eyre*, *The Lost City of Z*, *The Catcher in the Rye*, *A Raisin in the Sun*, and *Shakespeare's Macbeth or Julius Caesar*. Additional readings will include a variety of selections by such authors as Hemingway, Saki, Vonnegut, Poe, Twain, and Steinbeck. In addition to analyzing character and theme, students will examine the author's craft in more detail including tone, figurative language, symbolism, imagery, and point of view. Students who select this course will be expected to do assigned homework, which might include journal entries, reading, and taking notes on readings, and various types of writing. Students will be expected to participate in class discussion, respond to daily writing-to-learn activities, write frequent "think" papers, and deliver several oral presentations throughout the year. A minimum of two major essays will be required each quarter. Pre-AP strategies will be integrated into both curriculum and instruction. Modeling the colored criteria system that focuses on the criteria of effective writing, using anchor papers and having student learn to assess their own and others' writing, and analyzing close reading sets for the MCAS will be embedded into the curriculum. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of one quarter's grade. **This course meets the recommendation for an English class as outlined in MassCore**

022 ENGLISH 10

Grade 10

College Prep II

5 credits

This course provides more intensive practice in developing students' proficiency in reading, writing, speaking and listening skills by emphasizing student thinking and doing in the classroom. Student thinking will focus on the following areas: finding main ideas and relevant, supporting details; exploring personal connections to literature; drawing conclusions; understanding the meaning of new words in context; generating effective thesis statements, topic sentences, and commentary and analysis; and writing well-developed multi-paragraphs with idea development, organization, supporting details, and language and style. Literary selections will revolve around the major theme of "What is a Quest?" and will include the following major texts: *Beowulf*, *Sir Gawain and the Green Knight*, *The Alchemist*, *Jane Eyre*, *The Lost City of Z*, *The Catcher in the Rye*, *A Raisin in the Sun*, and *Shakespeare's Macbeth or Julius Caesar*. Additional readings will include a variety of selections by such authors as Hemingway, Saki, Vonnegut, Poe, Twain, and Steinbeck. In addition to analyzing character and theme, students will examine the author's craft in more detail including tone, figurative language, symbolism, imagery, and point of view. Students who select this course will be expected to do assigned homework, which might include journal entries, reading, and taking notes on readings, and various types of writing. Students will be expected to participate in class discussion, respond to daily writing-to-learn activities, write frequent "think" papers, and deliver several oral presentations throughout the year. A minimum of two major essays will be required each quarter. Pre-AP strategies will be integrated into both curriculum and instruction. Modeling the colored criteria system that focuses on the criteria of effective writing, using anchor papers and having student learn to assess their own and others' writing, and analyzing close reading sets for the MCAS will be embedded into the curriculum. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of the fourth quarter's grade. **This course meets the recommendation for an English class as outlined in MassCore**

003 ENGLISH 11

Grade 11

Honors

5 credits

This course provides a challenging and rigorous program for students to continue developing into proficient or advanced thinkers through reading, writing, listening, and speaking. The emphasis in this course is independent reading and frequent composition work. Literary selections will revolve around the major theme of *The Individual Versus The Establishment* and will include the following major texts: *The Scarlet Letter*, *Walden*, *The Adventures of Huckleberry Finn*, *The Great Gatsby*, *The Crucible*, an August Wilson play. Additional readings will include a variety of selections by such authors as Thoreau, Emerson, Steinbeck, Gaines, Lahiri, Alvarez, Alexie, as well as nonfiction, poetry, and short stories by representative American authors. Writing will focus on daily writing-to-learn responses, frequent "think" papers, and on literary analyses citing specific references to the text. In addition to analyzing character and theme, students will examine the author's craft in more detail including tone, figurative language, symbolism, imagery, and point of view. Students who select this course will be expected to do assigned homework, which will include daily writing-to-learn entries, frequent "think" papers, reading, taking notes on readings, embedded SAT review skills, and practice with a range of different modes of writing. Students will be expected to participate in class discussion and deliver several oral presentations throughout the year. A minimum of two major essays will be required each quarter. Students will complete one literary research paper, which will count one third of one quarter's grade. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of the fourth quarter's grade. **This course meets the recommendation for an English class as outlined in MassCore**

013 ENGLISH 11

Grade 11

College Prep I

5 credits

This course continues the development of helping students become proficient or advanced thinkers through reading, writing, listening, and speaking. To strengthen student thinking skills, students will read a variety of challenging authentic texts from fiction, nonfiction, drama, poetry, and traditional literature. Students will practice

effective expository, persuasive, descriptive, narrative, and creative. Students will respond to daily writing-to-learn prompts and participate in oral presentations. Literary selections will revolve around the major theme of *The Individual Versus The Establishment* and will include the following major texts: *The Scarlet Letter*, *Walden*, *The Adventures of Huckleberry Finn*, *The Great Gatsby*, *The Crucible*, an August Wilson play. Additional readings will include a variety of selections by such authors as Thoreau, Emerson, Steinbeck, Gaines, Lahiri, Alvarez, Alexie, as well as nonfiction, poetry, and short stories by representative American authors. Students will continue to develop their thinking skills in literary analysis writing, drawing inferences, identifying themes, and appreciating an author's purposeful choice of language and style. Students will write frequent "think" papers and two formal papers per quarter and a literary research paper will be required that will count one third of one quarter's grade. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of the fourth quarter's grade. **This course meets the recommendation for an English class as outlined in MassCore**

023 ENGLISH 11

Grade 11

College Prep II

5 credits

This course provides more intensive practice in developing students' proficiency in reading, writing, speaking and listening skills by having students read a variety of authentic texts from fiction, nonfiction, drama, poetry, and traditional literature. Students will practice effective expository, persuasive, descriptive, narrative, and creative. Students will respond to daily writing-to-learn prompts and participate in oral presentations. The focus of this course will be on reading representative works in American literature in accordance with the theme of *The Individual Versus The Establishment*. Literary selections will include some of the following texts: *The Scarlet Letter*, *The Crucible*, *The Adventures in Huckleberry Finn*, *The Great Gatsby*, and a play by Arthur Miller or August Wilson. Additional readings will include selections from various anthologies that feature American short stories, poems, and nonfiction. Students will continue to develop their thinking skills through expository, persuasive, descriptive, narrative, and creative writing. Students will continue to develop their vocabulary through their close reading. Students will write weekly "think" papers and two formal papers per quarter and a guided research paper will be required that will count one third of one quarter's grade. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of the fourth quarter's grade. **This course meets the recommendation for an English class as outlined in MassCore**

025 ENGLISH 11

Grade 11

Proficient Level

5 credits

This course provides more intensive practice in developing students' proficiency in reading, writing, speaking and listening skills by having students read a variety of authentic texts from fiction, nonfiction, drama, poetry, and traditional literature. Students will practice effective expository, persuasive, descriptive, narrative, and creative writing. Students will respond to daily writing-to-learn prompts and participate in oral presentations. The focus of this course will be on reading representative works in American literature in accordance with the theme of *The Individual Versus The Establishment*. Literary selections will include some of the following texts: *The Scarlet Letter*, *The Adventures in Huckleberry Finn*, *The Great Gatsby*, *The Crucible* or *Death of a Salesman*, and an August Wilson play. Additional readings will include selections from the anthology *The Interactive Reader* that feature American short stories, poems, and nonfiction. Students will continue to develop their thinking skills through expository, persuasive, descriptive, narrative, and creative writing. Students will write frequent "think" papers and two formal papers per quarter and a guided research paper will be required that will count one third of one quarter's grade. This course is required of all students scoring in the *Needs Improvement* and *Failing* performance levels on the grade 10 MCAS English Language Arts test during the previous year. Students will be required to score Proficient or beyond on a standards-based assessment administered by the English Department in June. **This course meets the recommendation for an English class as outlined in MassCore**

006 AP ENGLISH LANGUAGE AND COMPOSITION

Grade 10, 11 Advanced Placement 5 credits

This course demands a student's commitment and ability to sustain a high level of academic rigor in reading and writing. Students will read for depth and breadth from a primary text, *The Informed Argument*, and learn about rhetorical form from a variety of periods, disciplines, and rhetorical contexts in order to develop skilled writing. Authors include Twain, Steinbeck, Shakespeare, Hazlitt and Angelou along with a variety of other nonfiction sources selected for the quality of their writing: rhetoric, argument, and analysis. Each quarter will involve work pertaining to skills that prepare students for the A.P. Language and Literature exam, and all students will be required to take the A.P. Language and Composition test in May. **This course meets the recommendation for an English class as outlined in MassCore**

005 AP ENGLISH LITERATURE AND COMPOSITION

Grade 11, 12 Advanced Placement 5 credits

This course assumes the student's commitment and ability to sustain a high level of academic performance on a daily basis. Since the final exam in this course is the College Board Advanced Placement English Literature and Composition test, each quarter will involve work pertaining to skills that prepare students for this exam. Students will read widely and deeply from both the recognized canon: *Hamlet*, *Crime and Punishment*, *Jane Eyre*, poetry, essays, and short stories by well-known and respected authors, and from "companion works" that illuminate the originals in a different light, for example: *Rosencrantz and Guildenstern are Dead*. Frequent close readings and numerous short essays will be assigned. One long research project will also comprise one third of one quarter's grade. This is a rigorous course, and students may actually earn college credit and/or advanced standing in college by achieving a satisfactory score on the Advanced Placement Exam. Students must submit a recommendation form from their junior English teacher and gain approval before enrolling in this course. Students who are interested must apply by completing the English Department Advanced Placement application. Summer reading will be addressed at the beginning of the first quarter through exams, essays, and panel discussions, and will be referred to throughout the year. **This course meets the recommendation for an English class as outlined in MassCore**

004 ENGLISH 12

Grade 12 Honors 5 credits

This course provides a challenging and rigorous program for students to continue developing into proficient or advanced thinkers through reading, writing, listening, and speaking. The emphasis in this course is independent reading and frequent composition work in anticipation of college-level work. Literary selections will revolve around world literature by region to explore the major theme of *The Human Condition* and will include the following major texts: *Hamlet*, *Oedipus the King*, *Laughter in the Dark*, *Master Harold and the Boys*, *Rashoman*, and *Chronicle of a Death Foretold*... Additional readings will include a variety of selections from the genres of nonfiction, poetry, short stories, drama, essays, classical and traditional literature. Authors may include Orwell, Lessing, Chaucer, Swift, Shelley, Keats, Wordsworth, T.S. Eliot, Margaret Atwood, Katherine Mansfield, Virginia Woolf, Dostoevsky and James Joyce. Writing will focus on daily writing-to-learn responses, frequent "think" papers, and on literary analyses citing specific references to the text. Students will respond to the extensive readings by writing creatively and analytically and by participating in classroom discussion, responding to daily writing-to-learn activities, and delivering several oral presentations throughout the year. A minimum of two major essays will be required each quarter. Students will complete one research paper, which will count one third of one quarter's grade. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of the fourth quarter's grade. **This course meets the recommendation for an English class as outlined in MassCore**

014 ENGLISH 12

Grade 12 College Prep I 5 credits

This course continues to strengthen student proficiency in reading, writing, listening, and speaking in anticipation of the demands of the college classroom. Literary selections will revolve around world literature by region to explore the major theme of *The Human Condition* and will include the following major texts: *Hamlet*, *Oedipus the King*, *Laughter in the Dark*, *Master Harold and the Boys*, *Rashoman*, and *Chronicle of a Death Foretold*... Additional readings will include a variety of selections from the genres of nonfiction, poetry, short stories, drama, essays, classical and traditional literature. Authors may include Orwell, Lessing, Chaucer, Swift, Shelley, Keats, Wordsworth, T.S. Eliot, Margaret Atwood, Katherine Mansfield, Virginia Woolf, Dostoevsky and James Joyce. Writing will focus on daily writing-to-learn responses, frequent “think” papers, and on literary analyses citing specific references to the text. Students will respond to the extensive readings by writing creatively and analytically and by participating in classroom discussion, responding to daily writing-to-learn activities, and delivering several oral presentations throughout the year. A minimum of two major essays will be required each quarter. Students will complete one research paper, which will count one third of one quarter’s grade. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of the fourth quarter’s grade. **This course meets the recommendation for an English class as outlined in MassCore**

024 ENGLISH 12

Grade 12

College Prep II

5 credits

This course provides more intensive practice in developing students’ proficiency in reading, writing, speaking and listening skills. Literary selections will revolve around world literature by region to explore the major theme of *The Human Condition* and will include the following major texts: *Hamlet*, *Oedipus the King*, *Master Harold and the Boys*, and *Rashoman*. Additional readings will include a variety of selections from the genres of nonfiction, poetry, short stories, drama, essays, classical and traditional literature. Authors may include Orwell, Lessing, Chaucer, Swift, Shelley, Keats, Wordsworth, T.S. Eliot, Margaret Atwood, Katherine Mansfield, Virginia Woolf, Dostoevsky and James Joyce. Writing will focus on daily writing-to-learn responses, frequent “think” papers, and on literary analyses citing specific references to the text. Writing will focus on daily writing-to-learn responses, frequent “think” papers, and on literary analyses citing specific references to the text. A minimum of two essays will be required each quarter. Students will complete one research paper, which will count one third of one quarter’s grade. Students will complete a series of common formative and summative assessments with the common final assessment counting as one quarter of the fourth quarter’s grade. **This course meets the recommendation for an English class as outlined in MassCore**

ENGLISH ELECTIVES:

051 CREATIVE WRITING

Grades 9, 10, 11, 12

2.5 credits

This course is designed to foster students’ creativity in writing through experimentation with a variety of different genres. The writing focus begins with personal experience and moves toward fictionally based approaches in short stories and poems. The year culminates with the production of a compilation of student work.

058 COLLEGE ESSAY

Grades 12

2.5 credits

This elective will focus on essay writing for seniors. During the first semester, seniors who are aspiring to a four-year college and will need to complete the college application process will work with students to draft their personal essays and prepare their college application. During the second semester seniors will write essays in application to college scholarships.

073 SAT REVIEW

Grades 11

2.5 credits

This course is for college preparatory students who will be taking the SAT for admission into a two- or four-year college. Coursework includes test-prep strategies and instruction for both critical reading, writing, and mathematics subtests. Students will shift between an English teacher and a math teacher during the year to prepare for all subtests. Using material from SAT preparatory sources, students will be prepared for the SAT exam in the spring. Students will be introduced to the test format, be given a diagnostic exam to determine strengths and weaknesses, be acquainted with test-taking strategies and be given numerous practice exercises. The course will be pass/fail based on attendance, effort, completion of assignments, quiz scores, progress, and participation in discussion and group work. Prerequisite: None

075 ENGLISH

Grades 10, 11, 12

MCAS Prep

2.5 credits

This elective is required for at-risk students who are in jeopardy of failing or have already failed the grade 10 MCAS English Language Arts test. Areas of study will include the following: developing test-taking strategies, improving composition topic development, practicing open responses, improving organization and clarity in writing, making inferences and drawing conclusions, understanding and applying literary terms and devices, and acquiring challenging words in context. Prerequisite: A WIDA sub-score of 3 or higher.

083 SOPHOMORE COMPOSITION

Grades 10

2.5 credits

This class is required of all sophomores. Throughout the year, each student will develop, refine, create, and present a personal project of his or her choice. The class exposes students to a variety of writing modes, working to develop basic skills of written expression, and culminates in a student-driven presentation. First quarter focuses on memoir writing, second quarter on research skills, third on artifact production and journal response, and fourth on speech writing and public speaking skills.

052 FILM AND SOCIETY

Grades 11, 12

2.5 credits

This class will focus on how film has affected society over the course of 100+ years. We will see how films (feature and short) and documentaries throughout history reflect the time period in which they were created, through such concepts as culture, politics, art, and economics. We will critically look at films or film clips from such titles as *Birth of a Nation*, *City Lights*, *The Public Enemy*, *Little Caesar*, *Snow White*, *The Wizard of Oz*, *Forrest Gump*, *Life is Beautiful*, *Dead Poets' Society*, *Good Will Hunting*, *Hugo*, *Life is Beautiful*, *House of Flying Daggers*, *Les Miserables*, *Cinema Paradiso*, *The Red Balloon*, *Hoop Dreams*, *Night and Fog*, *Gasland*, *Steamboat Willie*, *Paperman*, and others. Social issues to be discussed include racism, censorship, prohibition, the Great Depression and poverty, family relations, and many others. Students will not only study the films, but will respond to prompts concerning social issues in their classroom journals. A short film will also be required of each student.

Not only will students analyze the societal effect of these films, but film study itself will be addressed. Students will learn about the directors behind these films, the actors who portray the roles, the regional area the films hail from, and the way the films themselves are created. We will discuss film scores, cinematography, lighting, costuming, and other aspects of filmmaking. Students will write one short paper per quarter on some aspect of film or filmmaking. Grade 10 students who test out of Sophomore Composition may enroll in this course.

057 SPORTS, LITERATURE, AND SOCIETY

Grades 11, 12

2.5 credits

Sport functions as its own literature, complete with its distinct language, characters, conflicts, themes, symbols, setting, and, points of view. We will be using a wide array of non-fiction sports writing, including articles, columns and essays, in addition to a variety of clips from TV journalism and cinematic documentaries to examine and analyze how language and image are used to establish a story: the always changing, always controversial story of

sports. Readings will draw from a wide variety of contemporary and classic works. The course will use excerpts from book length works like *How Soccer Explains the World* (Franklin Foer), *Summer of Beer and Whiskey* (Edward Achorn), *Autumn Glory: Baseball's First World Series* (Louis Masur), *Outliers* (Malcolm Gladwell), and various biographies, as well as current sports journalism from newspapers, magazines, and online sources, and clips from films such as *Remember the Titans*, *Miracle*, *League of their Own*, *The Sandlot*, and *Rocky*. We will look at some of the great motivational and inspirational sports speeches of all time. Writing for the course will include expository, persuasive, and journalistic assignments. For instance, students will be expected to attend WHS sporting events and report on them. Additionally, we will incorporate current technology to include blogging and infographics, thus connecting the course work to real-life experience, and offering students a chance to explore realistic sports-related career options. Grade 10 students who test out of Sophomore Composition may enroll in this course.

060 THE WRITING CENTER

Grade 11, 12

2.5 Credits

This course provides students with an in-depth study of writing in the academic disciplines through coaching at The Writing Center. Students prepare to be writing coaches through an intense examination of the rules of composition, critical reading and analytical thinking about writing. Students are expected to refine and develop their own writing abilities through coaching and reflective essays about their coaching experiences.

714 ACADEMIC SUPPORT/ENGLISH

Grade 9, 10, 11, 12

non-credit

Academic Support is an opportunity for students to receive academic tutoring, MCAS support, in English, Math, History, or Science during the school day. Sections will be staffed with content-certified teachers. Students will participate in Academic Support for limited periods of time throughout the school year as needed to bolster academic performance.

MATHEMATICS DEPARTMENT

"Problem solving is an integral part of all mathematics learning."

(Principles and Standards for School Mathematics, 2000, NCTM)

The mission of the mathematics department is to develop mathematical understanding and to extend computation through cognitively demanding mathematical tasks, which are represented in multiple ways, such as visual diagrams, manipulatives, symbols, and problem situations. Making connections among multiple representations helps develop meaning. In order to find solutions and make the connections, students must draw on their knowledge and skills, act on their curiosity, and develop the habit of perseverance.

The 2011 MA Frameworks includes the following Standards for Mathematical Practice:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

These practices, in addition to the content standards, will be an integral part of all our mathematics courses. Students will develop these practices in order to adapt and extend the mathematics they know.

Our mathematics courses are offered at various levels all of which contribute to preparing students for college, work, and life. Within these levels, students develop understanding of the content in the conceptual categories of number and

quantity, algebra, functions, modeling, geometry, and statistics and probability. Students apply their understanding of these concepts to solve problems and communicate about mathematics in their world.

The following is a description of the levels we offer:

Advanced Placement

These courses are designed to be taught at the same level as a first semester college course of the same name. They are exceedingly rigorous in both scope and sequence. Students are expected to take the AP exam in the springtime.

Honors

This level is the most academically challenging and it moves at a rigorous pace. Students possess a strong interest in learning and they have a high level of intellectual curiosity. Students are self-motivated and work well with others. They do homework promptly and thoroughly and participate in class discussions on a daily basis.

College Preparatory I

These students are conscientious about their studies and the class moves at a moderate pace. Students possess a solid interest in learning and work well independently and in small groups with teacher direction. Students are capable and willing to put time and effort into their work. They do homework daily and consistently participate in class.

College Preparatory II

These students are college bound, but may need more support and a slower pace in the classroom. Smaller class sizes increase student-teacher interaction. Students need practice and routine along with differentiated instruction. They are able to work independently and in small groups in a structured environment.

162 ALGEBRA 1

Grade 9 ONLY

College Prep I

6.25 credits

This course addresses the Common Core Standards for Model Algebra 1. Model Algebra I focuses on four critical areas: (1) deepen and extend understanding of linear and exponential relationships; (2) contrast linear and exponential relationships with each other and engage in methods for analyzing, solving, and using quadratic functions; (3) extend the laws of exponents to square and cube roots; and (4) apply linear models to data that exhibit a linear trend.

Pre-Requisite Course: Grade 8 Mathematics. Recommended Placement: Students planning to enroll in this college preparatory course must have the recommendation of their Grade 8 Mathematics Teacher. **Requirement: *This course is required for all freshmen who will be concurrently enrolled in C1 Physics course 471. This course meets the recommendations for a math class outlined in MassCore.***

724 SEI ALGEBRA 1

Grades 9, 10, 11, 12

College Prep I

7.5 credits

Limited to students enrolled in ESL I or ESL II, this course will integrate Algebra with Geometry for students who are learning English. Students will develop algebraic concepts, acquire competency in algebraic computation and problem solving as well as learning the vocabulary of Math and reading for Math applications. Students will develop skills in working with polynomials, linear equations, quadratic equations and their connections with geometry as well as practical applications. Standards outlined in The Massachusetts Curriculum Frameworks and the Massachusetts English Language Proficiency Benchmarks and Outcomes guide the course curriculum. **This course meets the recommendations for a math class outlined in MassCore.**

163 ALGEBRA 1

Grade 9 ONLY

College Prep II

6.25 credits

This course addresses the Common Core Standards for Model Algebra 1. Model Algebra I focuses on four critical areas: (1) deepen and extend understanding of linear and exponential relationships; (2) contrast linear and exponential relationships with each other and engage in methods for analyzing, solving, and using quadratic functions; (3) extend the laws of exponents to square and cube roots; and (4) apply linear models to data that exhibit a linear trend.

Pre-Requisite Course: Grade 8 Mathematics. Recommended Placement: Students planning to enroll in this course must have successfully completed Grade 8 Mathematics. **Requirement: *This course is required for all freshmen who will be concurrently enrolled in C2 Physics course 472. This course meets the recommendations for a math class outlined in MassCore.***

166 ALGEBRA 1

Grades 10, 11, 12

College Prep II

7.5 credits

This course addresses the Common Core Standards for Model Algebra 1. Model Algebra I focuses on four critical areas: (1) deepen and extend understanding of linear and exponential relationships; (2) contrast linear and exponential relationships with each other and engage in methods for analyzing, solving, and using quadratic functions; (3) extend the laws of exponents to square and cube roots; and (4) apply linear models to data that exhibit a linear trend. This course is designed for those who need a slower pace. Therefore, some content will be addressed more deeply than content that is not as critical to the overall understanding of the focus areas above. Pre-Requisite Course: Grade 8 Mathematics. Recommended Placement: Students planning to enroll in this course must have successfully completed Grade 8 Mathematics. **This course meets the recommendations for a math class outlined in MassCore.**

185 GEOMETRY

Grade 9 ONLY

Honors

6.25 credits

This course addresses the Common Core Standards for Model Geometry. Model Geometry focuses on six critical areas: (1) establish criteria for congruence of triangles based on rigid motions; (2) establish criteria for similarity of triangles based on dilations and proportional reasoning; (3) informally develop explanations of circumference, area, and volume formulas; (4) apply the Pythagorean Theorem to the coordinate plane; (5) prove basic geometric theorems; and (6) extend work with probability. Prerequisite Courses: Grade 8 Algebra 1 Recommended Placement: Students planning to enroll in this honors level course should have earned a grade of "B" or better in Grade 8 Algebra 1.

NOTE: This course is required for all freshmen who will be concurrently enrolled in Honors Physics course 469. This course meets the recommendations for a math class outlined in MassCore.

186 GEOMETRY

Grade 9 ONLY

College Prep I

6.25 credits

This course addresses the Common Core Standards for Model Geometry. Model Geometry focuses on six critical areas: (1) establish criteria for congruence of triangles based on rigid motions; (2) establish criteria for similarity of triangles based on dilations and proportional reasoning; (3) informally develop explanations of circumference, area, and volume formulas; (4) apply the Pythagorean Theorem to the coordinate plane; (5) prove basic geometric theorems; and (6) extend work with probability. Pre-Requisite Course: Grade 8 Algebra 1 Recommended Placement: Students planning to enroll in this college preparatory course should have earned a grade of "C" or better in Grade 8 Algebra 1.

NOTE: This course is required for all freshmen who will be concurrently enrolled in C1 Physics course 470. This course meets the recommendations for a math class outlined in MassCore.

187 GEOMETRY

Grades 10, 11 ONLY

Honors

7.5 credits

This course addresses the Common Core Standards for Model Geometry. Model Geometry focuses on six critical areas: (1) establish criteria for congruence of triangles based on rigid motions; (2) establish criteria for similarity of triangles based on dilations and proportional reasoning; (3) informally develop explanations of circumference, area, and volume formulas; (4) apply the Pythagorean Theorem to the coordinate plane; (5) prove basic geometric theorems; and (6) extend work with probability. Pre-Requisite Course: Algebra 1 Recommended Placement: Students planning to enroll in this honors level course should have earned a grade of "A-" or better in Algebra 1 C1. **This course meets the recommendations for a math class outlined in MassCore.**

170 GEOMETRY

Grades 10, 11 ONLY

College Prep I

7.5 credits

This course addresses the Common Core Standards for Model Geometry. Model Geometry focuses on six critical areas: (1) establish criteria for congruence of triangles based on rigid motions; (2) establish criteria for similarity of triangles based on dilations and proportional reasoning; (3) informally develop explanations of circumference, area, and volume formulas; (4) apply the Pythagorean Theorem to the coordinate plane; (5) prove basic geometric theorems; and

(6) extend work with probability. Pre-Requisite Course: Algebra 1 Recommended Placement: Students planning to enroll in this college preparatory course should have earned a grade of "C" or better in Algebra 1 C1 or "A-" or better in Algebra 1 C2. **This course meets the recommendations for a math class outlined in MassCore.**

729 SEI GEOMETRY

Grades 10, 11, 12

College Prep I

7.5 credits

Limited to students enrolled in ESL I or ESL II, students will acquire proficiency in reading for understanding of mathematical concepts, refine skills in algebraic computation, and develop understanding of the application of mathematics through critical thinking and problem solving. Geometry, data analysis, and probability will be integrated. Linear and parabolic functions and their applications will be studied in conjunction with their applications. Standards outlined in the Massachusetts Curriculum Frameworks and the Massachusetts English Language Proficiency Benchmarks and Outcomes guide the course curriculum. **This course meets the recommendations for a math class outlined in MassCore.**

173 GEOMETRY

Grades 10, 11, 12

College Prep II

7.5 credits

This course addresses the Common Core Standards for Model Geometry. Model Geometry focuses on six critical areas: (1) establish criteria for congruence of triangles based on rigid motions; (2) establish criteria for similarity of triangles based on dilations and proportional reasoning; (3) informally develop explanations of circumference, area, and volume formulas; (4) apply the Pythagorean Theorem to the coordinate plan; (5) prove basic geometric theorems; and (6) extend work with probability. This course is designed for those who need a slower pace. Therefore, some content will be addressed more deeply than content that is not as critical to the overall understanding of the focus areas above. Pre-Requisite Course: Algebra 1. Recommended Placement: Students planning to enroll in this college preparatory course should have successfully completed Algebra 1. **This course meets the recommendations for a math class outlined in MassCore.**

103 ALGEBRA 2

Grades 10, 11

Honors

5 credits

This course addresses the Common Core Standards for Model Algebra 2. Model Algebra 2 focuses on four critical areas: (1) relate arithmetic of rational expressions to arithmetic of rational numbers; (2) expand understandings of functions and graphing to include trigonometric functions; (3) synthesize and generalize functions and extend understanding of exponential functions to logarithmic functions; and (4) relate data display and summary statistics to probability and explore a variety of data collection methods. Pre-Requisite Courses: Algebra 1 and Geometry Recommended Placement: Students planning to enroll in this honors level course should have successfully completed Algebra 1 and earned a grade of "C" or better in Geometry Honors or a "A-" or better in Geometry C1. **This course meets the recommendations for a math class outlined in MassCore.**

113 ALGEBRA 2

Grades 10, 11, 12

College Prep I

5 credits

This course addresses the Common Core Standards for Model Algebra 2. Model Algebra 2 focuses on four critical areas: (1) relate arithmetic of rational expressions to arithmetic of rational numbers; (2) expand understandings of functions and graphing to include trigonometric functions; (3) synthesize and generalize functions and extend understanding of exponential functions to logarithmic functions; and (4) relate data display and summary statistics to probability and explore a variety of data collection methods. Pre-Requisite Courses: Algebra 1 and Geometry Recommended Placement: Students planning to enroll in this college preparatory course should have successfully completed Algebra 1 and earned a grade of "C" or better in Geometry C1 or "A-" or better in Geometry C2. **This course meets the recommendations for a math class outlined in MassCore.**

123 ALGEBRA 2

Grades 11, 12

College Prep II

5 credits

This course addresses the Common Core Standards for Model Algebra 2. Model Algebra 2 focuses on four critical areas: (1) relate arithmetic of rational expressions to arithmetic of rational numbers; (2) expand understandings of functions and graphing to include trigonometric functions; (3) synthesize and generalize functions and extend understanding of exponential functions to logarithmic functions; and (4) relate data display and summary statistics to probability and explore a variety of data collection methods. This course is designed for those who need a slower pace. Therefore, some content will be addressed more deeply than content that is not as critical to the overall understanding of the focus areas above. Pre-Requisite Courses: Algebra 1 and Geometry Recommended Placement: Students planning to enroll in this college preparatory course should have successfully completed Algebra 1 and Geometry. **This course meets the recommendations for a math class outlined in MassCore.**

119 PRE-CALCULUS

Grades 11, 12

Honors

5 credits

This course addresses the Common Core Standards for Model Precalculus. Model Precalculus focuses on four critical areas: (1) extend work with complex numbers; (2) expand understanding of logarithms and exponential functions; (3) use characteristics of polynomial and rational functions to sketch graphs of those functions; and (4) perform operations with vectors. Pre-Requisite Courses: Algebra 1, Geometry, and Algebra 2 Recommended Placement: Students planning to enroll in this honors level course should have successfully completed Algebra 1, Geometry, and earned a grade of "B" or better in Algebra 2 Honors or an "A" or better in Algebra 2 C1. **This course meets the recommendations for a math class outlined in MassCore.**

120 PRE-CALCULUS

Grades 11, 12

College Prep I

5 credits

This course addresses the Common Core Standards for Model Precalculus. Model Precalculus focuses on four critical areas: (1) extend work with complex numbers; (2) expand understanding of logarithms and exponential functions; (3) use characteristics of polynomial and rational functions to sketch graphs of those functions; and (4) perform operations with vectors. Pre-Requisite Courses: Algebra 1, Geometry, and Algebra 2 Recommended Placement: Students planning to enroll in this college preparatory course should have successfully completed Algebra 1 and Geometry and earned a grade of "B" or better in Algebra 2 C1 or "A" or better in Algebra 2 C2. **This course meets the recommendations for a math class outlined in MassCore.**

126 TOPICS IN ALGEBRA & TRIGONOMETRY

Grade 12 ONLY

College Prep II

5 credits

This course complements Algebra 2 C2 course 123. The course uses a standards-based approach to the study of algebra 3. Students should take this course if they are not ready for pre-calculus and if they would like to improve their current math skills, expand their mathematical knowledge in preparation for college level mathematics, and learn how mathematics is applied in various subject areas. The course includes such topics as quadratic equations, exponents, radicals, trigonometry, logarithms, statistics, probability, data analysis, problem solving techniques, and applications of concepts covered in algebra 1, geometry, and algebra 2. Connections to real world and cross-curricular applications will be made. Pre-Requisite Courses: Algebra 1, Geometry, and Algebra 2.

Recommended Placement: Students planning to enroll in this college preparatory course should have successfully completed Algebra 1, Geometry, and Algebra 2. **This course meets the recommendations for a math class outlined in MassCore.**

127 INTEGRATED MATHEMATICS STANDARDS FOR HIGH SCHOOL

Grade 12 EPP Students ONLY

College Prep II

5 credits

All students on an EPP (Educational Proficiency Plan) are required to take and pass a mathematics course during their senior year. This course is for those students who need an alternative to fill the EPP requirement for graduation. The course will cover topics that prepare students for an end of course proficiency exam. Students will need to pass the course as a graduation requirement. The exam will address the high school mathematics content in the Massachusetts

Frameworks. The course will also prepare students for topics they may encounter in a college math course. Topics addressed will come from the following conceptual categories: Number and Quantity, Algebra, Functions, Modeling, Geometry, and Statistics and Probability. Pre-Requisite Courses: Algebra 1, Geometry, and Algebra 2
Recommended Placement: *For Students on an Educational Proficiency Plan* who have successfully completed Algebra 1, Geometry, and Algebra 2. (See: <http://www.doe.mass.edu/ccr/epp/qa.html> for more information about EPP's)

107 AP CALCULUS BC

Grade 12 AP Level 7.5 credits

This is a course for the mathematically advanced student. The course uses a standards-based approach to the study of calculus and culminates the study of the most rigorous aspects of mathematics at the school. It follows the established AP curriculum for calculus at the BC level. Students in this course are required to take either the AB or BC level Advanced Placement Examination in Calculus. The approach combines a strong theoretical development with sound training in technique and the use of multiple representations of the solutions to problems. Use of a graphing calculator is required. Connections to real world and cross-curricular applications will be made. Pre-Requisite Courses: Algebra 1-2, Geometry, and Precalculus Recommended Placement: Students planning to enroll in this AP level course should have earned a grade of "A-" or better in Precalculus Honors. Students will be expected to take the AP exam for this course in May. **This course meets the recommendations for a math class outlined in MassCore.**

105 AP CALCULUS AB

Grade 12 AP Level 5 credits

This is a course for the mathematically proficient student. The course uses a standards-based approach to the study of calculus and follows the established AP curriculum for calculus at the AB level. Students in this course are required to take the AB level Advanced Placement Examination in Calculus. The course combines theoretical development with sound problem solving techniques. Use of a graphing calculator is required. Connections to real world and cross-curricular applications will be made. Pre-Requisite Courses: Algebra 1-2, Geometry, and Precalculus Recommended Placement: Students planning to enroll in this AP level course should have earned a grade of "B" or better in Precalculus Honors or an "A" in Precalculus C1 and a Teacher Recommendation. Students will be expected to take the AP exam for this course in May. **This course meets the recommendations for a math class outlined in MassCore.**

115 CALCULUS

Grade 12 College Prep I 5 credits

This course uses a standards-based approach to the study of calculus. The course surveys the main topics of calculus dealing with differential calculus, some integral calculus, and analytical geometry in the plane. It leans heavily on the intuitive approach with an emphasis on physical applications. Use of a graphing calculator is required. Connections to real world and cross-curricular applications will be made. Pre-Requisite Courses: Algebra 1-2, Geometry, and Precalculus Recommended Placement: Students planning to enroll in this college prep level course should have earned a grade of "C" or better in Precalculus C1. **This course meets the recommendations for a math class outlined in MassCore.**

MATHEMATICS ELECTIVES

117 AP STATISTICS

Grades 10, 11, 12 AP level 5 credits

This course uses a standards-based approach to the study of statistics and probability. It follows the established AP curriculum for Statistics and is designed for the mathematically advanced student. Students in this course are required to take the Advanced Placement Examination in Statistics. Students will use sophisticated techniques of probability, statistics, data collection, research, data analysis, a statistics calculator, statistical application software, and algebraic and trigonometric functions. Connections to real world and cross-curricular applications will be made. Pre-Requisite Courses: Algebra 1-2, Geometry, and Precalculus Recommended Placement: Students planning to enroll in this AP level course should have earned a grade of "C" or better in Precalculus Honors or a "B" or better in Precalculus C1.

Grade 10 and 11 students may take this course if they have met the recommended placement for and are concurrently enrolled in Precalculus Honors. Students will be expected to take the AP exam for this course in May. **This course meets the recommendations for a math class outlined in MassCore.**

110 STATISTICS

Grade 11, 12

Honors

5 credits

This course uses a standards-based approach to the study of statistics and probability. It is designed so that students will discover how to use probability and statistics to research and analyze data, compare results, and document how statistics are used and misused on a daily basis. A statistics calculator and statistical application software will be used. Connections to functions, both algebraic and trigonometric, will be introduced in the latter part of the course. Connections to real world and cross-curricular applications will be made. Pre-Requisite Courses: Algebra 1, Geometry, and Algebra 2 Recommended Placement: Students planning to enroll in this honors level course should have earned a grade of "C" or better in Algebra 2 Honors or a "B" or better in Algebra 2 C1. **This course meets the recommendations for a math class outlined in MassCore.**

118 STATISTICS

Grade 11, 12

College Prep I

5 credits

This course uses a standards-based approach to the study of statistics and probability. It is designed so that students will discover how to use probability and statistics to research and analyze data, compare results, and document how statistics are used and misused on a daily basis. A statistics calculator and statistical application software will be used. Connections to functions, both algebraic and trigonometric, will be introduced in the latter part of the course. Connections to real world and cross-curricular applications will be made. Pre-Requisite Courses: Algebra 1, Geometry, and Algebra 2 Recommended Placement: Students planning to enroll in this college prep level course should have earned a grade of "C" or better in Algebra 2 C1. **This course meets the recommendations for a math class outlined in MassCore.**

180 EXPLORING COMPUTER SCIENCE

Grades 10, 11, 12

Honors

5 credits

Exploring Computer Science is designed to introduce students to the breadth of the field of computer science through an exploration of engaging and accessible topics. The course will focus on the conceptual ideas of computing and help students understand why certain tools or languages might be utilized to solve particular problems. The goal of Exploring Computer Science is to develop in students the computational thinking practices of algorithm development, problem solving and programming within the context of problems that are relevant to the lives of today's students. Students will also be introduced to topics such as interface design, limits of computers and societal and ethical issues. Units include: Human Computer Interaction, Problem Solving, Web Design, Introduction to Programming, Computing and Data Analysis, and Robotics. Pre-Requisite Course: Algebra 1.

193 AP MATH COMPUTER SCIENCE PRINCIPLES

Grades 11, 12

AP Level

5 credits

AP Math Computer Science Principles provides students the opportunity to use programming, computational thinking and data analytics to create digital artifacts and documents representing design and analysis in areas including the Internet, algorithms, and the impact that these have on science, business, and society. Students use computational tools and techniques including abstraction, modeling, and simulation to collaborate in solving problems that connect computation to their lives. Students complete three creative projects, two collaborative programming projects, and an individual research and writing project on the impact of a recent, computing innovation that appeals to them. Students will be expected to take the AP exam for this course in May. Recommended Placement: Students planning to enroll in this AP level course should have earned a grade of "B" or better in Exploring Computer Science with the Honors Option or an "A-" or better at the C1 level. Students who did not take Exploring Computer Science may take this course with a teacher recommendation.

197 AP COMPUTER SCIENCE A

Grade 9,10,11,12 AP Level 5 credits

This course is the equivalent of an introductory college-level course in computer science. Students will be introduced to different topics in computer science such as design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. Students who have taken AP Computer Science Principles will build on their knowledge of programming with this course. The Java language will be used to problem solve and work through coding projects. Students will be expected to take the AP exam for this course in May. Prerequisites: AP Computer Science Principles or Algebra II and recommendation from teacher.

073 SAT REVIEW

Grade 11 unleveled 2.5 credits

This course is designed for a focused college preparatory student who will be taking the SAT for admission into a two or four-year college. Using material from several SAT preparatory sources, students will be prepared for the SAT exam in the spring. Students will be introduced to the test format, be given a diagnostic exam to determine strengths and weaknesses, be acquainted with test taking strategies and be given numerous practice exercises. A letter grade will be given based on attendance, effort, completion of assignments, quiz scores, progress, and participation in discussions and group work. Pre-Requisite Course: None

715 ACADEMIC SUPPORT/MATH

Grade 9, 10, 11, 12 non-credit

Academic Support is an opportunity for students to receive academic tutoring, MCAS support, in English, Math, History, or Science during the school day. Sections will be staffed with content-certified teachers. Students will participate in Academic Support for limited periods of time throughout the school year as needed to bolster academic performance

WORLD LANGUAGES DEPARTMENT

The World Languages Department offers different levels of courses in French, Italian, Latin, and Spanish. French, Italian, and Spanish are introduced to most Waltham students in middle school and Latin in grade 9. American Sign Language (ASL) will be offered for students in grades 11-12. Students develop listening, speaking, reading, and writing skills by using the target language in the classroom. The World Languages Department follows the Massachusetts Foreign Language Curriculum Frameworks. It seeks to develop the communicative and academic language abilities that will permit students access to knowledge in a multilingual world. Recognizing that our goal is proficiency for all students as well as the rich linguistic heritage of many of our students, the World Languages Department offers courses for students who have never studied a world language, courses that continue the middle school sequence, and Spanish Advanced Placement. Proficiency in a second language is at the core of what we hope to develop in students

As stated in the Guiding Principles of MassCore, students should take two years of the same foreign language. The World Language Department is dedicated to help students of Waltham fulfill these recommendations. Any additional years of study in foreign languages would give students the opportunity to fulfill "additional core courses" for MassCore. In addition, the High School core curriculum requires that all college-bound students take and pass at least two years of a single foreign language. This is currently a minimum requirement for entrance into state colleges and universities. Many private colleges and universities require three or more years of a foreign language. In addition, according to the Massachusetts Education Reform Act of 1993, foreign language is part of the common core of learning. A guiding principle of the Massachusetts Foreign Languages Curriculum Frameworks is that all students should become proficient in at least one language in addition to English by graduation. Knowledge of a world language is a great asset to many careers and occupations in today's global society. Foreign language education has a positive correlation with high verbal scores on the S.A.T. Therefore, we recommend four years of foreign language study for college- or career-bound students.

The goals of foreign language instruction are the following:

- Enhancing listening, speaking, reading, and writing skills in the target language.
- Developing proficiency in the target language.
- Fostering critical thinking through an understanding and an appreciation of cultural differences in the countries or regions where the target language is spoken and those of North America.
- Preparing our students well for all current academic challenges including MCAS, SAT, and advanced foreign language exams.
- Preparing our students well for post-secondary education.
- Connecting with other disciplines.

200 FRENCH I

Grade 9, 10, 11,12

Honors

5 credits

This course is designed to enhance students' ability to learn a foreign language. Students will be expected to use the target language extensively in class to enhance their communicative skills. Students will develop their listening, speaking, reading and writing skills through oral and written presentations. Short cultural readings will provide authentic insight into French culture worldwide. Students will have the opportunity to work with technology in an interactive manner. In addition to classroom participation, regularly assigned homework, quizzes, and unit tests, a mid-term examination will be administered in January and a comprehensive final exam will be administered in June. Text: Bon Voyage I. **Prerequisite:** "B" or better in middle school French

201 FRENCH I

Grade 9, 10, 11, 12

College Prep I

5 credits

This course is designed to enhance students' ability to learn a foreign language. . Students will be expected to acquire a solid understanding of the structure of the language through the development of listening, speaking, reading, and writing. Paired communicative activities, and short compositions will reinforce these skills. Cultural aspects of the French speaking world will be presented. Students will have the opportunity to work with technology in an interactive manner. In addition to classroom participation, regularly assigned homework, quizzes and unit tests, a mid-term examination will be administered in January and a comprehensive final exam will be administered in June. Text: Bon Voyage I

202 FRENCH I

Grade 9, 10, 11,12

College Prep II

5 credits

This course is designed to enhance a student's ability to learn a foreign language at a slower pace. Students will be expected to learn basic vocabulary and grammar. An appreciation of French culture and the French speaking world will be presented through videos and short readings from the textbook. Students will have the opportunity to work with technology in an interactive manner. In addition to regularly assigned homework, there will be weekly quizzes and unit tests on essential elements of language structure and usage. A mid-term examination will be administered in January and a comprehensive final exam will be administered in June. Text: Bon Voyage I

203 FRENCH II

Grade 9, 10, 11,12

Honors

5 credits

This course is designed for those students who have successfully completed French I. Honors (200) or have teacher's recommendation. Listening, speaking, reading and writing skills are developed at a rapid pace. Students are expected to master major verb tenses. French is used extensively in class to enhance students' comprehension and conversational skills and students are expected to respond in French. Students will write short essays in the target language using the acquired vocabulary and grammar structures. Students will have the opportunity to work with technology in an interactive manner. In addition to daily homework, there will be quizzes, unit tests, language and culture projects and role playing in the target language. A mid-term examination will be administered in January and a comprehensive final exam will be administered in June. Text: Bon Voyage I. **Prerequisite:** French I. **Recommended Placement:** "B" or better in French I Honors, or an "A" in French I C1

204 FRENCH II

Grade 10, 11, 12

College Prep I

5 credits

This course is designed for students who have successfully completed French I, or have teacher's recommendation. The course continues the student's development of the four foreign language skills. Listening and speaking skills are enhanced through various conversational activities. Reading and writing skills are further developed through supplemental readers and role playing. Students continue to become familiar with the culture and traditions of the French speaking world. Students will have the opportunity to work with technology in an interactive manner. In addition to daily homework, there will be quizzes and unit tests. A mid-term examination will be administered in January and a comprehensive final exam will be administered in June. Text: Bon Voyage II

Prerequisite: French I. **Recommended Placement:** "C" or better in French I C1 or "B" or better in French I C2

205 FRENCH II

Grade 10, 11, 12

College Prep II

5 credits

This course is designed for students who have successfully completed French I. Speaking, listening, reading and writing skills are developed at a slower pace. Students' listening and comprehension skills are enhanced through a variety of conversational exercises. Students will expand their writing skills through paragraph writing. Students will continue to become familiar with the culture and traditions of French-speaking countries. Students will have the opportunity to work with technology in an interactive manner. In addition to regularly assigned homework, there will be weekly quizzes and unit tests. A mid-term examination will be administered in January and a comprehensive exam will be administered in June. Text: Bon Voyage II.

Prerequisite: French I. **Recommended Placement:** Successful completion of French I

206 FRENCH III

Grade 11, 12

Honors

5 credits

This course is designed for students who have successfully completed French II Honors (203) or have teacher's recommendation. Students are expected to acquire detailed knowledge of all essential elements of language structure and grammar. Conversational proficiency will continue to be emphasized through a variety of activities, including skits, dialogues, presentations and projects. Students' reading, writing, and listening skills are further developed in the classroom with role playing, outside readings, journal writing, and composition writing. Students are expected to participate in class discussions and respond to daily activities using the target language. Students will continue to enhance their knowledge of culture through selected readings, videos, and songs. Quizzes, unit tests, and cultural projects are utilized to assess students' performance. Students will have the opportunity to work with technology in an interactive manner. In addition, a mid-term examination will be administered in January and a comprehensive final examination will be administered in June. Text: Bon Voyage II.

Prerequisite: French II. **Recommended Placement:** "B" or better in French II Honors or an "A" in French II C1

207 FRENCH III

Grade 11, 12

College Prep I

5 credits

This course is designed for students who have successfully completed French II. Listening, speaking, reading and writing skills continue to be developed at a higher level. Students are expected to acquire solid knowledge of all major language tenses including the conditional and the subjunctive modes of verbs. Reading, writing, listening and speaking skills are further developed in the classroom with conversation, role playing, journal writing, and guided writing. French culture will be integrated into the course through the use of readings, videos, and songs. Quizzes, unit tests, language and culture projects, role playing and classroom participation are utilized to assess students' performance. Students will have the opportunity to work with technology in an interactive manner. In addition, a mid-term examination will be administered in January and a comprehensive final exam will be administered in June. Text: Bon Voyage II.

Prerequisite: French II. **Recommended Placement:** Successful completion of French II

208 FRENCH IV

Grade 12 Honors 5 credits

This course is designed for students who demonstrated excellence in French and have completed French III Honors (206) or have teacher's recommendation. Class is conducted almost solely in the target language. Students are expected to further enhance their reading ability and cultural awareness through the use of excerpts from authentic literary works as well as other various short stories and websites... Listening and speaking skills are further developed through a variety of audio activities and videos. Students are expected to make presentations and write compositions in the target language. In addition to regularly assigned homework, classroom participation, quizzes and tests will be administered, based on selected readings are required. Students will have the opportunity to work with technology in an interactive manner. In addition, a mid-term examination will be administered in January and a final examination is administered in June. Text: Bon Voyage III. **Prerequisite:** French III. **Recommended Placement:** "B" or better in French III Honors or an "A" in French III C1

209 FRENCH IV

Grade 12 College Prep I 5 credits

This course is designed for students who have successfully completed French III. Students are expected to continue their study of all French grammar. Students are expected to enhance their reading ability and cultural awareness through the use of excerpts from authentic literary works as well as other various short stories and websites. Speaking and listening skills are further developed through a variety of conversational and audio activities, including video. Students are expected to make presentations in the target language, and write compositions in the target language. Students will have the opportunity to work with technology in an interactive manner. In addition to regularly assigned homework, classroom participation, quizzes and tests will be administered, based on selected readings are required. A mid-term examination will be administered in January and a final examination is administered in June. Text: Bon Voyage III. **Prerequisite:** French III. **Recommended Placement:** Successful completion of French III

210 ITALIAN I

Grade 9, 10, 11, 12 Honors 5 credits

This course is designed to enhance students' ability to learn a foreign language. Italian will be widely used in class to enhance students' communicative skills and to provide a solid base for the acquisition of listening, speaking, reading and writing skills. Emphasis will be placed on communicative tasks, language structure, and grammar, practical use of vocabulary, and a true understanding and appreciation of Italian culture. Students are expected to participate in oral discussions, complete daily writing assignments, including interactive on-line assignments and participate in group activities. Selected readings in the target language will be used regularly during the year to enhance students' reading and comprehension skills. Cultural understanding will be achieved through authentic videos, music, classroom presentations and multi-media projects. In addition to classroom participation, daily homework, quizzes, and unit tests, a mid-term examination will be administered in January and a comprehensive final examination will be administered in June. Text: Sentieri. **Prerequisite:** "B" or better in middle school Italian

211 ITALIAN I

Grades 9, 10, 11, 12 College Prep I 5 credits

This course is designed to enhance students' ability to learn a foreign language. Students will be expected to acquire a solid understanding of the language through the development of listening, speaking, reading and writing skills. Students will be expected to converse in the target language whenever possible, participate in oral discussions and group activities, complete daily writing assignments, including interactive on-line assignments. Students will acquire a true appreciation of Italian culture through videos, music, classroom presentations and projects. Supplemental readings will also be used in class to enhance students' reading comprehension skills. In

addition to classroom participation, regularly assigned homework, quizzes, and unit tests, a mid-term examination will be administered in January and a comprehensive final examination will be administered in June. Text: Sentieri

212 ITALIAN I

Grade 9, 10, 11, 12

College Prep II

5 credits

This course is designed to enhance students' ability to learn a foreign language. Listening, speaking, reading and writing skills are developed at a moderate pace. Students will be expected to learn basic vocabulary, verb tenses and other elements of Italian grammar. Students will be engaged in communicative activities and will be given the opportunity to develop language skills with immediate application in authentic situations. Students will be expected to complete interactive on-line assignments. Aspects of Italian culture and traditions will be presented in class through videos, music, songs and other sources. In addition to classroom participation, regularly assigned homework, quizzes, and unit tests, a mid-term examination will be administered in January and a comprehensive final exam will be administered in June. Text: Sentieri

213 ITALIAN II

Grade 9, 10, 11, 12

Honors

5 credits

This course is designed for students who have excelled in Italian I Honors (210) or have teacher's recommendation. Speaking, listening, reading and writing skills are further developed. Additional grammar elements and verb tenses are introduced at an intensive rate. Students will be expected to formulate complete and logical sentences in speaking and writing, including interactive on-line assignments. Communicative skills are reinforced through conversational exercises, short oral presentations, role playing and other group activities. Several selected readings will be used to further enhance students' comprehension skills. Aspects of Italian culture and traditions will be presented in class through videos, music, readings and other sources. In addition to classroom participation, regularly assigned homework, quizzes, and unit tests, a mid-term examination will be administered in January and a comprehensive test will be administered in June. Text: Sentieri. **Prerequisite:** Italian I. **Recommended Placement:** "B" or better in Italian I Honors, or an "A" in Italian I C1

214 ITALIAN II

Grade 9, 10, 11, 12

College Prep I

5 credits

This course is designed for students who have successfully completed Italian I, or have teacher's recommendation. The course continues the student's development of the four major skills: listening, speaking, reading and writing. Students will continue to learn basic vocabulary, verb tenses and other elements of Italian grammar with a focus on communication skills. Students will be engaged in practical conversation, paired activities and group work, including interactive on-line assignments. Aspects of Italian culture and traditions will be presented in class through videos, music, songs and other sources. In addition to classroom participation, regularly assigned homework, quizzes and unit tests, a mid-term examination will be administered and a final comprehensive test will be administered in June. Text: Sentieri. **Prerequisite:** Italian I. **Recommended Placement:** "C" or better in Italian I C1 or "B" or better in Italian I C2

215 ITALIAN II

Grade 9, 10, 11, 12

College Prep II

5 credits

This course is designed for students who have successfully completed Italian I. All course activities aim at enhancing students' knowledge and application of the four major language skills. Listening, speaking, reading and writing skills are developed at a moderate pace. Students will continue to learn basic vocabulary, verb tenses and other elements of Italian grammar with a focus on communication skills. Students will be engaged in practical conversation, paired activities and group work, including interactive on-line assignments. Aspects of Italian culture and traditions will be presented in class through videos, music, songs and other sources. In addition to classroom participation, regularly assigned homework, quizzes and unit tests a mid-term examination will be administered in

January and a comprehensive final exam will be administered in June. Text: Sentieri. **Prerequisite:** Italian I.
Recommended Placement: Successful completion of Italian I

216 ITALIAN III

Grade 10, 11, 12

Honors

5 credits

This course provides a challenging and rigorous program for students who have successfully completed Italian II. Honors (213) or have teacher's recommendation. Students will be expected to write coherent, comprehensive paragraphs, to read selected stories and authentic selections of short articles from magazines, newspapers, and various on-line resources. Students' communicative skills are continually developed through the use of songs, music, videos, movies and other sources. Students will be expected to participate in class discussions and respond to daily activities using the target language. Italian cultural aspects are presented through readings related to the world of art, music, literature and history. In addition to classroom participation, regularly assigned homework, quizzes, and unit tests, a comprehensive final test will be administered in June. Text: Parliamo Italiano. **Prerequisite:** Italian II. **Recommended Placement:** "B" or better in Italian II Honors or an "A" in Italian II C1

217 ITALIAN III

Grade 10, 11, 12

College Prep I

5 credits

This course is designed for students who have successfully completed Italian II. Listening, speaking, reading and writing skills are further developed to enable the student to create complex and meaningful sentences. Students will be expected to formulate sentences into short paragraphs as well as to read selected short stories, from magazines, newspapers, and various on-line resources. Students' communicative skills are further developed through the use of music, videos, movies and other sources. Students will be expected to participate in class discussions and respond to daily activities using the target language. Italian cultural aspects are presented through readings related to the world of art, music, literature and history. In addition to classroom participation, regularly assigned homework, quizzes, and unit tests, a mid-term examination will be administered in January and a final comprehensive test will be administered in June. Text: Parliamo Italiano. **Prerequisite:** Italian II. **Recommended Placement:** Successful completion of Italian II

218 ITALIAN IV

Grade 11, 12

Honors

5 credits

This course is designed for students who have successfully completed Italian III. Honors (216) or have teacher's recommendation. The purpose of this course is to further develop students' knowledge of Italian language and culture. The course is in part a review of grammar and concepts previously studied. Special importance is given to oral production in class, a deepening of reading comprehension skills and analysis, written work and projects. At the end of the course, students will have increased familiarity with the basic structures of Italian language, a more developed vocabulary, and extensive exposure to social, cultural, literary, and historical themes. In addition to classroom participation, regularly assigned homework, quizzes, and unit tests during the school year, a mid-term examination will be administered in January and the course will conclude with an end of the year assessment. Text: Immagina. **Prerequisite:** Italian III. **Recommended Placement:** "B" or better in Italian III Honors or an "A" in Italian III C1

219 ITALIAN IV

Grade 11, 12

College Prep I

5 credits

This course is designed for students who have successfully completed Italian III. The purpose of this course is to further develop students' knowledge of Italian language and culture. The course is in part a review of grammar and concepts previously studied. Special importance is given to oral production in class, a deepening of reading comprehension skills and analysis, written work and projects. At the end of the course, students will have increased familiarity with the basic structures of Italian language, a more developed vocabulary, and extensive exposure to social, cultural, literary, and historical themes. In addition to classroom participation, homework,

quizzes, and unit tests during the school year, a mid-term examination will be administered in January and the course will conclude with an end of the year assessment. Text: *Immagina*. **Prerequisite:** Italian III. **Recommended Placement:** Successful completion of Italian III

220 SPANISH I

Grade 9, 10, 11, 12

Honors

5 credits

This course is designed to enhance students' ability to learn a foreign language. Listening, speaking, reading and writing skills are developed, through oral presentations, dialogs, as well as reading and writing assignments. Students will learn about the geography and culture of different Hispanic countries through their text and other sources. Students will be expected to respond in Spanish to questions posed by their peers and their teacher, to write conversations and dramatize them. The target culture will be presented in class through videos, music and selected readings from a variety of sources. In addition to classroom participation, daily homework, quizzes and unit tests, a mid-term examination will be administered in January and a comprehensive final examination will be administered in June. Text: *Exprésate I*. **Prerequisite:** "B" or better in middle school Spanish

221 SPANISH I

Grade 9, 10, 11, 12

College Prep I

5 credits

This course is designed to enhance students' ability to learn a foreign language. Listening, speaking, reading and writing skills are developed, through oral presentations, dialogs, as well as reading and writing assignments. Students will learn about the geography and culture of different Hispanic countries through their text and other sources. Students will be expected to respond in Spanish to questions posed by their peers and their teacher, to write conversations and dramatize them. The target culture will be presented in class through videos, music and selected readings from a variety of sources. In addition to classroom participation, regularly assigned homework, quizzes and unit tests, a mid-term examination will be administered in January and a comprehensive final examination will be administered in June. Text: *Exprésate I*

222 SPANISH I

Grade 9, 10, 11, 12

College Prep II

5 credits

This course is designed to enhance students' ability to learn a foreign language. Listening, speaking, reading and writing skills are developed, at a slower pace through oral presentations, dialogs, as well as reading and writing assignments. Students will learn about the geography and culture of different Hispanic countries through their text and other sources. Students will be expected to respond in Spanish to questions posed by their peers and their teacher, to write conversations and dramatize them. The target culture will be presented in class through videos, music and selected readings from a variety of sources. In addition to classroom participation, regularly assigned homework, quizzes and unit tests, a mid-term examination will be administered in January and a comprehensive final examination will be administered in June. Text: *Exprésate I*

223 SPANISH II

Grade 9,10,11, 12

Honors

5 credits

This course is designed for students who have successfully completed Spanish I Honors (220) or have teacher's recommendation. Listening, speaking, reading, and writing skills will continue to be developed at a rapid and intense rate through oral presentations, readings, writing assignments, and special projects. Students are expected to respond in Spanish to questions posed by their peers and the teacher, to write conversations and dramatize them, and to understand material presented by native speakers on tape. The repertoire of vocabulary and grammar topics is further extended to include additional areas and details. Aspects of Hispanic culture will be presented in class through videos, music, and selected readings from a variety of sources. In addition to regularly assigned homework, there will be weekly quizzes and unit tests on essential elements of language structure and usage. A mid-term examination will be administered in January and a comprehensive exam will be administered in June. Text: *Exprésate II*. **Prerequisite:** Spanish I. **Recommended Placement:** "B" or better in Spanish I Honors, or an "A" in Spanish I C1

224 SPANISH II

Grade 10, 11, 12

College Prep I

5 credits

This course is designed for students who have successfully completed Spanish I, or have teacher's recommendation. The course continues the students' development of listening, speaking, reading, and writing skills. Additional verb tenses are introduced to further enhance students' communicative skills. Students are expected to respond in Spanish to questions posed by their peers and the teacher, to write and dramatize conversations, and to understand material presented by native speakers on tape. The repertoire of vocabulary and grammar topics is further extended to include additional areas. Aspects of Hispanic culture will be presented in class through videos, music, and selected readings from a variety of sources. In addition to regularly assigned homework, there will be weekly quizzes and unit tests on essential elements of language structure and usage. A midterm exam will be administered in January and a comprehensive final exam will be administered in June. Text: *Exprésate II*. **Prerequisite:** Spanish I. **Recommended Placement:** "C" or better in Spanish I C1, or "B" or better in Spanish I C2

225 SPANISH II

Grade 10, 11, 12

College Prep II

5 credits

This course is designed for students who have successfully completed Spanish I C2. Speaking, listening, reading and writing skills are developed at a slower pace. Additional verb tenses are introduced to further enhance students' communicative skills. Listening and comprehension skills are enhanced through a variety of conversational exercises. Students continue to become familiar with the culture and traditions of Spanish-speaking countries through extra readings, videos and songs. In addition to regularly assigned homework, there will be weekly quizzes and unit tests on essential elements of language structure and usage. A mid-term examination will be administered in January and a comprehensive exam will be administered in June. Text: *Exprésate II*. **Prerequisite:** Spanish I. **Recommended Placement:** Successful completion of Spanish I

226 SPANISH III

Grade 10, 11, 12

Honors

5 credits

This course is designed for students who have successfully completed Spanish II Honors (223) or have teacher's recommendation. Students are expected to acquire a detailed knowledge of essential elements of language structure and grammar. Students will explore Spanish readings including literary excerpts, short stories, poetry and articles. Conversational proficiency will continue to be emphasized through a variety of activities including skits, dialogues, presentations and projects. Students will continue to develop Spanish writing skills via note taking, journal writing and guided compositions. Appreciation of the rich and varied cultures of the Spanish-speaking world will continue through the use of video clips, cultural and popular music, art and culture-based projects. In addition to regularly assigned homework, a variety of performance assessments will be utilized. These include class participation, projects, tests and quizzes. A mid-term examination will be administered in January and a comprehensive exam will be administered in June. Text: *Exprésate III*. **Prerequisite:** Spanish II. **Recommended Placement:** "B" or better in Spanish II Honors or an "A" in Spanish II C1

227 SPANISH III

Grade 10, 11, 12

College Prep I

5 credits

This course is designed for those students who have successfully completed Spanish II. Spanish is used for a large percentage of class time in the classroom. Students are expected to acquire detailed knowledge of all essential elements of language structure and grammar. Students will be expected to read stories of increasing length, be engaged in discussing topics in the target language and guided writing. A variety of conversational exercises will be used to enhance students' vocabulary and language proficiency. Reading, writing, listening and speaking skills are further developed in the classroom. Students continue to enhance their knowledge of culture through selected readings, videos, music and cultural projects. In addition to regularly assigned homework, there

will be weekly quizzes and unit tests on essential elements of language structure and usage. A mid-term examination will be administered in January and a comprehensive exam will be administered in June. Text: *Exprésate III*. **Prerequisite:** Spanish II. **Recommended Placement:** Successful completion of Spanish II

228 SPANISH IV

Grade 11, 12

Honors

5 credits

Prerequisite is successful completion of Spanish III and teacher recommendation. The three essential components of this course are Spanish language, culture, and literature. This course is designed for the highly motivated language learner. Reading, writing, speaking, and listening skills are enhanced through numerous techniques. Spanish is used exclusively in the classroom. Students continue to practice these skills through projects, presentations debates, and team learning. A goal of this course is to prepare students for future study of Spanish at the university level. Students are expected to actively participate and independently complete regularly assigned work. A mid-term examination will be administered in January and the course will conclude with an end-of-year assessment. **Prerequisite:** Spanish III. **Recommended Placement:** "B" or better in Spanish III Honors or an "A" in Spanish III C1

229 SPANISH IV

Grade 11, 12

College Prep I

5 credits

This course is designed for students who have successfully completed Spanish III C1. The two essential objectives of this course are language proficiency and cultural awareness. Students will be given the opportunity to review and fine tune their language skills from prior years of study; and to apply these skills to four areas of communication: reading, speaking, listening, and writing. The class includes a variety of activities. A goal of this course is to prepare students for future study of the Spanish language at the university level. Students will be assessed through quizzes, tests, projects, homework, and participation. A mid-term examination will be administered in January and a comprehensive final exam will be given at the end of the year. **Prerequisite:** Spanish III. **Recommended Placement:** Successful completion of Spanish III

246 ADVANCED PLACEMENT SPANISH LANGUAGE AND CULTURE

Grade 12

5 credits

This course is recommended for highly motivated language learners and is conducted in Spanish. The purpose of the course is to demonstrate mastery of the listening, speaking, reading, and writing skills required for college level proficiency. Students who take this class are expected to take the AP Spanish Exam. In this course, students will acquire a greater knowledge of the language and culture through the exploration of six themes. Students will strengthen language skills through a variety of activities, discussions, audio, and video. A midterm exam will be administered in January and a comprehensive final exam will be administered in June. **Prerequisite:** Teacher recommendation is required. **Recommended Placement:** "B" or better in Spanish III or Spanish IV

230 LATIN I

Grade 9, 10, 11, 12

Honors

5 credits

This course is designed to enhance students' ability to learn a foreign language. Students are introduced to grammatical structures and translation of the language. This course also includes a survey of mythology, examination of ancient classical culture, and an emphasis on English-related vocabulary. Students will learn to identify Latin connections of their language while exploring the lives, language and literature of the ancient Romans. Students will strengthen their English grammar and vocabulary skills while learning to translate and make connections between Latin words and their English derivatives. Students are expected to acquire a solid knowledge of all five noun declensions and all four verb conjugations in addition to other grammar topics, mythology and culture. Students will be encouraged to participate in the National Latin Exam, National Myth Exam, National Vocabulary Exam, and their performance will be assessed through a variety of quizzes, unit tests,

translation exams, and projects. A mid-term examination will be administered in January and a comprehensive final exam will be administered in June. Text: Latin for Americans I, Edith Hamilton's Mythology

231 LATIN I

Grade 9, 10, 11, 12

College Prep I

5 credits

This course is designed to enhance students' ability to learn a foreign language. Latin I is an introduction to the grammatical structure and translation of the language. This course also includes a survey of mythology and examination of ancient classical culture and an emphasis on English-related vocabulary. Students will learn to identify Latin connections to their language while exploring the lives, language and literature of the ancient Romans. Students will strengthen their English grammar and vocabulary skills while learning to translate and make connections between Latin words and their English derivatives. Students are expected to acquire a solid knowledge of all five noun declensions and all four verb conjugations. Students will be encouraged to participate in the National Latin Exam, National Myth Exam, National Vocabulary Exam, and their performance will be assessed through a variety of quizzes, unit tests, translation exams, and projects. A mid-term examination will be administered in January and a comprehensive final exam will be administered in June. Text: Latin for Americans I, Edith Hamilton's Mythology

232 LATIN II

Grade 10, 11, 12

Honors

5 credits

This course is designed for students who have successfully completed Latin I Honors (230). Students continue to enhance their vocabulary and translation skills. Students are expected to complete a review of grammatical structures of Latin I and complete all essential Latin grammar. Students will study Roman mythology and history. In addition, they will be encouraged to participate in the National Latin Exam, National Myth Exam, National Vocabulary Exam, and National Etymology Exam. Students' performance will be assessed through a variety of quizzes, unit tests, translation exams, and projects. A mid-term examination will be administered in January and a comprehensive final exam will be administered in June. Text: Latin for Americans I. **Prerequisite:** Latin I. **Recommended Placement:** "B" or better in Latin I Honors, or an "A" in Latin I C1

233 LATIN II

Grade 10, 11, 12

College Prep I

5 credits

This course is designed for students who have successfully completed Latin I CI (231). Students continue to enhance their vocabulary and translation skills. Students are expected to complete a review of grammatical structures of Latin I and complete all essential Latin grammar. Students will study Roman mythology and history. Students will be encouraged to participate in the National Latin Exam, National Myth Exam, National Vocabulary Exam, and National Etymology Exam. Students' performance will be assessed through a variety of quizzes, unit tests, translation exams, and projects. A mid-term examination will be administered in January and a comprehensive final exam will be administered in June. Text: Latin for Americans I. **Prerequisite:** Latin I. **Recommended Placement:** Successful completion of Latin I

234 LATIN III

Grade 11, 12

Honors

5 credits

This course is designed for students who have successfully completed Latin II Honors (232) Students will be expected to examine the writings and styles of famous authors of Latin prose or poetry. Translation skills and critical analysis are intensively developed throughout the year. Students will be encouraged to write their own Latin poetry modeled by Vergil and Catullus, and devise their own oration based on the works of Cicero. These courses rotate prose one year and poetry the next, and include the study of Roman history and government with a view to a correlative understanding of current events, meter, figures of speech and mythology. Students are encouraged to participate in the National Latin Exam, National Mythology Exam, National Etymology Exam, National Vocabulary Exam, and National Roman Culture Exam. Performance will be assessed with a variety of quizzes, tests,

translation exams, and projects. A midterm exam will be administered in January and a comprehensive final exam will be administered in June. Text: Latin for Americans II, and selected readings. **Prerequisite:** Latin II. **Recommended Placement:** Successful completion of Latin II

235 LATIN IV

Grade 11, 12

Honors

5 credits

This course is designed for students who have successfully completed Latin III Honors (234). Students will be expected to examine the writings and styles of famous authors of Latin prose or poetry. Translation skills and critical analyses are intensively developed throughout the year. Students will be encouraged to write their own Latin poetry modeled by Vergil and Catullus, and devise their own orations based on the works of Cicero. These courses rotate prose one year and poetry the next, and include the study of Roman history and government with a view to a correlative understanding of current events, meter, figures of speech and mythology. Students are encouraged to participate in the National Latin Exam, National Mythology Exam, National Etymology Exam, National Vocabulary Exam, and National Roman Culture Exam. Performance will be assessed with a variety of quizzes, tests, translation exams, and projects. A midterm exam will be administered in January and a comprehensive final exam will be administered in June. Text: Vergil's Aeneid and selected readings. **Prerequisite:** Latin III. **Recommended Placement:** Successful completion of Latin III

238 AMERICAN SIGN LANGUAGE I - (ASL)

Grade 11, 12

Honors

5 credits

This course provides an introduction to American Sign Language. Areas studied include the grammatical structure, usage and history of ASL, as well as finger spelling, ASL classifiers and cultural information related to Deaf Culture and the Deaf Community. Class work and daily homework assignments focus on ASL expressive and receptive skill development, utilizing interactive reinforcement drills, role-plays, videotapes, dialogues, and ASL storytelling. Through hands-on activities, partner and group work, students will learn to develop and enhance their receptive and expressive signing skills. Successful completion of ASL I may be applied toward the Waltham High School and MassCore world language requirements.

239 AMERICAN SIGN LANGUAGE I – (ASL)

Grade 11, 12

College Prep 1

5 credits

This course provides an introduction to American Sign Language. Areas studied include the grammatical structure, usage and history of ASL, as well as finger spelling, ASL classifiers and cultural information related to Deaf Culture and the Deaf Community. Class work and regularly assigned homework will focus on ASL expressive and receptive skill development, utilizing interactive reinforcement drills, role-plays, videotapes, dialogues, and ASL storytelling. Through hands-on activities, partner and group work, students will learn to develop and enhance their receptive and expressive signing skills. Successful completion of ASL I may be applied toward the Waltham High School and MassCore world language requirements.

ENGLISH LANGUAGE LEARNERS

The English Language Learner Department provides a sheltered English immersion (SEI) program for our English language learners. The SEI program is comprised of English as second language (ESL) classes and sheltered content courses for students who are learning English.

Placement in the SEI Program is determined by English language proficiency tests, grades, and teacher recommendation. Placement in SEI Math, SEI Science, SEI History, and SEI MCAS Prep is also determined by student English language proficiency, grades, and teacher recommendation.

ESL courses satisfy English requirements. ESL Literacy, ESL I, ESL II, and ESLIII are aligned with the Massachusetts English Language Proficiency standards. ESL courses enhance the student's ability to understand, speak, read, and write in English, with increasing expectations for acquisition of academic literacy skills. Sheltered content courses (SEI math, science history) enable high school students to learn grade level math, science, and history at an appropriate pace, with native language clarification, or through a variety of ESL class presentation methods. MCAS Prep, after-school, Saturday, and Summer MCAS programs assist ELL students in preparing for the State's graduate requirement.

The goals of the SEI Program are to help students adapt to American culture and Waltham High School, gain proficiency in English, gain access to core academic subjects through sheltered content classes, achieve passing and proficient scores on the MCAS exam, learn about the college application process, and become excellent students and future citizens of our world.

All ELL students will participate in two annual state tests: The WIDA ACCESS test and The Massachusetts Comprehensive Assessment System (MCAS).

701 ESL IA

Grades 9-12

5 credits

This course is designed for students at the beginning/entering English language proficiency level. Students enrolled in ESL IA are also enrolled in ESL IB. The course focuses on developing a student's listening, speaking, reading, and writing skills in English. Literacy skills such as vocabulary development, sentence structure and word order patterns, verb tenses, reading and writing skills are taught in a holistic and integrated manner. Course content is theme-driven. Students will keep a portfolio, learn about revision, and show progress in writing over time. The development of reading and writing skills, including MCAS preparation, is given strong emphasis. Students will learn how to write basic compositions, do simplified research, and give short individual and group presentations. Within and in addition to the textbook, a wide array of materials and sources that introduce students to fiction, poetry, and factual writing are used in the course; pictures, advertisements, basic books, newspaper articles are a few examples. There will be frequent quizzes, tests, performance projects and a final exam. Text: HighPoint Basic; readers

716 ESL IB

Grades 9-12

5 credits

This course is designed for beginning/entering English language proficiency students in order to provide ESL students more time on learning to develop oracy, vocabulary, grammar, listening comprehension, and basic literacy skills. It runs concurrently with ESL IA. Students learn to use their own ideas in writing and speaking in English, and how to use their bilingual abilities to transfer academic learning to English. Students recognize cognates, and learn strategies for reading and writing in a second language. Students learn about the writing process and different writing formats and will use graphic organizers, templates, and journals to practice writing summaries, open response questions, basic essays, and works of creative character. Text: HighPoint Basic; readers

710 ESL LITERACY A

Grades 9-12

5 credits

This class is designed for students who are new to the study of English and to the United States and who may have gaps in their educational experience. Students who are enrolled in ESL Literacy 1A are also enrolled in Literacy 1B. The class focuses on lessening the gaps in student's education, making students comfortable with both the culture of the high school and the rapid development of English speaking and listening comprehension skills. In addition to English, students learn about study skills, teamwork, and basic reading and writing to enhance speaking activities. Students will use visuals to increase vocabulary for speaking and writing, complete short readings in order to write about and discuss them, write dialogues to learn and perform everyday English, and compare their

school experience with that of their new environment. In addition to the basic five-hundred working-word vocabulary students need, they will also learn study skills, such as: note-taking, dictionary use, dictation, spelling and grammar in context for accuracy. Students will write in basic forms to express ideas such as writing to learn and journaling, building up to sentences and paragraphs in English. In addition, they will learn and strategies for approaching a standardized test in a foreign language.

706 ESL LITERACY B

Grades 9-12

5 credits

This class is for students new to English who have gaps in their schooling experiences. This class runs concurrently with ESL Literacy IA. The more intensive, smaller class environment will enable the student the opportunity to catch up with peers who have been schooled in consecutive years. Bilingual support in instruction and resources where possible enable faster comprehension of concepts. This class will teach students how to read and write in English by building on developing literacy skills in the students' first language.

702 ESL IIA

Grades 9-12

5 credits

This course is for ELL students who have achieved or are approaching an emerging level of English language proficiency. Students enrolled in ESL IIA are also enrolled in ESL IIB. The structure, process, and activities of ESL 2 are similar to those noted in ESL 1. However, course content becomes more complex and additional skills are introduced and stressed. The development of listening, speaking, reading, and writing skills continue to be stressed with particular emphasis given to the development of literacy and writing skills. Students are expected to write and speak with greater fluency and gain control over basic errors as they continue to develop reading, research, presentation, and writing skills. Students continue to keep a writing portfolio, and revise important assignments. Students are introduced to the skills and strategies needed to read for meaning and inference in a second language, and are encouraged to use their cultural and first language knowledge to assist them in becoming critical thinkers. Students are expected to read one level appropriate book a month in addition to quarterly books read in class, such as *Sadako and a Thousand Paper Cranes*, *Leon*, or *The Miracle Worker*. There will be frequent quizzes, tests, and a final exam. Prerequisite: Completion of ESL I or equivalent assessment or teacher recommendation. Text: HighPoint A readers

708 ESL IIB

Grades 9-12

5 credits

This course is designed for second year ESL students at the emerging level of English language proficiency to enhance language skills developed in ESL IA & B. It runs concurrently with ESL IIA. There is a strong emphasis on literacy and oracy; reading, writing, and oral presentations are at the core of this course. Students will learn to use their own ideas in writing and speaking in English. They will use the writing process and different writing formats. They will learn about the different genres of writing through proficiency-paced exemplars. They will use graphic organizers, templates, exemplar study, and journals to practice writing summaries, open response questions, essays, and works of creative character. Text: HighPoint A, readers

703 ESL III

Grades 9-12

5 credits

This course is designed for ESL students at the intermediate/developing level of English proficiency. Students enrolled in ESLIII are strongly encouraged to concurrently enroll in their grade-level standard, curriculum English class. In ESLIII, students apply the skills and strategies needed to read for meaning in a second language, and are expected to actively use their cultural and first language knowledge in becoming more proficient critical thinkers. Students read one to two books per quarter and do supplementary factual readings, research, or thematically related projects. Emphasis is placed upon the higher level literacy skills such as: drawing conclusions, predicting outcomes, distinguishing fact from opinion, drawing inferences, determining author's purpose, author's bias,

determining mood/tone, and identifying problem/solution. The course includes an analysis of literature with the emphasis on the following: the identification of major characteristics and elements of literary genres and understanding of common literary terms, literary techniques, and recurrent motifs and themes. In addition to literary analysis, works of nonfiction that exemplify themes from a historical or factual perspective deepen students' cultural, vocabulary, and conceptual base of knowledge. Students are expected to write in a variety of formats: persuasive essays, creative papers, research papers with Works Cited and timed essay tests as well as other formative and summative assessments. Students continue to keep a writing portfolio and revise important assignments. Students participate in class discussions, and group and individual presentations. There will be frequent quizzes, tests, a final exam, and a final portfolio of best work. Prerequisite: Completion of ESL II or equivalent assessment or teacher recommendation. Text: HighPoint B, Readers

704 ESL IV

Grades 9-12

5 credits

This course is designed for ESL students at the expanding level of English proficiency. Students enrolled in ESL IV will be enrolled in their grade-level standard, curriculum English classes. This course focuses on mastering listening, speaking, reading and writing skills. Student's interpersonal language may have reached the level of a native speaker, but their academic language proficiency still places them at a disadvantage in content area classes taught in English. Emphasis is on attaining the English literacy skills needed to transition out of ESL classes. Prerequisite: Completion of ESLIII or equivalent assessment or teacher recommendation.

705 ESL V

Grades 9-12

5 credits

This course is designed for ESL students at the transitioning/bridging level of English proficiency. Students enrolled in ESL V will be enrolled in their grade-level standard, curriculum English classes. This course focuses on mastering reading and writing skills at the transitioning level. Student's interpersonal language may have reached the level of a native speaker, but their academic language proficiency still places them at a disadvantage in content area classes taught in English. Emphasis is on attaining the English literacy skills needed to transition out of ESL classes. Prerequisite: Completion of ESL IV or equivalent assessment or teacher recommendation.

HISTORY AND SOCIAL STUDIES (HSS) DEPARTMENT

As stated in the Guiding Principles of the Massachusetts History and Social Studies Frameworks, "Students need to learn about the events, ideas, individuals, groups, ideals, dreams, and limitations that have shaped our country and the world." The History and Social Studies (HSS) Department is dedicated to help the students of Waltham fulfill this need.

The department's three course sequence of Modern World History (Grade 9), United States History I (Grade 10), and United States History II* (Grade 11) fulfills the MassCore requirement for History and Social Studies. Finally, History and Social Studies elective offerings may count as MassCore "Additional Core Courses" and/or "Additional Learning Opportunities"

*Students may take Advanced Placement United States History to fulfill the US History II component.

316 MODERN WORLD HISTORY

Grade 9

Honors

5 credits

This course is an in-depth examination of events and concepts of world history from the French Revolution to the present. It emphasizes how these developments have created our modern world, and analyzes present-day movements and problems in Europe, Asia, Africa, and the Americas. Assignments from the text, analysis of primary sources, and supplemental readings are required. Research papers, projects, and novels are also

assigned. Traditional as well as computer aided research skills will be emphasized. Each student will be assigned a formal, detailed research project. A final examination on all aspects of the course will be administered in June. **Recommended Placement:** Students planning to enroll in this honors course should have earned a grade of "B" or better in 8th grade World History I. **(WHS HSS MassCore Component 1)**

317 MODERN WORLD HISTORY

Grade 9 College Prep I 5 credits

This course covers world history from the French Revolution to the present. Developments in Europe, Asia, Africa, and the Americas that were influential in creating modern movements and problems, are emphasized. World religions are also studied in depth. To properly prepare student for college, students will be required to review primary source readings and perform independent research, and to complete frequent homework assignments. Students will maintain a notebook of all completed class work and homework, as well as class notes. A research project is assigned which will incorporate traditional and computer-aided research. A final examination on all aspects of the course will be administered in June. **Recommended Placement:** Students planning to enroll in this college preparatory course should have earned a grade of "C" or better in 8th grade World History I. **(WHS HSS MassCore Component 1)**

318 MODERN WORLD HISTORY

Grade 9 College Prep II 5 credits

Students study the major events and outstanding personalities that shaped world history from the French Revolution to the present day. Attention will be given to the growth of world religions, and the historical and cultural influences of China, Japan, Africa, Latin America, and the nations of Europe. Current problems, considered in the light of history, will provide students with a better understanding of world events. When appropriate, primary source materials will be used. Students will be encouraged to participate in class discussions, and to maintain a current notebook. Written projects will be assigned, and traditional and computer aided research skills will be emphasized. A final examination on all aspects of the course will be administered in June. **(WHS HSS MassCore Component 1)**

326 UNITED STATES HISTORY I

Grade 10 Honors 5 credits

Beginning a sequence of United States history that will be completed in Grade 11, this course will study the United States from the American Revolution to the close of the nineteenth century. The course aims to deepen students' understanding of the history of pre-twentieth century America. Special emphasis will be placed on the study of the Founding Documents, the Early Republic, slavery, the Civil War and Reconstruction, and industrialization. Homework and outside readings will be assigned regularly. Students will read several historical selections throughout the year as well as two historical novels. In addition, students will use primary and secondary source materials to complete a substantial term paper. Traditional and computer aided research skills will be a significant component of the course. A cumulative final examination will be administered in June. **Pre-Requisite Course:** Modern World History Recommended **Placement:** Students planning to enroll in this honors level course should have earned a grade of "C" or better in Modern World History honors or a grade of "B" or better in Modern World History C1. **(WHS HSS MassCore Component 2)**

327 UNITED STATES HISTORY I

Grade 10 College Prep I 5 credits

Beginning a sequence of United States history that will be completed in Grade 11, this course will study the United States from the American Revolution to the close of the nineteenth century. The course aims to explore in detail the American Revolution, the Constitution, the Early Republic, slavery, the Civil War and Reconstruction, the end of the frontier, immigration, and the era of American industrialization. Regular homework assignments will be given, and students will maintain a notebook of all related materials. Readings from the text, selected historical works, and at least one novel will be assigned. Primary and secondary sources will be analyzed as the basis for report

writing. Traditional and computer aided research skills will be components of the course. A cumulative final examination will be given in June. **Pre-Requisite Course:** Modern World History Recommended **Placement:** Students planning to enroll in this college preparatory course should have earned a grade of "C" or better in Modern World History C1 or a grade of "B" or better in Modern World History C2. **(WHS HSS MassCore Component 2)**

328 UNITED STATES HISTORY I

Grade 10 College Prep II 5 credits

This course begins a sequence of United States history that will be completed in Grade 11. Students will study United States history from the period of the American Revolution to the close of the nineteenth century. Particular emphasis will be placed on the study of the American Revolution, the Constitution, the Early Republic, slavery, the Civil War and Reconstruction, the end of the frontier, immigration, and the era of American industrialization. The completion of homework and the maintenance of a well-organized notebook will be vital components of this course. The class will feature class discussions of historical events and their significance in today's world. In addition, students will explore selected readings and will read one historical novel. Traditional and computer based research skills will be utilized in the preparation of short papers. A final examination on all aspects of the course will be administered in June.—**Pre-Requisite Course:** Modern World History **(WHS HSS MassCore Component 2)**

324 UNITED STATES HISTORY

Grade 11 Advanced Placement 5 credits

This is an intensive course in United States history conducted at a college level exploring United States history from the period of pre-Columbus America to the present. Primary source documents, the work of prominent historians, and major social, cultural, economic and political trends will be studied and discussed. In-depth historical research and independent study will be expected of the student who enrolls in this course. Students are also expected to take the Advanced Placement exam at the end of the year. Such works as Democracy in America, Bury My Heart at Wounded Knee, the Jungle, Only Yesterday and others will be read and analyzed. Prerequisite: Maintaining a B average in two years of Social Studies courses at the high school honors level, approval of the sophomore honors teacher and director is required. **Pre-Requisite Courses:** Modern World History, US History I **Recommended Placement:** Students planning to enroll in this Advanced Placement course must have a passion for the study of history and should have earned a grade of "B+" or better in US History I honors. **(WHS HSS MassCore Component 3)**

320 UNITED STATES HISTORY II

Grade 11 Honors 5 credits

Completing the sequence of United States history begun in Grade 10, this course explores American history from the Age of Imperialism to the present day. This is an honors course and, as such, the pace and course materials will be rigorous. Primary source materials are used extensively. Each student is required to complete several research projects, and to read novels reflecting historical periods studied. A formal, detailed term paper is also required, based on traditional and computer-aided research. A final examination on all aspects of the course will be administered in June. **Pre-Requisite Courses:** Modern World History, US History I

Recommended Placement: Students planning to enroll in this honors level course should have earned a grade of "C" or better in US History I honors or a grade of "B" or better in US History I C1. **(WHS HSS MassCore Component 3)**

321 UNITED STATES HISTORY II

Grade 11 College Prep I 5 credits

This course, designed for college bound students, focuses on the history of the United States from the era of U.S. Imperialism in the 1890s to the present. The course aims to deepen the students' understanding of their history and culture as Americans. Special emphasis is placed on events in the twentieth century, the growth of our country

to its present position as a world power, and the contributions of immigrant and minority groups. Readings from the text and from selected historical works are required, and homework will constitute a significant grade each term. Primary source and secondary source materials will be used as the basis for report writing. Traditional and computer aided research skills will be reviewed and utilized. A final examination on all aspects of the course will be administered in June. **Pre-Requisite Courses:** Modern World History, US History I **Recommended Placement:** Students planning to enroll in this college preparatory course should have earned a grade of "C" or better in US History I C1 or a grade of "B" or better in US History I C2. **(WHS HSS MassCore Component 3)**

322 UNITED STATES HISTORY II

Grade 11 College Prep II 5 credits

This course focuses upon United States history from the "Age of U.S. Imperialism" in the 1890s to the present day. Topics such as the growth of the United States as a world power, as well as the contributions of immigrant and minority groups are important areas of study. Students are assigned reading selections from their texts and other sources. The class will feature class discussions of historical events and their significance in today's world. Homework will be assigned and will constitute a major grade each term. Additionally, students will be asked to write extensively in class and compile a portfolio of notes and assignments. Instruction on computer aided research skills will be given. A final examination on all aspects of the course will be administered. **Pre-Requisite Courses:** Modern World History, US History I. **(WHS HSS MassCore Component 3)**

329 AP PSYCHOLOGY

Grade 12 Advanced Placement 5 credits

This course adheres to the Advanced Placement curriculum for Psychology developed by the College Board. It is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology; including, but not limited to, abnormal, developmental, biological, and cognitive psychology. This course is designed to prepare motivated college bound students for the Advanced Placement examination administered in the spring, and taking the exam is a course requirement. At most institutions of higher learning, a passing grade on the test can be counted as college credit and will exempt the student from introductory psychological study. **(WHS HSS Additional Core / Learning Opportunity)**

Pre-Requisite Courses: Modern World History, US History I and II

Recommended Placement: Students planning to enroll in this course must be committed to completing the rigorous coursework associated with an Advanced Placement class. Students should have a strong record of success in a previous honors level history class.

330 PSYCHOLOGY

Grade 12 Honors 5 credits

This course is designed to introduce major schools of psychological theory and practice including personality theory, child development, human motivation, emotions, behaviorism, and abnormal psychology. Included in the program of study will be the contributions of Freud, Skinner, Maslow, Rogers, Jung, Fromm and others. Students will read materials representing humanist, existential, psychoanalytic and other schools of thought. Research projects based on extensive readings will be required. This is an honors course open to interested and capable students and is comparable to a college introductory psychology course. A final examination on all aspects of the course will be administered in May. **Recommended Placement:** Students planning to enroll in this honors level course should have earned a grade of "C" or better in US History II honors or a grade of "B" or better in US History II C1. **(WHS HSS Additional Core / Learning Opportunity)**

333 SOCIOLOGY

Grade 11, 12 Honors 5 credits

This course is for students who are interested in an in-depth study of how people interact in groups. Students will be expected to construct and use the tools of sociologists, such as surveys, behavioral observations and documented research. Required work will include participation in group projects and presentations, analysis of sociological trends in written and discussion formats, and the reading of the class text as well as other supplemental books. Students will study such topics as adolescence, personality development, deviant behavior and social control, the nature of prejudice, and the influence of heredity and environment on human behavior. A final examination on all aspects of the course will be administered in May. **Recommended Placement:** Students planning to enroll in this honors level course should have earned a grade of "C" or better in their most recent honors level core history course or a grade of "B" or better in their most recent C1 level core history course. **(WHS HSS Additional Core / Learning Opportunity)**

331 SOCIOLOGY

Grade 11, 12

College Prep I

5 credits

This course is for students who are interested in people and how they interact in groups. Students will be required to do detailed research and critical thinking on current social concerns such as the nature of prejudice, juvenile problems, family relationships, drugs and alcohol, dating and marriage, personality development and psychology. Sociological terminology will be studied. In-depth discussions, frequent student reports, and a research paper are key elements of this course. A supplemental book will also be assigned. Homework based on the text and assigned readings will constitute a significant part of the grade. Additional topics of student interest may be included. A final examination on all aspects of the course will be administered in May.

Recommended Placement: Students planning to enroll in this college preparatory course should have earned a grade of "C" or better in their most recent C1 core history course or a grade of "B" or better in their most recent C2 core history course. **(WHS HSS Additional Core / Learning Opportunity)**

332 SOCIOLOGY

Grade 11, 12

College Prep II

5 credits

This course is for students who are interested in people and how they interact in groups. Special attention is given to topics such as the nature of prejudice, juvenile problems, family relationships, drugs and alcohol, dating and marriage, personality development and psychology. In-depth discussions and student reports are key elements of this course. Homework based on the text and assigned readings will constitute a significant part of the grade. Additional topics of student interest may be included. A final examination on all aspects of the course will be administered in May. **(WHS HSS Additional Core / Learning Opportunity)**

340 CONSTITUTIONAL & CRIMINAL LAW

Grade 11, 12

Honors

5 credits

This course is a detailed and rigorous examination of the Massachusetts criminal justice system, as well as an in-depth analysis of individual civil liberties and their basis in the Constitution and the Bill of Rights. Landmark American trials, key constitutional cases, and current legal issues are extensively reviewed. Current criminology theories will be examined and researched. Students will be asked to complete research papers, prepare legal briefs, participate in mock trials, read Truman Capote's classic non-fiction work, **In Cold Blood**, and Lara Bricker's book **Lie after Lie**, describing the successful investigation by the Waltham Police Department in the recent "anti-freeze" murder case. Students will view trials in Suffolk Superior Court and interview a Superior court judge. The course features guest lectures by Waltham police officers, state police officials, district attorneys and defense lawyers. A final examination on all aspects of the course will be administered. **Recommended Placement:** Students planning to enroll in this honors level course should have earned a grade of "C" or better in their most recent honors level core history course or a grade of "B" or better in their most recent C1 level core history course. **(WHS HSS Additional Core / Learning Opportunity)**

341 CONSTITUTIONAL & CRIMINAL LAW

Grade 11, 12 College Prep I 5 credits

This course is an examination of the Massachusetts criminal law system, as well as an analysis of individual civil liberties and their basis in the Constitution and the Bill of Rights. Landmark American trials, key constitutional cases, and current legal issues are studied. Students will be asked to complete a term paper, prepare legal briefs, participate in mock trials, complete assignments from their text, as well as read Truman Capote's classic non-fiction work, **In Cold Blood**. Students will view trials in Suffolk Superior Court and interview a Superior Court judge. The course features guest lectures by Waltham police, state police officials, and lawyers. A final examination on all aspects of the course will be administered. **Recommended Placement:** Students planning to enroll in this college preparatory course should have earned a grade of "C" or better in their most recent C1 core history course or a grade of "B" or better in their most recent C2 core history course. **(WHS HSS Additional Core / Learning Opportunity)**

342 HISTORY OF WALTHAM

Grade 11, 12 Honors 5 credits

This course will provide students with an intensive study of some of the major topics in local history including the English settlement of Waltham, Waltham in the Revolutionary War, Waltham's role in the industrial revolution, immigration into the city, the development of neighborhoods and downtown Waltham, and the impact of Route 128 on the city. Students will also examine Waltham's geography, architecture, local government, and current issues facing the city. Primary source documents will be analyzed, and students will visit historical sites of interest. Students will also develop their own original research project on Waltham's history. Field trips and guest speakers are part of the course. This is an honors course open to interested and capable seniors.

Recommended Placement: Students planning to enroll in this honors level course should have earned a grade of "C" or better in their most recent honors level core history course or a grade of "B" or better in their most recent C1 level core history course. **(WHS HSS Additional Core / Learning Opportunity)**

352 HISTORY OF WALTHAM

Grade 11, 12 College Prep I 5 credits

This course provides an in-depth look at the history of Waltham from its founding to the present day. Among the topics covered are colonial Waltham, Waltham's architectural history and estates (the Gore, Lyman, and Paine Estates), the industrial revolution in Waltham, immigration, the development of Waltham's neighborhoods, and our local government. There is an emphasis on primary sources including historical maps, census reports, city directories, newspaper accounts, and photographs. Individual projects are required, and field trips are included. A final on all aspects of the class will be given at the end of the course. Prerequisite: Eleventh grade United States History. **Recommended Placement:** Students planning to enroll in this college preparatory course should have earned a grade of "C" or better in their most recent C1 core history course or a grade of "B" or better in their most recent C2 core history course. **(WHS HSS Additional Core / Learning Opportunity)**

345 ADVANCED PLACEMENT MACROECONOMICS

Grade 12 Advanced Placement 5 credits

Strongly recommended for students who have successfully completed Advanced Placement Microeconomics #346. This course adheres to the Advanced Placement curriculum for macroeconomics developed by the College Board. Students must be self-motivated learners interested in pursuing advanced economic study building on their foundation of economic knowledge established in Advanced Placement Microeconomics (346). After a review of basic concepts, students will study topics such as: economic performance measurement, national income and price determination, monetary and fiscal policy, inflation, unemployment, stabilization policies, economic growth and productivity, and international trade and finance. This course is designed to prepare college bound seniors for the Advanced Placement examination administered in the spring, and taking the exam is a course requirement. At most institutions of higher learning, a passing grade on the test can be counted as college credit and will exempt

This course will provide students an analytical perspective on government and politics in the United States. This course includes both the study of general concepts used to interpret U.S. government and politics and the analysis of specific examples. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. government and politics. Students successfully completing this course will be expected to learn important facts, concepts, and theories pertaining to U.S. government; understand typical patterns of political processes and behavior and their consequences; be able to analyze and interpret basic data relevant to U.S. government and politics; be able to critically analyze relevant theories and concepts, and apply them appropriately. The main thrust of the course, however, is to be able to apply an understanding of our political system to contemporary events. Students will conclude this course with the Advanced Placement Exam in this subject. **Recommended Placement:** Students planning to enroll in this Advanced Placement course must have a passion for the study of history and should have earned a grade of "B" or better in US History II honors or should have successfully completed Advanced Placement United States History. **(WHS HSS Additional Core / Learning Opportunity)**

382 CIVICS - GOVERNMENT, AND CITIZENSHIP IN THE 21ST CENTURY

Grades 11, 12

Honors

5 credits

This course will begin with an examination of the foundations of American government but through readings, discussion, film, and research, students will explore how our system of government has changed over time. The structure and function of the government will be analyzed on a national, state, and local level while showing how each level is interrelated. Students will examine how the concept of civic participation has evolved and will investigate the rights and responsibilities of citizens in our modern world. Throughout the course we will focus on how citizens can play an active role in our government and show how individuals, through civic participation, can shape our society. **Recommended Placement:** Students planning to enroll in this honors level course should have earned a grade of "C" or better in their most recent honors level core history course or a grade of "B" or better in their most recent C1 level core history course. **(WHS HSS Additional Core / Learning Opportunity)**

SEI HISTORY COURSES:

709 SEI MODERN WORLD HISTORY

Grades 9-12

5 credits

Typically, limited to students enrolled in ESL I, II, III or ESL Literacy, this course focuses on the major events and outstanding personalities that shaped world history from the French Revolution to the present day are taught using Sheltered English Immersion methods. The growth of world religions and the historical and cultural influences of China, Japan, Africa, Latin America and the nations of Europe will be presented as well as major global events of the twentieth century. Students will participate in class discussions and maintain a current notebook. Listening, speaking, reading, writing, study, and computer skills will be practiced through the study of world history. In addition to quizzes, tests, reports, and projects there will be a final examination in June. Standards outlined in The Massachusetts Curriculum Frameworks and the Massachusetts English Language Proficiency Benchmarks and Outcomes guide the course curriculum. **(WHS HSS MassCore Component 1)**

768 SEI UNITED STATES HISTORY I

Grade 9-12

5 credits

Typically limited to ESL I, II, III or ESL Literary students, this course introduces students to American history from the Revolutionary period to the close of the nineteenth century. Students are exposed to the American Constitution, the Civil War and Reconstruction, Industrialization, and Immigration. Coverage is provided in a variety of formats that support the listening, speaking, reading, and writing needs of ELL students. Students keep a notebook. There are frequent quizzes, tests, reports, projects, and a final exam. Standards outlined in the Massachusetts Curriculum Frameworks for Social Studies and the Massachusetts English Language Proficiency Benchmarks and Outcomes guide the course curriculum. **(WHS HSS MassCore Component 2)**

726 SEI UNITED STATES HISTORY II

Grade 9-12

5 credits

This is the second course in the American history sequence that exposes the ESL I, II, III or ESL Literacy students to American history from the turn of the nineteenth century to the present era. Students cover the Imperialism, Immigration, WWI, WWII, the Cold War, and the post Cold War period through present day. Coverage is provided in a variety of formats that support the listening, speaking, reading, and writing needs of ELL students. Students keep a notebook. There are frequent quizzes, tests, reports, projects, and a final exam. Standards outlined in The Massachusetts Curriculum Frameworks and the Massachusetts English Language Proficiency Benchmarks and Outcomes guide the course curriculum. **(WHS HSS MassCore Component 3)**

721 ACADEMIC SUPPORT/ HSS

Grade 9, 10, 11, 12

non-credit

Academic Support is an opportunity for students to receive academic tutoring, MCAS support, in English, Math, History, or Science during the school day. Sections will be staffed with content-certified teachers. Students will participate in Academic Support for limited periods of time throughout the school year as needed to bolster academic performance.

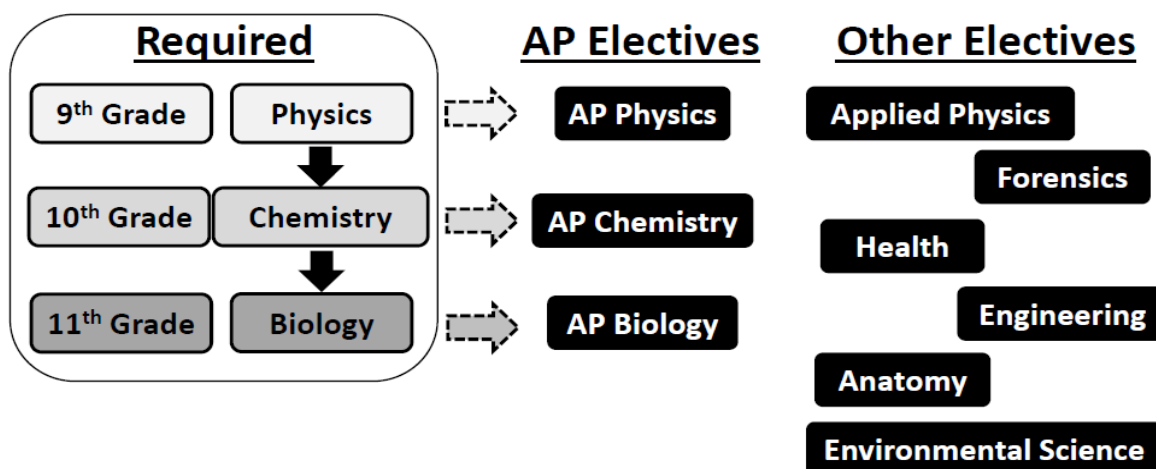
HEALTH AND SCIENCE DEPARTMENT

Massachusetts Comprehensive Assessment System (MCAS)

Students will take the Physics MCAS test in the spring of their freshman year. The tests items include multiple choice and open response questions. There are four levels of achievement, and the descriptors for each level are clearly defined by the state. Proficiency/Advanced is the goal for each student. **Students must pass a Science MCAS exam to graduate. As noted below, beginning with the graduating class of 2017, it is required that all students must take and pass 3 lab science courses.**

MassCore: The recommended course sequence of Physics (Grade 9), Chemistry (Grade 10), and Biology (Grade 11) fulfills the MassCore requirement for Science. Additional Lab Science elective offerings could also fulfill the MassCore requirement. Some Health courses fulfill the MassCore requirement for “additional core courses”.

WHS Science Sequence



Students may “double up” if they are *exceptional* students and plan to take AP classes in the future

Students may take AP classes after completing the introduction classes

CORE SCIENCE COURSES

469 FRESHMAN CONCEPTUAL PHYSICS G

Grade 9 Honors 6.25 credits

This is an introductory physics course for students concurrently enrolled in Geometry. Students will learn important science related skills including experimental design, accurate measurement using a variety of instruments and technologies, quantitative and qualitative observations, construction and interpretation of graphs, application of algebra to science problems, and applications of science concepts to the real world. This activity-based course will provide the foundation for all future science courses. Laboratory experiments will examine forces, motion, electricity, magnetism, waves, light, sound and heat. This course engages students in activities that help them to conceptualize key physics concepts before introducing mathematical approaches. Upon completion of the course, students will take the Introduction to Physics MCAS exam. **Prerequisite:** 8th grade teacher recommendation and Algebra I. **Requirement:** Must be taking Honors Geometry course **185** in 9th grade to enroll in this course. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

470 FRESHMAN CONCEPTUAL PHYSICS G

Grade 9 C1 6.25 credits

This is an introductory physics course for students concurrently enrolled in Geometry. Students will learn important science related skills including experimental design, accurate measurement using a variety of instruments and technologies, quantitative and qualitative observations, construction and interpretation of graphs, application of algebra to science problems, and applications of science concepts to the real world. This activity-based course will provide the foundation for all future science courses. Laboratory experiments will examine forces, motion, electricity, magnetism, waves, light, sound and heat. Upon completion of the course, students will take the Introduction to Physics MCAS exam. **Prerequisite:** 8th grade teacher recommendation and Algebra I. **Requirement: Must be taking C1 Geometry course 186 in 9th grade to enroll in this course.** *This course is a lab science and fulfills a unit of lab-based science for MassCore*

471 FRESHMAN CONCEPTUAL PHYSICS

Grade 9 C1 6.25 credits

This is an introductory physics course for students concurrently enrolled in algebra. Students will learn important science related skills including experimental design, accurate measurement using a variety of instruments and technologies, quantitative and qualitative observations, construction and interpretation of graphs, application of algebra to science problems, and applications of science concepts to the real world. This activity-based course will provide the foundation for all future science courses. Laboratory experiments will examine forces, motion, electricity, magnetism, waves, light, sound and heat. Upon completion of the course, students will take the Introduction to Physics MCAS exam. **Prerequisite:** successful completion of 8th grade science. **Requirement: Must be taking C1 Algebra I course 162 in 9th grade to enroll in this course.** *This course is a lab science and fulfills a unit of lab-based science for MassCore*

472 FRESHMAN CONCEPTUAL PHYSICS

Grade 9 C2 6.25 credits

This is an introductory physics course for students concurrently enrolled in algebra. Students will learn important science related skills including experimental design, accurate measurement using a variety of instruments and technologies, quantitative and qualitative observations, construction and interpretation of graphs, application of algebra to science problems, and applications of science concepts to the real world. This activity-based course will provide the foundation for all future science courses. Laboratory experiments will examine forces, motion, electricity, magnetism, waves, light, sound and heat. Upon completion of the course, students will take the Introduction to Physics MCAS exam. **Prerequisite:** successful completion of 8th grade science. **Requirement: Must be taking C2 Algebra I course 163 in 9th grade to enroll in this course.** *This course is a lab science and fulfills a unit of lab-based science for MassCore*

473 PHYSICS MCAS SUPPORT

Grade 10, 11, 12

2.5 Credits

This course is offered two times per week for students that did not pass the Physics STE MCAS in grade 9 and need additional support. Students will review necessary concepts and build skills to help them pass the Physics MCAS. Practice MCAS exams, with an emphasis on open response questions, will be a major part of the preparation process.

420 CHEMISTRY I

Grade 10, 11, 12

Honors

5 credits

This course is an introduction to the study of Chemistry. Honors Chemistry I is an inquiry-based course that examines matter and the changes it undergoes. We will cover the essential topics to give you a firm foundation for classes you may take later and for the chemistry you experience in everyday life. The course content may include the study of atomic structure, chemical bonding, reactions, mass relationships in reactions, gasses, liquids, solids, solutions, acids and bases, kinetics and equilibrium, oxidation and reduction, and nuclear chemistry. The course is structured and designed for students with strong interests in math and science. Laboratory experiments will be used to reinforce topics studied in the class. During laboratory experiments students are required to make accurate measurement using a variety of instruments and technologies along with make quantitative and qualitative observation, and use critical thinking skills to solve problems. Students will need to communicate clearly and effectively in verbal and written formats. In addition complete additional research on topics to deepen their knowledge of chemistry. Students will be required to work independently and collaboratively with other students on projects and laboratory experiments. The application of algebra to solve science problems. Students will be construct and interpret graphs to solve problems and observe patterns. Students will be perform mathematics to analyze findings and form conclusions from experiments and demonstrations. This course grade will be complied of nightly homework, laboratory reports, test/quizzes, and projects.

Prerequisite: Successful completion of Biology or Freshman Physics. **Recommended Placement:** B or better in Honors Freshman Physics and Algebra I. A- or better in C1 Freshman Physics and Algebra I. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

421 CHEMISTRY I

Grade 10, 11, 12

C1

5 credits

This course is to provide a solid chemistry background for the college bound student. It is expected that the C1 student: will be able to communicate clearly and effectively in verbal and written formats; will be able to use mathematics to analyze data and form conclusions; and will complete all assignments including homework, laboratory reports, and projects. Topics to be covered include the study of atomic structure, chemical bonding, reactions, mass relationships in reactions, gasses, liquids, solids, solutions, acids and bases, kinetics and equilibrium, oxidation and reduction, and nuclear chemistry. Laboratory experiments will be used to reinforce topics studied in the class. During laboratory experiments students are required to make accurate measurement using a variety of instruments and technologies along with make quantitative and qualitative observation, and use critical thinking skills to solve problems. This course grade will be complied of nightly homework, laboratory reports, test/quizzes, and projects. **Prerequisite:** Successful completion of Freshman Physics **Recommended placement:** B or better in C1 Freshman Physics and Algebra I. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

422 CHEMISTRY I

Grade 11, 12

C2

5 credits

This is a course for the career bound or non-science major college preparatory student. There is an emphasis relating chemistry concepts to everyday life. Topics to be covered include the study of atomic structure, chemical bonding, reactions, mass relationships in reactions, gasses, liquids, solids, solutions, acids and bases, kinetics and equilibrium, oxidation and reduction, and nuclear chemistry. The C2 student is expected to: 1) be able to communicate clearly and effectively in verbal and written formats; 2) be productive in laboratory activities; 3) complete assigned projects and laboratory assignments; and 4) complete weekly homework. Chemistry seminar (**Course 423**) is recommended for this course. **Prerequisite:** successful completion Algebra I. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

423 CHEMISTRY SEMINAR

Grade 11, 12 Unleveled 2.5 credits

This course is recommended for students presently taking C1 or C2 Chemistry. Chemistry Seminar provides the first year Chemistry student with the time to complete labs, work on extra projects, or seek help with the course material.

410 BIOLOGY I

Grade,11 Honors 5 credits

This is a first year course in college preparatory biology for the honors student who has shown deep interest in science, who has demonstrated outstanding ability in previous science courses, and who intends to study advanced placement science courses. Emphasis is on experimental design and application of the scientific process. Topics to be covered include biochemistry, cellular biology, human body systems, genetics, and evolution. This accelerated course uses a molecular approach to biology intended to prepare highly motivated students for a competitive four-year college. It is expected that the honors student: will be able to work independently and collaboratively with other students; will be able to communicate clearly and effectively in verbal and written formats; will use mathematics to analyze findings and form conclusions; and will do additional research to deepen knowledge of biology. **Prerequisite:** Completion of Chemistry **Recommended placement:** B in Honors Chemistry. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

411 BIOLOGY I

Grade, 11, C1 5 credits

This course is a cellular approach to biology, designed to provide a solid biological background for the college bound student. Topics to be covered include human body systems, biochemistry, cellular biology, genetics, and evolution. It is expected that the C1 student: will be able to communicate clearly and effectively in verbal and written formats; will be able to use mathematics to analyze data and form conclusions; and will complete all assignments including homework, laboratory reports, and projects. **Biology seminar (course 419) is recommended together with this course.** **Prerequisite:** Completion of Chemistry **Recommended placement:** C or better in C1 Chemistry. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

412 BIOLOGY I

Grade, 11, 12 C2 5 credits

This course is designed for the student who needs a working understanding of biology and who needs to pass the MCAS Biology exam, but who does not intend to major in a science in college. Topics to be covered include human body systems, biochemistry, cellular biology, genetics, and evolution. The C2 student is expected to: 1) be able to communicate clearly and effectively in verbal and written formats; 2) be productive in laboratory activities; and 3) keep a portfolio of his/her work. **Biology seminar (course 419) is strongly recommended for students taking this course.** **Prerequisite:** completion of Chemistry. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

419 BIOLOGY SEMINAR I

Grade 10, 11, 12 C1, C2 2.5 credits

C2 Biology students are strongly encouraged to take Biology Seminar I, which is an extension of their biology course work. During Biology Seminar students will focus on science investigations and MCAS preparation. Students are graded on their work.

432 BIOLOGY MCAS SUPPORT

Grade, 11,12

2.5 credits

This course is offered two times per week for students that took Biology but did not pass the Biology Science MCAS. Students will review necessary concepts and build skills. Practice MCAS exams, with an emphasis on open response questions, will be a major part of the preparation process.

ADVANCED PLACEMENT SCIENCE ELECTIVES

464 ADVANCED PLACEMENT PHYSICS II

Grade 11, 12

Advanced Placement

7.5 credits

An advanced course for those students interested in a science related career. The course of study will include advanced topics in astronomy, work and energy, momentum and impulse, kinematics and dynamics of rotational motion, waves, light, electricity and magnetism, and thermodynamics. Although calculus will be utilized on a limited basis in the analysis of physics concepts and problems, it is not a prerequisite for taking this course. Students are expected to take the Advanced Placement test in this subject. **Prerequisite:** Physics and Algebra II. **Recommended Placement:** B or better in Honors Physics and Algebra II; A- or better in C1 Physics and Algebra II. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

424 ADVANCED PLACEMENT CHEMISTRY II

Grade 11, 12

Advanced Placement level

7.5 credits

This is an intensive course in Chemistry using college level texts and laboratory activities. A wide range of advanced topics will be considered such as: Concepts of matter, thermodynamics, kinetics, equilibrium, electrochemistry, etc. The approach will be qualitative and quantitative with an emphasis on lab work. Students are expected to take the AP examination in chemistry. **Prerequisite:** Successful completion of Chemistry and Algebra II, Chemistry teacher recommendation. **Recommended placement:** B or better in Honors Chemistry, and Algebra II, A- or better in C1 Chemistry and Algebra II. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

415 ADVANCED PLACEMENT BIOLOGY II

Grade 11,12

Advanced Placement

7.5 credits

This is an intensive survey course in biology using college level texts and laboratory exercises. The successful student is highly motivated, has strong reading comprehension skills, can communicate effectively in writing and is able to maintain a rigorous study schedule. Major topics include cells, biochemistry, biotechnology, biodiversity, genetics, evolution, and human anatomy & physiology. **Students are required to complete a summer assignment.** Students are expected to take the Advanced Placement Biology examination. **Prerequisite:** Successful completion of Honors Chemistry and Honors Biology and Biology teacher recommendation. **Recommended Placement:** Successful Completion of Honors Chemistry and B or better in Honors Biology. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

SCIENCE ELECTIVES

403 ANATOMY AND PHYSIOLOGY

Grade 11, 12

Honors

5 credits

This is a yearlong course that provides students an opportunity to explore the intricate relationship between structure and function in the human body. Students will explore histology and gross human anatomy, in addition to homeostasis and pathophysiology for each body system. Students will also examine case studies, present research projects and participate in laboratory activities and dissections that reinforce concepts presented in the course. Honors Anatomy and Physiology is an excellent introduction for those considering a career in the medical field or for anyone with a general interest in the human body. It can be taken on its own or as a compliment to Advanced Placement Biology. Good study habits, self-motivation and discipline are cornerstones of a successful experience in the honors level course.

Recommended placement: B or better in Honors Biology and Chemistry; A- in C1 Biology and Chemistry. This course is a lab science and fulfills a unit of lab-based science for MassCore.

414 ANATOMY AND PHYSIOLOGY

Grade 11, 12

C1

5 credits

This is a yearlong course that provides students an opportunity to explore the intricate relationship between structure and function in the human body. Students will explore histology and gross human anatomy, in addition to homeostasis and pathophysiology for each body system. Students will also examine case studies, present research projects and participate in laboratory activities and dissections that reinforce concepts presented in the course. C1 Anatomy and Physiology is recommended for any student with a general interest in the human body or for those considering a career in the medical field. Recommended placement: C or better in C1 Biology and Chemistry. This course is a lab science and fulfills a unit of lab-based science for MassCore.

404 FORENSIC SCIENCE

Grade 11,12

5 credits

Students will apply their knowledge of science to solving “crimes” and mysteries of human history. From fingerprinting, to studying DNA evidence, to studying physical evidence, this course brings CSI into the classroom. Students will also be introduced to principles of physics. **Recommended Placement:** C or better in previous Science course. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

460 APPLIED PHYSICS

Grade 11, 12

Honors

5 credits

This is an accelerated course in physics for students who want to learn more about how the world around them works. It is also designed to prepare students for college and the SAT subject test in Physics. Through laboratory experiments and class discussions students will examine waves and optics, forces and motion, gravitation and orbital physics, momentum and energy, quantum and nuclear physics, relativity, thermodynamics, and electricity and magnetism. Students will also learn important science related skills including experimental design, accurate measurement using a variety of instruments and technologies, quantitative and qualitative observations, construction and interpretation of graphs, application of algebra to science problems, and applications of science concepts to the real world. **Prerequisite:** Algebra II should have been taken before or be taken concurrently with this course.

Recommended Placement: Grade B or better in previous honors science and math courses, or A- or better in previous C1 science and math courses. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

461 APPLIED PHYSICS

Grade 11, 12

C1

5 credits

This is a course in physics for students who want to learn more about how the world around them works. It is also designed to prepare students for college and the SAT subject test in Physics. Through laboratory experiments and class discussions students will examine waves and optics, forces and motion, gravitation and orbital physics, momentum and energy, quantum and nuclear physics, relativity, thermodynamics, and electricity and magnetism. Students will also learn important science related skills including experimental design, accurate measurement using a variety of instruments and technologies, quantitative and qualitative observations, construction and interpretation of graphs, application of algebra to science problems, and applications of science concepts to the real world. **Prerequisite:** Algebra II should have been taken before or be taken concurrently with this course. **Recommended placement:** C or better in previous C1 science and math courses. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

462 APPLIED PHYSICS

Grade 11. 12

C2

5 credits

This is a course for the career bound or non-science major college preparatory student. There is an emphasis relating physics concepts to everyday life. **Prerequisite:** Successful completion of previous science, Algebra I and Geometry. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

685 ENGINEERING THE FUTURE

Grades 10, 11, 12

5 credits

Engineering the Future is a full-year course designed to introduce students to the world of technology and engineering, as a step in becoming technologically literate citizens. Through this course's practical real-world connections, students have an opportunity to see how science, mathematics, and engineering are part of their everyday world, and why it is important for every citizen to be technologically and scientifically literate. This course uses project-based learning and focuses on 21st century skills (Communication, critical thinking to solve problems, the use of technology, and working cooperatively.) The course consists of four major projects: Designing an organizer, designing a building of the future, improving a patented boat design, and designing an electronic communications system. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

734 ACADEMIC SUPPORT/SCIENCE

Grade 9, 10, 11, 12

non-credit

Academic Support is an opportunity for students to receive academic tutoring, MCAS support, in English, Math, History, or Science during the school day. Sections will be staffed with content-certified teachers. Students will participate in Academic Support for limited periods of time throughout the school year as needed to bolster academic performance

HEALTH COURSES

482 FRESHMAN HEALTH AND WELLNESS:

Grade 9 (semester course)

1.25 credits

This is a required course is an introduction to health and wellness. This is a half year semester course that will be paired with **514 Freshman Personal Fitness and Wellness**.

Topics include 1. Health and Wellness (including stress management, decision making, goal setting), 2. The Human Body Systems as they relate to health and fitness (Skeletal, muscular, nervous, cardiopulmonary, integumentary) 3. Nutrition and the Digestive System 4. Disease Prevention (including immune system, skin cancer, lifestyle diseases and infectious diseases) 5. Refusal Skills/Addiction, 6. Substance Abuse Prevention (including tobacco, e-cigarettes, vape, opiates, marijuana, prescription drugs, alcohol), 7. Healthy Relationships/Violence Prevention (including bullying, harassment and dating violence), 8. Reproductive and Sexual Health, 9. Mental and Emotional Health (including stress, anxiety, depression and suicide).

514 FRESHMAN PERSONAL FITNESS & WELLNESS

Grade 9 (Semester Course)

1.25 credits

This is course is an introduction to health related fitness and wellness. This is a semester course (1/2 year) that combines with **482 Freshman Health and Wellness** to give all freshman a year of Wellness. The curriculum is comprised of a Scope and Sequence which will guide individuals in developing a quality personal fitness plan.

Throughout the course students will collect fitness data, develop personal goals, and utilize safety procedures that will enhance their health/fitness and wellness. This unit culminates with students designing individualized fitness plan than can be used during the individual activities that will be introduced during the year. Students will also have the opportunity to learn CPR

483 HONORS HEALTH SCIENCE

Grade 10, 11, 12

Honors

5 credits

This is a course for the honors student who plans to pursue or who is interested in a career in any of the allied health professions. Students will gain an understanding of the human body as it relates to the causes, prevention, diagnosis and treatment of diseases. Students will learn about various allied health careers and relevant medical terminology for these careers. Other topics include human development, bioethics, food policy, and reproductive health. This class will

include labs such as taking blood pressures, EKG's, vital signs, lung auscultation, cardiovascular labs and monitoring oxygen saturation. . Honors Health Science may be taken concurrently with another science course. *This course fulfills a unit of "Additional Core Courses "for MassCore*

485 CURRENT HEALTH

Grade 10, 11, 12

5 credits

This is a course about you and how the quality of your life is affected by smoking, drugs, alcohol, sleep, nutrition, fitness, stress management, and other lifestyle choices. The life cycle is explored from conception to birth including parenting. Other topics include the body systems, reproductive health, genetic diseases, decision-making, goal setting, and relationships. Students will explore current issues and trends in health through on-line, newspaper, and magazine sources. This course will help you deepen your awareness of the above topics and give you the tools you need to live your healthiest life. *This course fulfills a unit of "Additional Core Courses "for MassCore*

486 STRESS MANAGEMENT: Cool, Calm and Collected VIOLENCE PREVENTION: Hawk Strong

Grades 10,11,12

2.5 credits

The first half of the year, students will examine the effects of stress on the body and mind, as well as the impact stress has on one's health, wellness, and quality of life. Students will learn how to recognize stress as well as effective strategies for managing and coping with the stressors in their daily life. In addition, students will increase their concentration and focus and create a healthy life balance that will allow them to reduce stress and increase productivity.

The second half of the year, the course will shift to **Violence Prevention: Hawk Strong** where students will examine a variety of issues including bullying, harassment, dating violence, sexual assault, and the impact of the media in society. Students will explore the sources of violence in school and society and will develop skills to prevent and combat violent situations acquiring effective conflict resolution skills to foster personal growth. Particular attention will be paid to dating violence and the importance of developing healthy relationships.

SEI SCIENCE COURSES

764 SEI CHEMISTRY I

Grades 9-12

5 credits

Limited to students enrolled in ESL I or II, this course focuses on the application of various computations in chemistry as well as dimensional analysis. The vocabulary of chemistry continues to be an important focus in order to ensure that students understand essential concepts in Chemistry. Students will explore the system of measurement, matter and energy, atoms and molecules, atomic theory, the periodic table, chemical equations, etc. Students will learn about lab safety and how to be productive in the lab. Students are expected to keep an organized notebook, participate actively in class, and complete all assignments. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

762 SEI CHEMISTRY II

Grades 9- 12

5 credits

This course is limited to students enrolled in ESL I or II, and who have successfully completed SEI Chemistry I, its equivalent, or received teacher recommendation. This course prepares ESL students for the state science exam in chemistry. In addition to descriptive chemistry, it focuses on the application of various computations in chemistry as well as dimensional analysis. Various topics will be addressed such as concepts of matter, thermodynamics, chemical reactions, equilibrium, chemical bonding, etc. The vocabulary of chemistry continues to be an important focus in order to ensure that students understand essential concepts in chemistry. Experiments are hands-on, step-by-step investigations that extend the chemistry concepts. Writing is a key component of this course. Students will manipulate variables and write summaries using complete sentences. Students learn about lab safety and how to be productive in the lab. Students are expected to keep an organized notebook, participate actively in class, and complete all assignments. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

749 SEI PHYSICS

Grades 9 – 12

5 credits

This course is limited to students enrolled in ESL I or II, This course prepares ESL students for the state science exam in physics. This is a physics course in which students will learn important science related skills including experimental design, accurate measurement using a variety of instruments and technologies, quantitative and qualitative observations, construction and interpretation of graphs, application of algebra to science problems, and applications of science concepts to the real world. This activity-based course will provide the foundation for all future science courses. Lab experiments will examine forces, motion, electricity, magnetism, waves light, sound and heat. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

429 SEI BIOLOGY I

Grades 9 – 12

5 credits

This course is limited to students enrolled in ESL I or II. This course prepares ESL students for the state science exam in biology. Topics to be covered include human body systems, biochemistry, cellular biology, genetics, and evolution. Students will be taught to 1) be able to communicate clearly and effectively in verbal and written formats in the science classroom; 2) be productive in laboratory activities; and 3) keep a portfolio of his/her work. *This course is a lab science and fulfills a unit of lab-based science for MassCore*

SPECIAL EDUCATION

The Waltham Public Schools Special Education Department offers a wide variety of programs for special needs students. The goal of the Special Education Department is to enable students to access the general education curriculum. For all students deemed eligible, and on an Individual Education Program (I.E.P.), instruction is individualized taking into consideration each child's unique learning style. Programming is developed which allows the student to work to their potential in the least restrictive environment. Selection of the appropriate programs is done through the TEAM process and is based on individual needs as developed in the educational plan. Students who receive special education services work closely with their liaisons to ensure that their individual education program complies with standards based instruction and the curriculum frameworks.

PHYSICAL EDUCATION

“Intelligence and skill can only function at the peak of their capacity when the body is healthy and strong. In this sense, physical fitness is the basis of all activities of our society.” John F. Kennedy

The Waltham High School physical education curriculum aligns with both the National Association Standards for Physical Education and Standard 2 of the Massachusetts Comprehensive Health Curriculum Frameworks. Students are required to successfully complete one physical education course every year. Each course completed earns 2.5 credits and 10 credits are required for graduation. Courses are designed to develop and challenge students physically, mentally, and socially (Cognitive: knowledge, Affective: growth in feelings or emotional areas, and Psychomotor: manual or physical skills). Each course provides students with an opportunity to grow as individuals in a physically challenging environment. Students will learn and be able to develop the skills and the knowledge to achieve and maintain a health-enhancing level of physical activity and fitness. We learn best by moving. Our bodies and minds are completely interconnected and interdependent. Movement stimulates the mind to create more nerve connections, promoting more learning potential.

514 FRESHMAN PERSONAL FITNESS & WELLNESS

Grade 9 (Semester Course)

1.25 credits

This course is an introduction to health related fitness and wellness. This is a semester course (1/2 year) that combines with **482 Freshman Health and Wellness** to give all freshman a year of Wellness. The curriculum is comprised of a Scope and Sequence which will guide individuals in developing a quality personal fitness

plan. Throughout the course students will collect fitness data, develop personal goals, and utilize safety procedures that will enhance their health/fitness and wellness. This unit culminates with students designing individualized fitness plan than can be used during the individual activities that will be introduced during the year. Students will also have the opportunity to learn CPR

482 FRESHMAN HEALTH AND WELLNESS

Grade 9 (semester course)

1.25 credits

This is a required course is an introduction to health and wellness. This is a half year semester course that will be paired with **514 Freshman Personal Fitness and Wellness**.

Topics include 1. Health and Wellness (including stress management, decision making, goal setting), 2. The Human Body Systems as they relate to health and fitness (Skeletal, muscular, nervous, cardiopulmonary, integumentary) 3. Nutrition and the Digestive System 4. Disease Prevention (including immune system, skin cancer, lifestyle diseases and infectious diseases) 5. Refusal Skills/Addiction, 6. Substance Abuse Prevention (including tobacco, e-cigarettes, vape, opiates, marijuana, prescription drugs, alcohol), 7. Healthy Relationships/Violence Prevention (including bullying, harassment and dating violence), 8. Reproductive and Sexual Health, 9. Mental and Emotional Health (including stress, anxiety, depression and suicide).

515 SOPHOMORE PROJECT ADVENTURE

Grade 10

2.5 credits

This course is designed to promote self-confidence, group cooperation, and problem solving skills in a mutually supportive environment. The course is divided into three distinct phases. The initial activities are designed to develop trust and mutual support among group members. The second phase emphasizes group cooperation and problem solving skills. The initiative problems presented require a full contribution from every member of the group. The final activities in this course are designed to encourage risk taking and to develop self-confidence. These activities include working on the ropes course located at the high school. Students are not mandated to participate on the high elements but are encouraged to try. Students will also use Cooperative activities through team sports to continue supporting their group or team members. Sports will include Basketball, Hockey, and Soccer.

519 JUNIOR PERSONAL FITNESS & WELLNESS

Grade 11

2.5 credits

This course is a continuation of the Freshman Fitness curriculum. Students will build on prior knowledge gained and apply the fitness principles to various movements and modalities. Students will learn the value of Nutrition as it relates to Metabolism and the benefits of physical activity with regards to mental health. Students will establish goals based on fitness assessment data in order to develop, implement, achieve, and monitor an individual health and fitness plan. Students will apply these principles during the activities within the curriculum. Students will have the opportunity within this class to try additional individual activities such as: Archery, Orienteering, Table Tennis, and Yoga during the school year.

520 SENIOR FITNESS & ADVENTURE LEARNING

Grade 12

2.5 credits

12th grade will be Adventure Learning based. This course will be an extension of the learning experience they had in their sophomore Project Adventure Class. Students in this course will participate in more advanced climbs, and learn how to facilitate problem solving initiatives, as well as how to lead various Sophomore Project Adventure activities/games. Students will also use strategies they have learned through Adventure Learning and implement them into team sports such as Football, Volleyball, and Invasion Games.

508 21ST CENTURY FITNESS AND WELLNESS

Grades 11, 12

2.5 credits

This course is a combination of classroom and “lab” activities that will enhance total-body fitness for the long term. The benefits of exercise for preventive measure, promotion of health and wellness, and its affect on other systems of the body will be emphasized. The primary objectives of this course would be to:

- Establish a starting point and realistic goals
- Create a completely personalized fitness plan
- Identify dangerous weakness BEFORE injury occurs
- Identify and resolve movement problems.

Students who have an interest in improving and/or maintaining their personal fitness level or who may be pursuing careers in physical therapy, occupational therapy, sports medicine, and/or physical education teacher certification may have a particular interest in this course of study

ART DEPARTMENT

The courses offered by the Art Department are designed to meet the needs of both serious career minded students and any student who desires to enrich his or her life through experiences in the visual arts. All art courses fulfill the requirements of Mass Core. To fulfill MassCore students need to take two 2-period art classes or one 4-period art class between freshman and senior year.

*PREREQUISITES are required in some courses. These can be waived by portfolio review by the Director of Fine Arts and the instructor of the class.

528 FOUNDATIONS OF ART

Grade 9, 10, 11, 12

2.5 credits

This two-period class serves as a general introduction to studio art for students of all abilities while providing serious art students with a foundation for continued study in art. Students will explore a variety of media including drawing, painting, design, mixed-media, digital art, printmaking, fiber and sculpture in order to give them a broad basis for personal expression. Students will demonstrate their ability to respond, analyze and interpret artwork through informal and formal critique.

541 STUDIO ART

Grade 9, 10, 11, 12

5 credits

Students in Studio Art will develop their skills in a variety of 2D and 3D media- drawing, painting, design, mixed-media, digital art, printmaking, fiber and sculpture while developing their individual style and self-expression. Emphasis will be given to observational study of the human form, portraiture, composition in still-life, landscape and abstract design. Cultural, historical and contemporary art concepts will also be explored. Students will demonstrate their ability to respond, analyze and interpret artwork through oral and written critique.

531 ADVANCED ART

Grade 10,11, 12

5 credits

Advanced Portfolio is designed for those students who want to concentrate their artistic efforts at a more advanced level and/or intend to further their education at an art school, college or university. Students work in all areas of art with an emphasis on drawing, painting and 2D media. They are also given opportunities to concentrate in a particular medium, art style, and/or subject matter. Students will demonstrate their ability to respond, analyze and interpret their own artwork and the work of others through discussions, critiques, and writings.

Prerequisites: Teacher recommendations.

536 PORTFOLIO PREPARATION

Grade 11, 12

5 credits

Portfolio is designed for those students who want to concentrate their artistic efforts at a more advanced level and/or intend to further their education at an art school, college or university. Students work in all areas of art with an emphasis on drawing, painting, two and three dimensional design, art history and aesthetics. Through a variety of challenging

experiences, students are given opportunities to concentrate in a particular medium, art style, and/or subject matter. They will be engaged in written reflection and group critiques. Students in this class must be willing to put in the extra time and effort to produce the high quality of work expected in an honors-level art course. Prerequisites: Teacher recommendation

538 AP DRAWING PORTFOLIO

Grade 12

5 credits

Advance Placement Studio Drawing is intended for highly motivated students who are seriously interested in the study of art. Students should be aware that AP work involves significantly more commitment and accomplishment than the typical high school course. Students will learn to be proficient in a variety of areas including observational drawing, painting, color theory, printmaking, design, and mixed media. The Advanced Placement course will address three major concerns: 1) a sense of quality in a student's work; 2) the student's concentration on a particular visual interest or problem; and 3) the student's need for breadth of experience in the formal, technical and expressive means. Upon completing Advance Placement Studio Art, students will submit a portfolio to the College Board for college credit. Prerequisite: Students who are considering AP Studio Art must submit a portfolio in March as a prerequisite for this program and get the teacher's recommendation.

527 CERAMICS

Grade 9, 10, 11, 12

5 credits

This four-block course focuses on the methods and techniques of using clay as a media to create functional and creative works of art. The origins, nature, and qualities of clay will be explored. Craftsmanship, technical proficiency, personal expression and vision will be stressed. Students will problem-solve through the development of a series of works using traditional and non-traditional methods to express themselves through specific themes, concepts, and methods. Prior experience in ceramics is not necessary for success. A sense of adventure is!

529 SCULPTURE AND CERAMICS

Grade 9, 10, 11, 12

2.5 credits

This class offers an introductory exploration of sculpture, hand built ceramics and 3D design. Materials that will be used will be paper, wood, clay, plaster and wire. Students will learn basic tools and techniques required for 3D work. Craftsmanship, personal vision, creative expression & reflection will be of primary concern. Cultural, historical and contemporary art concepts will also be explored. No prior art experience is necessary.

533 ADVANCED SCULPTURE AND CERAMICS

Grade 10, 11, 12

5 credits

A unique experience of problem solving and creative thinking applied to 3D media is the main focus of this advanced curriculum. Students with an interest in 3-D design will challenge themselves by developing a series of major works related to specific themes, concept, media and methods. Special attention will be paid to craftsmanship, personal vision, and creative expression. Students will take an in-depth look at various materials in order to select those that best express their personal statement in order to create 3D art of portfolio quality. **Prerequisite:** 529 sculpture and ceramics OR 527 Ceramics.

544 STAINED GLASS

Grade 9, 10, 11, 12

2.5 credits

Create hand crafted designs of light, color and texture. Students will safely learn to cut, grind and solder glass to create unique works of art employing the Tiffany Method through a series of assignments. They will use their creativity and insights to create striking works of glass art they will treasure.

522 INTRO TO DIGITAL PHOTOGRAPY

Grade 9, 10, 11, 12

2.5 credits

Are you always taking snapshots of friends with your smart phone or pocket camera? Then this 2-period class is for you. In this course, we will explore how and why photographers create work. You will learn the basics of taking a successful

photograph. This class will include taking your own original photographs, learning multiple techniques on Photoshop, and analyzing and discussing historic and contemporary photographers. Use of your smart phone or personal camera is encouraged. Point-and-shoot cameras are available to all students in the course. This art course requires weekly homework.

546 DIGITAL PHOTOGRAPHY

Grade 10, 11, 12

5 credits

Digital Photography is designed for students with a passion for photography who want to enhance their shooting and editing skills and are curious to explore how and why photographers create work. This course will include taking your own original photographs, learning multiple techniques on Photoshop, analyzing and discussing historic and contemporary photographers, exploring career paths that involve photography in addition to exploring photography use in the media. You will learn the elements and principals of design and how they apply to photography and you will have the opportunity to explore a variety of styles of photography. Use of your smart phone or personal camera is encouraged. Point-and-shoot cameras are available to all students in the course. This art course requires weekly homework.

Prerequisite: any 2 or 4 block art class

543 AP 3-D SCULPTURE

Grade 12

5 credits

Departmental approval is required for this rigorous course for the highly motivated and artistically gifted student who intends to pursue a career in the visual arts. Students will create a portfolio of work that meets the requirements of the College Board Advanced Placement Studio 3D Design Program. Significant effort by the student is needed on out of class assignments in order to prepare the AP Studio 3D & Design portfolio. Emphasis will be placed on the three components of the AP Studio 3D & Design Portfolio: 5 creations of the students best quality of work, 12 images illustrating growth and discovery of a chosen concentration & 8 works showing breath by demonstrating an understanding of the Principals of Design and that clearly address 3D issues. Openness to experimentation and a superior work ethic are essential. **Prerequisite:** Two years of a 5-credit studio class including one year in Advanced Sculpture and or AP Drawing Portfolio.

DRAMA AND DANCE DEPARTMENT

The Drama Department provides opportunities in the two allied arts: Drama, and Dance. Through classroom study, rehearsals, and performances, students develop skills, techniques and knowledge that foster their intellectual, emotional, and physical growth and development. Students of all experience levels are encouraged to participate. Students considering college majors or minors in a performing art can gain a solid foundation of pre-professional training through consecutive years of study within a program.

All drama and dance courses fulfill the requirements of Mass Core. To fulfill MassCore students need to take two 2-period art classes or one 4-period art class between freshman and senior year.

579 DRAMA I

Grades 9, 10

2.5 credits

This course is designed to further broaden the student's understanding of drama studied in middle school. The course focuses on creative drama, communication, movement, theatre games, improvisations, voice and speech, scene work, the musical theatre, history of theatre and stage production. Selected scenes will be performed in class.

580 DRAMA II

Grades 10, 11, 12

2.5 credits

This intermediate course will offer the student frequent opportunities to practice and develop the creative skills introduced in Drama I (course #579). More advanced scene work, character study, self-scripting and playwriting are

also studied. A one-act play will be rehearsed in class and performed. Students taking this class will be required to attend the one evening performance. Prerequisite: Drama I or teacher recommendation.

582 STAGE AND BODY MOVEMENT I

Grades 9, 10, 11, 12

2.5 credits

This course offers an intensive study of physical stage and body movement for both the performing and non-performing student. Learning to relax and feel comfortable with one's body, in front of others, is essential for all students. Choreography, construction, and quality of movement are covered. Some detail is spent on different styles of movement, dance, mime, musical theatre and various ethnic styles. Students may repeat this course. Students will be invited to participate in one evening performance at the end of the school year.

583 STAGE AND BODY MOVEMENT II

Grades 10, 11, 12

2.5 credits

This course is an advanced version of Stage and Body Movement I. It gives the student an opportunity to expand on technique, skills and concepts introduced in Level I. Independent choreography and performance are stressed. Students electing Stage and Body Movement II are required to participate in one evening performance at the end of the school year. **Prerequisite:** Stage and Body Movement I (course #582) or teacher recommendation.

584 ADVANCED STAGE AND BODY MOVEMENT INTENSIVE LEVEL II

5 credits

Grades 11 & 12 (prerequisite: Stage & Body Movement I, II & Instructor's Approval)

This course is designed for students who are serious about dance and theatrical performance. A majority of the class will be spent on classical dance technique and cover lyrical, contemporary, tap, ballet and jazz styles of dance. Time will also be spent on theatrical aspects of performance. There is an expectation that all students will perform in this class throughout the year.

588 STAGECRAFT AND DESIGN

Grades 9, 10, 11, 12

2.5 credits

This class is for the student who is interested in a behind the scenes look at the world of theatre. This class will offer a hands on approach to learning set design and stagecraft as the students become a part of the design and construction team of a major stage theatre production at the high school. As students build a set, they will learn about the use of tools and equipment used in the theatre. The class will focus on the different facets of design including the following: lighting, costume, sound, make-up, and set. This elective will satisfy either the fine arts or the practical arts requirement for graduation.

MUSIC DEPARTMENT

The Music Department offers a variety of courses that will enhance the overall high school experience and provides a great richness to a student's overview of the arts and culture as it exists in today's society. The Music Department's course offering includes the following: individual instruction in piano and guitar; general music courses that include the exploration of the History of Rock n Roll, music theory, sound recording; and a variety of Instrumental and Vocal performing ensembles. The music program at Waltham High School is designed to give students the necessary skills to further their education with appropriate options, particularly those wishing to major or minor in music or liberal arts.

ALL MUSICAL ENSEMBLES, INSTRUMENTAL AND CHORAL meets four periods per week at Grade 9,10,11 and 12. Because of the difficulty of the literature and the high level of performance, juniors and seniors are not allowed to take these courses for two blocks except in cases where the student can prove there are NO other scheduling options. If scheduling conflicts occur, then student can elect an ensemble for two class periods per week. **(CHORUS IS AN EXCEPTION AS IT IS ONLY OFFERED TWO PERIODS PER WEEK.)**

PREREQUISITES are required in some courses. These can be waived by audition, teacher recommendation, and review by the Director of Fine Arts.

All music courses fulfill the requirements of Mass Core. To fulfill MassCore students need to take two 2-period art classes or one 4-period art class between freshman and senior year.

550 WIND ENSEMBLE

589 WIND ENSEMBLE HONORS

Grade 9, 10, 11, 12

5 credits

Wind Ensemble is open to any student with previous experience playing a band instrument. Students who are members of Wind Ensemble will perform at all home football games, at the Holiday Festival of the Arts, Student Santa, winter, spring and All City Concerts, and at graduation. Each performance counts as 10% of the quarter grade. Some Wind Ensemble members will also play with the Symphony Orchestra and may be required to attend after-school rehearsals with the string players. (Usually two per concert) Additional opportunities exist for an out of state trip (such as Walt Disney World) for band members in good standing. Students will play music in a wide range of musical styles, and experience the cooperative skills needed to perform in an ensemble.

Students wishing to take Honors Level must have approval of the band director or recommendation of previous band director. Honors level students will be given additional projects and responsibilities, keep a practice journal, and audition for District if appropriate.

590 CONCERT BAND

Grade 9 & 10

2.5 credits

Students enrolled in Concert Band are considered to be members of the Wind Ensemble (please see 550 WIND ENSEMBLE description) and are required to learn all of the same music and fulfill the same responsibilities. Concert Band is a two period option available ONLY to 9th and 10th grade students who would otherwise be unable to fit Wind Ensemble into their schedule. Because of the considerable increase of difficulty in high school music, it is highly recommended that everyone take Wind Ensemble or Wind Ensemble Honors if possible to ensure an enjoyable and successful band experience.

553 JAZZ BAND

Grade 9, 10, 11, 12

2.5 credits

In addition to the skills demonstrated in Wind Ensemble/Concert Band, Jazz Band students will be expected to become familiar with various jazz idioms from blues to big band to rock/fusion. They must demonstrate improvisational skills in class and during all in-school and evening performances. Performances at school programs and evening concerts will account for 10% of the grade. Concurrent enrollment in Wind Ensemble or Concert Band is required. **Prerequisite:** Instructor or Director of Fine Arts Approval

554 STRING ORCHESTRA

593 STRING ORCHESTRA HONORS

Grade 9, 10, 11, 12

5 credits

String Orchestra is open to any student with previous experience playing an orchestral string instrument. Students who are members of String Orchestra will perform at the Holiday Festival of the Arts, Student Santa, winter, spring and All City Concerts. Some String Orchestra members will also play for special events in the greater Waltham area. Orchestra students may be required to attend after-school rehearsal when plying Symphony Orchestra music with winds and percussion (usually two per concert). Additional opportunities exist for an out of state trip (such as Walt Disney World) for string members in good standing. Students will play music in a wide range of musical styles, using complex rhythms, in a variety of keys, using advanced techniques, and experience the cooperative skills needed to perform in an ensemble. Students wishing to take Honors Level must have approval of the orchestra director or recommendation of previous orchestra director. Honors level students will be given additional projects and responsibilities, keep a practice journal, and audition for District if appropriate.

591 STRING ORCHESTRA 2

Grade 9, 10

2.5 credits

Students enrolled in String Orchestra 2 are considered to be members of the Orchestra (please see 554 STRING ORCHESTRA description) and are required to learn all of the same music and fulfill the same responsibilities. String Orchestra 2 is a two period option available ONLY to 9th and 10th grade students who would otherwise be unable to fit String Orchestra into their schedule. Because of the considerable increase of difficulty in high school music, it is highly recommended that everyone take String Orchestra or Honors String Orchestra if possible to receive more extensive instruction, and to ensure an enjoyable and successful orchestra experience.

547 CHORUS

Grade 9, 10, 11, 12

2.5 Credits

This course is opened to all in grades 9 - 12 who are beginners and have had limited or no experience singing in a high school choir. Students electing this class will learn the process of using their singing voice as an instrument and will develop skills in reading music, interpreting musical symbols, understanding music vocabulary and developing their ears to create the patterns that give music shape and meaning. Students will enjoy singing a variety of musical styles including contemporary pop, traditional choral, folk songs, jazz, musical theater and classic rock. Students will also sing songs in various languages. This choir will perform four times per year in the evening at the Fall Concert, Winter Concert, All Choir Concert and the All City Concert. Attendance at these performances is mandatory. There will be no after school rehearsals for this ensemble.

595 HONORS SHOW CHOIR

Grade 9, 10, 11, 12

5 credits

552 SHOW CHOIR

Grade 9, 10, 11, 12

2.5 credits

This select mixed show choir is an ensemble made up of men and women in grades 9 - 12. This group will prepare for show choir competitions that are held throughout the year. Preparation will include learning choral literature that will be staged and choreographed. Course expectations are to increase students' vocal proficiency, sight singing, learn appropriate movement, choreography, stage presence, and acting for their performance repertoire. Students will be expected to assume some of the costs of competitions either directly or through fundraising, especially on the national level. Participation in both in school and out of school-scheduled performances is required. These rehearsals normally take place twice a week and one weekend per month. Students will be expected to participate in auditions for solos and competitive events such as Districts and All-State.

Prerequisite: Audition required and or director's approval

594 HONORS MUSIC EXPRESS

Grade 9, 10, 11, 12

5 credits

597 MUSIC EXPRESS

Grade 9, 10, 11, 12

2.5 credits

Music Express is a beginner show choir open to all women in grades 9 - 12. Throughout the year students will learn the principles of singing, reading music, performance skill and elements of dance/choreography in preparation for a show that will be performed at various times throughout the year. Students are exposed to a variety of music such as contemporary pop, musical theater, and traditional choral. There are four major concerts that students will participate in at night and other opportunities may arise throughout the year for the group to perform in the community. Concert dress is required but provided by the music department. Due to the performance nature, there may be two or three after school rehearsals required prior to a concert or show choir festival. Attendance at these after school rehearsals is required.

Prerequisite: Director's approval

598 HONORS CONCERT CHOIRS

Grades: 9, 10, 11, 12

5 credits

596 CONCERT CHOIR

Grades: 9, 10, 11, 12

2.5 credits

This class is open to all students who have a strong interest in participating in music-making using their voice. Some prior choral singing is recommended either in a community chorus or in middle school. The course will focus on group vocal techniques, various styles of choral literature (including a cappella, jazz, classical and musical theater.), performances, and individual growth. Students will work toward auditioning for District Music festivals. Students will be given the opportunity to work on vocal skills and increase their musical understandings. There are four major concerts that students will participate in at night and other opportunities may arise throughout the year for the group to perform in the community. Concert dress is required but provided by the music department. There may be a need for a few after school rehearsals around concert time.

555 MUSIC THEORY

Grade 9, 10, 11, 12

2.5 credits

Students taking this course are expected to learn basic concepts of music reading and writing, and apply these concepts using available music technology. Students will learn to read pitch notation on the treble and bass clef staves, and learn scales, keys, intervals, and chords as the building blocks of harmony. They will become fluent in rhythm reading in common time signatures, and learn to identify rhythm and pitch structures by ear.

557 AP MUSIC THEORY

Grade: 11, 12

5 credits

This course is designed for those students who have a serious interest in music as a career and who plan to elect music as a major or minor beyond high school. It is strongly recommended that students have completed at least two years in a performance group, have a solid background in music theory and can display competence on a principal instrument. Theory Exam in the spring. Course content will focus on advanced concepts in Music Theory; including four part harmonization using principles of 18th century voice leading, harmonic analysis including secondary dominants and modulations, advanced sight-reading in major and minor modes, composition of a bass line and melodic dictation. Advanced projects in performance and composition will also be components of this course. Along with planned instructional activities, much of the course work will involve directed study, independent performance, music analysis, and utilization of music technology. It is expected that all students enrolled will take the Advanced Placement Exam.

Prerequisite: Successful completion of Music Theory and teacher recommendation

559 INTRODUCTION TO SOUND RECORDING

Grade 10, 11, 12

2.5 credits

This course will introduce students to the technology used in creating professional quality audio recordings. Students will be expected to use MIDI (musical instrument digital interface) applications, microphones, microphone technique, signal processing, stereo imaging, mixing, and multi-tracking in both the analog and digital realms. To demonstrate understanding of all of these areas, students will be expected to participate in the production of a number of recordings. This course is limited to sophomores, juniors and seniors who study instruments or singing. (This course will be offered every other year during the even years, 2016, 2018, 2020, 2022, 2024)

569 HISTORY OF ROCK

Grade 9,10,11,12

2.5 credits

.History of Rock and Roll surveys Rock music from its early roots through the present day. In addition to studying the different genres of Rock music, we will discuss the political, social and economic events which influenced its development. Artists particularly important to each genre will be studied in depth. We will also learn how to analyze instrumentation, structure and lyrics of Rock music. This unit-based course requires no previous musical experience and fulfills the required Fine Arts credited needed for graduation. (This class will be offered every other year, during the odd years 2017, 2019, 2021)

570 BEGINNING PIANO CLASS

Grade 9, 10, 11, 12

2.5 credits

This class is open to all students who wish to learn to play the piano. It is intended for students with little or no prior piano experience. Students will learn to read treble and bass clef, play with both hands, and play multiple keys and

positions. Students may be asked to improvise or compose a song with a melody line and chords. Periodic worksheets and assessments will be given to strengthen understanding of musical concepts.

573 BEGINNING GUITAR

Grade 9, 10, 11, 12

2.5 credits

This course is for students who wish to begin the study of guitar. Students will learn to play open position major, minor, and dominant chord progressions, recognize note values and associated rhythms, read and play melodies in open finger position, have small group performances in the blues, classical and pop/rock styles and develop improvisational and compositional techniques utilizing the 12 bar blues structure. All of the above will be assessed through in-class performance and recitals. A limited number of school guitars will be available and assigned to students at the discretion of the teacher.

575 INTERMEDIATE GUITAR

Grade 9, 10, 11,12

2.5 credits

This class will cover more advanced guitar skill development in various styles, building on areas covered in Beginning Guitar. Material covered includes movable Barre chord forms, major and minor pentatonic scale patterns across the neck, reading in the fifth position, more advanced improvisation techniques within a variety of musical styles and composing using all of the above. As with Beginning Guitar, there will be recitals and performance. A limited number of school guitars will be available, assigned at the teacher's discretion. Prerequisite 573: Beginning Guitar or teacher recommendation.

576 GUITAR ENSEMBLE

Grade 10, 11, 12

2.5 credits

Guitar Ensemble is a performance based class that will follow Intermediate Guitar in the guitar sequence. Students enrolling in Guitar Ensemble will continue their studies in reading standard guitar notation, improvisational skills and chord patterns. Repertoire will be chosen from a variety of styles including classical, jazz, Latin, rock, blues and other contemporary forms. Students will learn to play individual guitar parts which then come together as a group performance. Guitar Ensemble will perform at the in-school winter and Spring Concerts. There can also be off-campus performance opportunities as well throughout the year. Class participation and presentations are a significant aspect of this course. Guitar Ensemble may be repeated each year for credit.

585 HONORS GUITAR ENSEMBLE

Grades: 10, 11, 12

5 credits

Pre-requisite: *Grade of B- or better in Intermediate Guitar or teacher recommendation.* Honors Guitar Ensemble is a four-period class that is designed to offer an extension of the two-period Guitar Ensemble Class. Students electing to take the Honors level will be responsible for meeting all the requirements of Guitar Ensemble. Additionally, Honors candidates will study scales, modes, chord voicings, theory, ear training, improvisational techniques in a variety of styles and advanced rhythms in greater depth as it relates to improvising, composition, note reading and repertoire. Class participation and presentations are a significant aspect of this course. *Honors Guitar Ensemble may be repeated each year for credit.*

PRACTICAL ARTS AREAS

BUSINESS

The Business Department offers a variety of courses for grades 9-12. All business courses meet the Waltham High School *Practical Art* requirement as well as the MassCore requirement for graduation. Each course provides students with real and relevant skills including; critical and creative thinking skills, problem solving, team building, entrepreneurial, organizational and mechanical reasoning skills using a hands-on Project Based Learning Model. Students will gain valuable insight to the Business Industry in the fields of Sports and Entertainment Marketing, Retail Management, Accounting, Finance and Investments, Technology, Hospitality, and Leadership.

1659 AGRICULTURE AND DESIGN

Grades 9, 10, 11, 12 2 periods per week 2.5 credits

This course will introduce students to the opportunities in Agriculture and Design. Animal science, plant science, biodiversity, environmental responsibilities, protecting our natural resources, and careers in the Agricultural and Design fields are the foundation of this course. Students will gain valuable insight to the Agriculture Industry that will provide guidance into Career and College pathways.

667 COMPUTER AIDED DRAFTING AND DESIGN I

Grades 9, 10, 11, 12 2 periods per week 2.5 credits

Drafters and designers are required for every manufacturing and construction process. This course will provide a basic understanding of the universal graphic language that all drafters use. Students will initially measure and sketch views from a collection of actual mechanical parts using paper and pencil, progressing quickly to the use of SolidWorks drafting software, and producing CAD drawings. The importance of drawing to scale and correct view location will be stressed. SolidWorks 3D Parametric Design Technology is the dominant CAD program used in industry today.

668 COMPUTER AIDED DRAFTING AND DESIGN II

Grades 10, 11, 12 2 periods per week 2.5 credits

This course will utilize SolidWorks Solid Modeling Parametric software. This design package is the dominant CAD program used in industry today. The course will provide a more in-depth utilization of SolidWorks. Students will measure a variety of machined parts and produce 3D solid models from the scaled dimensions. Assembly models and drawings will be created from the individually modeled components. Prerequisite: 667 CAD I

669 COMPUTER AIDED ARCHITECTURE

Grades 9, 10, 11, 12 2 periods per week 2.5 credits

This course uses the computer as a tool to learn about architectural design. Students will be given a basic understanding of local zoning codes, rules and regulations, house styles, good design principles including individual room design, proper layout, and kitchen design and bath design. Students will design a house and create an architectural model using Chief Architect drafting software

671 PRE-ENGINEERING

Grades 9, 10, 11, 12 2 periods per week 2.5 credits

This course is an introduction to some of the technologies and thought processes required to design and build manufactured products. Mechanical drawing is the single most important skill utilized in engineering today. Approximately 50% of the class will be spent using CAD software packages. Students will use Chief Architect and SolidWorks 3D Solid Modeling software to produce simple models and drawings. Classroom discussion and Internet investigation will explore plastic modeled parts, metal castings, machined components, sheet metal fabrication, screw threads, bearings, and tolerances of manufactured parts. Patent documents will be accessed online through the US patent and trademark office and discussed in class.

1653 SMALL ENGINE SYSTEMS

Grades 9,10,11,12 2 periods per week 2.5 credits

This course will introduce students to the systems and the mechanics of small engines. Roll up your sleeves and join us to learn how small engines work, and how to service and repair them. This class examines the workings of 2-cycle and 4-cycle engines and the theory of operation. Fuel systems, basic electrical, maintenance and storage of power equipment are some of the topics covered. Students will gain valuable insight to the Auto Industry that will provide guidance into Career and College pathways.

1654 BUILDING AND CONSTRUCTION TECHNIQUES

Grades 9,10,11,12 2 periods per week 2.5 credits

This course will introduce students to the fundamentals and interdisciplinary connections of carpentry and welding. Construction and manufacturing techniques, metal fabrication and welding techniques, drafting and using hand tools and

Throughout the portfolio, an emphasis will be made on three sections; Quality, Concentration, and Breadth. Prerequisites: Graphic Design I and either Graphic Design II or a 5 credit-drawing course and Department approval.

1655 PRINCIPLES OF TELEVISION AND MULTI-MEDIA PRODUCTION

Grades 11,12 2 periods per week 2.5 credits

Students who elect to enroll in this fun, and fast paced elective will enjoy exposure to state of the art television, computer and multi-media equipment. Through interesting and thought-provoking assignments, students will learn the basics of creating clear and concise multi-media presentations. They will deconstruct film, television and commercials in order to discover the role media plays in their social, economic and political lives. Assignments will range from television commercials to full-scale programming and will air on our own local access education channel WE-TV. Active participation is mandatory, as students should be prepared to perform daily, both in front of and behind the cameras. For classroom assignments students will record and videotape some programs after school and during weekends, as well as written homework and short papers. Upon completion of this course students will have developed the writing, vocabulary and production skills, essential to quality media productions.



CAREER AND TECHNICAL EDUCATION PROGRAMS (CTE)

Career and Technical Education Programs are available to all students who are interested in exploring and committing to a three year CTE pathway during their high school career. Waltham High School has 10 chapter 74 Perkins funded programs including; Auto technology, Auto Collision, Carpentry, Culinary Arts, Early Education and Childcare, Electrical, Electronics, Graphic Communications, Metal Fabrication, and TV Broadcasting. An additional 5 new chapter 74 Perkins funded programs are in the developmental stages which include; Cosmetology, Environmental Science and Technology, Health Assisting, HVAC, and Web Design and Programming. Students who participate in the 9th grade CTE Exploratory Program will have the opportunity to continue his/her education in their chosen career field and follow a sequential path of courses for the next three years. By choosing a career pathway students have the unique opportunity to learn technical knowledge and skills, problem solving, and professional employability skills in a live shop using a hands on Project Based Learning (PBL) Model. Each CTE pathway is federally funded by Carl Perkins Grant which follows state regulated curriculum frameworks and policy regulations. Maintaining CTE chapter 74 approvals allows students to be able to earn their Competency of Occupational Proficiency (COP's) certification in addition to their high school diploma. CTE pathways also provide internships and Coop opportunities for eligible junior and senior students who are in good standing in their CTE program.

CTE EXPLORATORY

NINTH GRADE EXPLORATORY PROGRAM FOR CAREER AND TECHNICAL EDUCATION:

The ninth grade Career Exploration Program is an opportunity for students to follow a course of study by cluster. Each Career and Technical Program cluster incorporates three career industry pathways. Students learn relative, industry standards and hands on skills, safety, employability skills and entrepreneurship. During exploration, students will rotate each quarter within their cluster to one of the three interdisciplinary pathways. At the end of third quarter each student will have the opportunity to select a non-traditional pathway, a new pathway, or his or her top choice within his or

her cluster to explore. Passing the Exploratory Program and showing evidence of mastery of safety and technical skills is a major factor in securing acceptance into a Career and Technical Pathway.

Exploratory Clusters

Transportation	Construction	Arts & Communications	Health & Human Services	Hospitality
Auto Technology	Carpentry	Business	Early Education & Care	Culinary Arts
Auto Collison	Electrical	Graphic Communications		
Electronics	Metal Fabrication	TV Broadcasting		

1600 EXPLORATORY CLUSTER: AUTO TECHNOLOGY, AUTO COLLISION, AND ELECTRONICS

Grade 9 4 periods per week 5 credits

The ACE cluster exposes students to the mechanics of Auto Technology, Collision and Electronics. These interdisciplinary fields masterfully use technology and industry equipment to build, repair and provide services in a live shop setting. Students will be able to build and design in a hands-on environment their own personalized work. Operating technology and industry equipment safely and successfully, communicating, working as a team and problem solving are some of the skills students will acquire in this course. At the end of this rotation students will have a foundation of knowledge in each of the three pathways including the variety of career opportunities they offer.

1601 EXPLORATORY CLUSTER: CARPENTRY, ELECTRICAL AND METAL FABRICATION

Grade 9 4 periods per week 5 credits

The CEM cluster exposes students to the valuable trades of Carpentry, Electrical and Metal Fabrication. These interdisciplinary fields take a practical approach in using technology and industry equipment to assemble, build, repair, and weld. Students will be able to create and design in a hands-on environment their own personalized work. Operating technology and industry equipment safely and successfully, communicating, working as a team and problem solving are some of the skills students will acquire in this course. At the end of this rotation students will have a foundation of knowledge in each of the three pathways including the variety of career opportunities they offer.

1602 EXPLORATORY CLUSTER: BUSINESS, GRAPHIC COMMUNICATIONS AND TV BROADCASTING

Grade 9 4 periods per week 5 credits

The CGT cluster exposes students to the exciting fields of Business, Design, Printing, and TV Broadcasting. These interdisciplinary fields are very creative using technology and industry equipment to produce a variety recipes, personal stationery and business cards as well as short stories on film. Students will be able to create and design in a hands-on environment their own personalized work. Operating technology and industry equipment safely and successfully, communicating, working as a team and problem solving are some of the skills students will acquire in this course. At the end of this rotation students will have a foundation of knowledge in each of the three pathways including the variety of career opportunities they offer.

634 EARLY EDUCATION AND CARE

Grade 9 2 periods per week 2.5 credits

The EEC course exposes students to the health and human services fields of Early Education and Care. Students will be able to learn and model skills independently in a hands-on environment. Operating technology and industry equipment safely and successfully, communicating, working as a team and problem solving are some of the skills

students will acquire in this course. Students will have a foundation of knowledge in the Early Education & Care pathway including the variety of career opportunities it offers.

648 CHEFS

Grades 9,10, 11, 12

2 periods per week

2.5 credits

This course introduces students to the fundamentals of basic meal planning and food preparation. Students will use a wide variety of cooking and food preparation techniques, focusing on the skills necessary to live on your own. Units will include: Breakfast; Lunch; and Dinner foods. Culture and its impact on food will also be investigated. Students will learn measuring, kitchen safety, sanitation, terminology and the importance of group collaboration. This course gives valuable insight into the Culinary Industry that will provide guidance into Career and College pathways.

AUTOMOTIVE COLLISION

Program Overview:

As a member of the Automotive Collision team, students will learn how to diagnosis & estimate damages, work with customers and insurance companies, and ultimately repair automobiles that have sustained damage from an accident. They will learn about the many systems within a car and apply that knowledge in a practical, hands-on shop setting. Students will work on 'practice' cars as well as customer's vehicles. From hot rods to classic antiques and custom fabrication, to repairing late model car wrecks, this industry is both exciting and challenging. We encourage any student with an interest in fine details and craftsmanship to join our team! All classes emphasize safety and standards required by prospective future employers. The students will learn to work together safely as well as independently, developing their self-confidence. They will learn that "working with your hands" is not easy and requires knowledge and the ability to apply that knowledge. Students will have access to professional/commercial equipment and tools, and work in a large, well-ventilated shop area.

Program Expectations:

- 3 year commitment to this career pathway (Grades 10, 11, & 12)
- Ability to be PRESENT for all scheduled class periods with MINIMAL absences/tardies
 - 4 periods per week – Exploratory
 - 8 periods per week – Auto Collision 1
 - 14 periods per week – Auto Collision 2
 - 14 periods per week – Auto Collision 3
- Commitment to purchasing and/or wearing all required safety gear daily
 - o Student/Family Provides: work boots, long sleeve shirts, long pants, uniform/jumpsuit*
 - o School Provides: commercial equipment, required materials for projects; safety glasses; some basic tools (for use in the shop only).

Sample Lessons:

Dent repair
Welding
Replacing panels

Skills & Aptitudes Needed:

Good visual perception
Patience
Manual Dexterity
Problem Solving Skills

Creativity
Positive Attitude
Understanding of technical manuals

637 AUTOMOTIVE COLLISION 1

Grades 10,11

8 periods per week

10 credits

This course builds on the foundation learned during the Automotive Collision Exploratory course. Students will review concepts and methods previously taught including vehicle safety inspections, detailing, identifying vehicle components, light cosmetic repairs, and hand and power tools as well as shop & personal safety standards. Students will look more in depth at vehicle structures and identifying when to repair vs replace vehicle components. They will look to become proficient at preparing new and used panels, masking vehicles for paint, and final car detailing. A more in-depth look at OSHA safety regulations and safety standards within the Auto Collision program will be covered. During the course students will be introduced to working on 'live' cars including practice vehicles and actual customer's cars.

Mechanical Reasoning
Manual Dexterity

Problem Solving Skills
Creativity
Positive Attitude

638 AUTOMOTIVE TECHNOLOGY 1

Grades 10,11

8 periods per week

10 credits

This course builds on the foundation learned during the Automotive Technology Exploratory course. Students will review concepts and methods previously taught including vehicle safety inspections, tire service, hand and power tools as well as shop & personal safety standards. Students will begin to learn vehicle and engine configurations, basic engine construction, engine systems, basic electrical/electronics, and diagnostic tools/techniques. Students will have the chance to disassemble, inspect and rebuild an engine. A more in-depth look at OSHA safety regulations and safety standards within the Auto Tech program will be covered. During the course students will be introduced to working on 'live' cars including practice vehicles and actual customer's cars.

Prerequisite – A passing score in the Automotive Technology Exploratory Cluster, meeting attendance, discipline/conduct record, safety requirements, meeting minimum course requirements, and an accepted application to become a member of the CVTE Department Team.

635 AUTOMOTIVE TECHNOLOGY 2

Grades 11,12

14 periods per week

17.5 credits

This course builds on the foundation learned during the Auto Tech 1 course. Students will begin to work on assigned CBVE (Competency Based Vocational Education) projects that are progressively difficult to expand their knowledge to prepare them for a career as an Automotive Technician or related field. They will continue to expand their knowledge of automotive theory and diagnosis. Additionally students will study all aspects of brake, steering, and suspension systems and begin to interact with customers regarding the repairs to their vehicles.. Students will take part in a 10-Hour OSHA safety course, earning their OSHA safety certification if they achieve a passing score.

Prerequisite – A passing grade in Auto Tech 1, and meeting attendance, discipline/conduct record, and safety requirements.

636 AUTOMOTIVE TECHNOLOGY 3

Grades 12

14 periods per week

17.5 credits

This course builds on the foundation learned during the Auto Tech 2 course. Students will work on all aspects of engine performance including basic operation, mechanical problems, computer controls, electronic fuel injection, forced induction, and emission controls. Students will also learn about heating and air conditioning systems. Eligible students may participate in the Cooperative Education Program at an approved worksite.

Prerequisite – A passing grade in Auto Tech 2, and meeting attendance, discipline/conduct record, and safety requirements.

ELECTRONICS

Program Overview:

As a member of the Electronics team, students will apply scientific principles of electronic devices and circuits leading to practical consumer, computer, telecommunications and robotics systems outcomes using modern tools, equipment, materials and processes. All aspects of the industry including safety, human factors, consumerism and recycling will be common threads of discussion throughout the program. All classes emphasize safety and standards required by prospective future employers. The students will learn to work together safely as well as independently, developing their self-confidence. They will learn that "working with your hands" is not easy and requires knowledge and the ability to apply that knowledge. Students will have access to professional equipment and supplies, and work in a classroom area.

Program Expectations:

- 3 year commitment to this career pathway (Grades 10, 11, & 12)
- Ability to be PRESENT for all scheduled class periods with MINIMAL absences/tardies:
 - 4 periods per week – Exploratory (Grade 9)
 - 8 periods per week – Electronics 1 (Grade 10)

14 periods per week – Electronics 2 (Grade 11)

14 periods per week – Electronics 3 (Grade 12)

- Commitment to acquiring the following:
 - Student's family provides a notebook, pen/pencil, calculator, long pants and closed toe shoes are to be worn daily.
 - Instructor/school provides all tools and required materials.
- Commitment to adhering to the Waltham High School dress and ethics codes.

Sample Lessons:

Resistor Color Code
Scientific Notation
Ohm's and Kirchoff's Laws
Binary Number System
Digital Logic
Microcontrollers/processors

Skills & Aptitudes Needed:

Collaboration
Dexterity
Independence
Computation
Inquiry
Communication

658 ELECTRONICS 1

Grades 10,11

4 periods per week

5 credits

As part of the Electronics team students are exposed to authentic theory and practice within this career field leading to employment or further study. Investigate basic concepts and applications of analog electronics to include power supplies, amplifiers and oscillators. Prototype analog circuits and use diagnostic instrumentation to troubleshoot. Illustrate and simulate analog circuits using computer software. Fabricate printed circuit boards and printed circuit board assemblies. Perform "live work" on various non-functional, serviceable circuits and systems to return them to industry standard condition. *Requisites: Safety and Ethics Contract and Dress Code.*

Prerequisite – A passing score in the Electronics Exploratory Cluster, meeting attendance, discipline/conduct record, safety requirements, meeting minimum course requirements, and an accepted application to become a member of the CVTE Department Team.

675 ELECTRONICS 2

Grades 11,12

8 periods per week

10 credits

This course builds on the foundation learned during the Electronics 1 course. The second in a series of three consecutive outcome-based courses in which students are exposed to authentic theory and practice within this career field leading to employment or further study. Investigate basic concepts and applications of digital electronics to include logic gates, counter displays, memory registers, and data selectors. Prototypes digital circuits and use diagnostic instrumentation to troubleshoot. Illustrate and simulate digital circuits using computer software. Fabricate printed circuit boards and printed circuit board assemblies. Perform "live work" on various non-functional, serviceable circuits and systems to return them to industry standard condition. *Requisites: Safety and Ethics Contract and Dress Code.*

Prerequisite – A passing grade in Electronics 1, and meeting attendance, discipline/conduct record, and safety requirements.

688 ELECTRONICS 3

Grades 12

12 periods per week

15 credits

This course builds on the foundation learned during the Electronics 2 course. The third in a series of three consecutive outcome-based courses in which students are exposed to authentic theory and practice within this career field leading to employment or further study. Use the engineering design process to investigate advanced concepts and applications of electronics to include consumer appliances, computers/peripherals, telecommunications, robotics, additive/subtractive manufacturing and drones. Encounter the entire manufacturing cycle by prototyping advanced circuits and systems using microcontrollers and microprocessors. Utilize interactive web-based instruction to supplement and complement training. Perform "live work" on various non-functional, serviceable circuits and systems to return them to industry standard condition. Eligible students may participate in the Cooperative Education Program at an approved worksite.

Prerequisite – A passing grade in Electronics 2, and meeting attendance, discipline/conduct record, and safety requirements.

CARPENTRY

Program Overview:

As a member of the Carpentry team, students will learn about construction and manufacturing techniques. Carpenters are employed in almost every type of construction activity and are the largest group of building trade workers in the country. There is a greater demand for qualified technicians than there are trained people to fill open positions, ensuring job security upon graduation. Students will learn about the planning and constructing of wood projects, furniture, cabinetry and buildings/construction. They will learn about OSHA safety regulations on the jobsite and have the opportunity to become OSHA-10 safety certified in their junior year. Students will learn the safe and effective use of hand and power tools that are utilized in rough carpentry and fine finish work. Blueprint reading, estimation of cost, shell construction, and renovation are part of the curriculum. All classes emphasize safety and standards required by prospective future employers. The students will learn to work together safely as well as independently, developing their self-confidence. They will learn that “working with your hands” is not easy and requires knowledge and the ability to apply that knowledge. Students will have access to professional/commercial equipment and tools, and work in a large, well-ventilated shop area.

Program Expectations:

- 3 year commitment to this career pathway (Grades 10, 11, & 12)
- Ability to be PRESENT for all scheduled class periods with MINIMAL absences/tardies
 - 4 periods per week – Exploratory
 - 8 periods per week – Carpentry 1
 - 14 periods per week – Carpentry 2
 - 14 periods per week – Carpentry 3
- Commitment to purchasing and/or wearing all required safety gear daily
 - o Student/Family Provides: workboots, long sleeve shirts, long pants, uniform/jumpsuit*
 - o School Provides: commercial equipment, required materials for projects; safety glasses; some basic tools (for use in the shop only)

Sample Lessons:

Drawing Blueprints
Fundamentals of Building
Construction of a coffee table

Skills & Aptitudes Needed:

Excellent Math aptitude
Good visual perception
Patience
Manual Dexterity
Problem Solving Skills
Creativity
Positive Attitude
Understanding of technical manuals

639 CARPENTRY 1

Grades 10,11

8 periods per week

10 credits

This course builds on the foundation learned during the Carpentry Exploratory course. Students will review concepts and methods previously taught including an overview and use of shop equipment like the band saw, sander, and drill press, measuring/reading a tape measure, and hand and power tools as well as shop & personal safety standards. Students will look more in depth at architectural drawings/blueprints, basic construction techniques like framing for ceilings/walls/floors, and basic cabinetmaking skills like joining. New equipment to be introduced is the table saw, cross cut saw, rip saw, dado and rabbet saws. Sample projects include a bench and chest. They will look to become proficient at safety standards. A more in-depth look at OSHA safety regulations and safety standards within the Carpentry program will be covered. During the course students will be introduced to working on real construction projects around the school building as available.

Prerequisite – A passing score in the Carpentry Exploratory Cluster, meeting attendance, discipline/conduct record, safety requirements, meeting minimum course requirements, and an accepted application to become a member of the CVTE Department Team.

644 CARPENTRY 2

Grades 11, 12

14 periods per week

17.5 credits

This course builds on the foundation learned during the Carpentry 1 course. Students will begin to work on assigned CBVE (Competency Based Vocational Education) projects that are progressively difficult to expand their knowledge to prepare them for a career as a Carpenter or related field. They will continue to expand their knowledge of construction techniques including stair construction, drywall, plaster, tile, and roof construction. Students will be introduced to 'green' products like insulation, windows and doors. Activities will include building a coffee table, encompassing inlay techniques, learning more about types of wood and their properties, and learning new shop equipment like the router table. Students will take part in a 10-Hour OSHA safety course, earning their OSHA safety certification if they achieve a passing score.

Prerequisite – A passing grade in Carpentry 1, and meeting attendance, discipline/conduct record, and safety requirements.

672 CARPENTRY 3

Grades 11, 12

14 periods per week

17.5 credits

This course builds on the foundation learned during the Carpentry 2 course. Students will work on developing skills in drawer construction including raised and flat panel with the construction of a nightstand. The course continues to focus on construction techniques and safety standards on the jobsite. A large focus is on entrepreneurial skills needed when running a business including withholdings, writing checks, balancing books, and job estimating. Eligible students may participate in the Cooperative Education Program at an approved worksite.

Prerequisite – A passing grade in Carpentry 2, and meeting attendance, discipline/conduct record, and safety requirements.

ELECTRICAL

Program Overview:

As a member of the Electrical team, students will learn to install electrical equipment to supply equipment for electrical power, lighting, & heating applications in residential, commercial and industrial settings according to both the National and Massachusetts Electrical and building codes. All classes emphasize safety and standards required by prospective future employers. Students will have access to professional/commercial equipment and tools, and work in a large, well ventilated shop with simulated residential, commercial and industrial work areas.

Program Expectations:

- 3 year commitment to this career pathway (Grades 10, 11, & 12)
- Ability to be PRESENT for all scheduled class periods with MINIMAL absences/tardies
 - 4 periods per week – Exploratory
 - 8 periods per week – Electrical 1
 - 14 periods per week – Electrical 2
 - 14 periods per week – Electrical 3
- Commitment to purchasing and/or wearing all required safety gear daily
 - o Student/Family Provides: workboots, long sleeve shirts, long pants, some basic hand tools
 - o School Provides: commercial equipment, required materials for projects; safety glasses; some basic tools (ex. drills - for use in the shop only)

Sample Lessons:

Installations of Electrical Circuits
Circuit Breakers and Fuses
Wiring Devices

Skills & Aptitudes Needed:

Math and Science
Mechanical Reasoning
Manual Dexterity

Problem Solving Skills
Creativity
Positive Attitude

640 ELECTRICAL 1

Grades 10,11

8 periods per week

10 credits

This course builds on the foundation learned during the Electrical Exploratory course. Students will review concepts and methods previously taught including basic wiring, switches, and lighting, hand and power tools as well as construction safety standards. Students will begin to learn residential wiring methods, using Romex® and low voltage wiring. They will be taught to read and draw electrical drawings and schematics. A more in-depth look at OSHA safety regulations and safety standards within the Electrical program will be covered. At the end of the course students will be introduced to commercial wiring methods.

Prerequisite – A passing score in the Electrical Exploratory Cluster, meeting attendance, discipline/conduct record, safety requirements, meeting minimum course requirements, and an accepted application to become a member of the CVTE Department Team.

673 ELECTRICAL 2

Grades 11,12

14 periods per week

17.5 credits

This course builds on the foundation learned during the Electrical 1 course. Students will begin to work on assigned CBVE (Competency Based Vocational Education) projects that are progressively difficult to expand their knowledge to prepare them for a career as an Electrician or related field. They will continue to expand their knowledge of electrical drawings and schematics. Students will take part in a 10-Hour OSHA safety course, earning their OSHA safety certification if they achieve a passing score.

Prerequisite – A passing grade in Electrical 1, and meeting attendance, discipline/conduct record, and safety requirements.

674 ELECTRICAL 3

Grades 12

14 periods per week

17.5 credits

This course builds on the foundation learned during the Electrical 2 course. Students will begin to work on industrial/commercial wiring methods; theories and motors; motor controls; and relays. Eligible students may participate in the Cooperative Education Program at an approved worksite. Hours earned in class or on the jobsite are credited towards the Massachusetts state licensing requirements for Electricians.

Prerequisite – A passing grade in Electrical 2, and meeting attendance, discipline/conduct record, and safety requirements.

METAL FABRICATION

Program Overview:

As a member of the Metal Fab team, students will learn the use of basic shop equipment and hand tools used in the industry. Capital equipment to include, Press brake, metal shear, drill press, band saw, bench grinder, belt sander and ironworker. Students will have access to multiple types of welding including: gas welding, Mig welding, Tig welding and ARC welding. The use of the oxyacetylene torch for cutting and heating will also be taught. Students will have the opportunity to explore hand forged blacksmithing as a craft and as a means to further develop basic metal working skill. Individual take home projects are encouraged. This shop fabricates projects per instruction or drawings and in addition does a considerable amount of repair work for the city of Waltham on construction equipment. Real world work projects are provided to help students develop marketable skill. All classes emphasize safety and standards required by prospective future employers. The students will learn to work together safely as well as independently, developing their self-confidence. They will learn that “working with your hands” is not easy and requires knowledge and the ability to apply that knowledge. Students will have access to professional equipment and supplies, and work in a well-ventilated shop area.

Program Expectations:

- 3 year commitment to this career pathway (Grades 10, 11, & 12)
- Ability to be PRESENT for all scheduled class periods with MINIMAL absences/tardiness
 - 4 periods per week – Exploratory
 - 8 periods per week – Metal Fabrication 1
 - 14 periods per week – Metal fabrication 2
 - 14 periods per week – Metal Fabrication 3
- Commitment to purchasing and/or wearing all required safety gear daily
 - Student/Family Provides: work boots, long sleeve shirts, long pants, uniform/jacket*.
 - School Provides: commercial equipment, required materials for projects; safety glasses; some basic tools (ex. drills - for use in the shop only)

Sample Lessons:

The oxyacetylene torch
ARC welding
Press brake operation

Skills & Aptitudes Needed:

Math and Science
Mechanical Reasoning
Manual Dexterity
Problem Solving Skills
Creativity
Positive Attitude

641 METAL FABRICATION 1

Grades 10,11

8 periods per week

10 credits

This course builds on the foundation learned during the Metal Fabrication exploratory course. Students will review concepts and methods previously taught including Mig welding, gas welding and cutting, and brake and shear use. Measuring techniques, engineering drawings, and shop math are introduced and used daily in the planning, designing and crafting of projects. Hand forged blacksmithing and ARC welding are also explored. Students will improve proficiency in basic weld operations. Craftsmanship and efficient work are encouraged. A more in-depth look at OSHA safety regulations and safety standards within the Metal Fabrication program will be covered.

Prerequisite – A passing score in the Metal Fabrication Cluster, meeting attendance, discipline/conduct record, safety requirements, meeting minimum course requirements, and an accepted application to become a member of the CVTE Department Team.

612 METAL FABRICATION 2

Grades 11,12

14 periods per week

17.5 credits

This course builds on the foundation learned during the Metal Fabrication 1 course. Students will begin to work on assigned CBVE (Competency Based Vocational Education) projects that are progressively difficult to expand their knowledge to prepare them for a career as a Welder or related field. They will continue to expand their skills with the introduction of ARC welding in the flat position, metallurgy, and heat-treating, cutting and forming of metal. Students will take part in a 10-Hour OSHA safety course, earning their OSHA safety certification if they achieve a passing score.

Prerequisite – A passing grade in Metal Fabrication 1, and meeting attendance, discipline/conduct record, and safety requirements.

618 METAL FABRICATION 3

Grades 12

14 periods per week

17.5 credits

This course builds on the foundation learned during the Metal Fabrication 2 course. Students will be introduced to TIG welding of aluminum and ferrous metals. ARC welding will be performed in the vertical and overhead positions. Creativity is encouraged. During the course students will have the opportunity to work on real life repairs including rebuilding and maintaining heavy equipment/machinery. Eligible students may participate in the Cooperative Education Program at an approved worksite.

Prerequisite – A passing grade in Metal Fabrication 2, and meeting attendance, discipline/conduct record, and safety requirements.

GRAPHIC COMMUNICATIONS

Program Overview:

As a member of the Graphic Communications team, students will learn design and print skills in a hands-on environment. From digital photography, design, and typography, to the operation and maintenance of offset and digital printing equipment, students will have the opportunity to work in a “real world” shop producing materials for the school system. An emphasis on entrepreneurship is the core of study in these courses, touching on all aspects of the industry. All classes emphasize safety and standards required by prospective future employers. The students will learn to work together safely as well as independently, developing their self-confidence. They will learn that “working with your hands” is not easy and requires knowledge and the ability to apply that knowledge. Students will have access to professional/commercial equipment and tools, and work in a fast-paced production environment.

Program Expectations:

- 3 year commitment to this career pathway (Grades 10, 11, & 12)
- Ability to be PRESENT for all scheduled class periods with MINIMAL absences/tardies
 - 4 periods per week – Exploratory
 - 8 periods per week – Graphic Communications 1
 - 14 periods per week – Graphic Communications 2
 - 14 periods per week – Graphic Communication 3
- Commitment to purchasing and/or wearing all required safety gear daily
 - o Student/Family Provides: closed toe/nonslip shoes, no loose or ill fitting clothing, uniform/jacket*
 - o School Provides: commercial equipment, required materials for projects; safety glasses; some basic tools (for use in the shop only)

Sample Lessons:

Entrepreneurship
Using the Adobe Design Suite
Design Layout for print
Form Creation & Printing
Digital Press Operation
Bindery

Skills & Aptitudes Needed:

Listening and Communications
Spatial and Visual Perception
Problem Solving
Mechanical Skills
English Language Arts
Mathematical Aptitude
Science and Chemistry Aptitude
Computer and File Management
Organization
Time Management Skills
Attention to Details

676 GRAPHIC COMMUNICATIONS 1

Grades 10,11

8 periods per week

10 credits

This course builds on the foundation learned during the Graphic Communications Exploratory course. If you're interested in communications you will benefit from this course of study. This first in a sequential set of courses exposes students to the world of communications. Pre-press use of Macintosh and Windows computers to create printed and web designs will be explored in a real-world shop serving the school department and some local non-profit community organizations. Successful completion of this sequence of courses can earn the opportunity to receive college credit through existing articulation agreements with local colleges. Among the activities explored will be more in-depth use of the Adobe Creative Suite of software including Photoshop, InDesign, Illustrator, and Acrobat. The basics of digital photography, scanning, and web page creation are also covered. Operation of digital and offset presses and bindery and finishing skills will be used in meeting customer needs.

Prerequisite – A passing score in the Graphic Communications Exploratory Cluster, meeting attendance, discipline/conduct record, safety requirements, meeting minimum course requirements, and an accepted application to become a member of the CVTE Department Team.

623 GRAPHIC COMMUNICATIONS 2

Grades 11,12

14 periods per week

17.5 credits

This course builds on the foundation learned during the Graphic Communications 1 course. Students will begin to work on assigned CBVE (Competency Based Vocational Education) projects that are progressively difficult to expand their knowledge to prepare them for a career as a Digital Press Operator and teaches the skills necessary to succeed in the world of communications. The responsibilities of performing complex pre-press, print, and finishing tasks will be conducted in a real-world shop serving the school department and local non-profit community organizations. Students will create and print posters, tickets, brochures, and forms, in complex tasks utilizing the Adobe Creative Suite. Folding, binding, and finishing techniques will be more complex and students will benefit from the additional time on task. More in-depth use of digital photography and scanning for print and web page creation will be conducted. Students will take part in a 10-Hour OSHA safety course, earning their OSHA safety certification if they achieve a passing score.

Prerequisite – A passing grade in Graphic Communications 1, and meeting attendance, discipline/conduct record, and safety requirements.

665 GRAPHIC COMMUNICATIONS 3

Grades 12

14 periods per week

17.5 credits

This course builds on the foundation learned during the Graphic Communications 2 course. The final level of study in the Graphic Communications sequence dives deeper into the skills necessary to succeed in the world of communications. Responsibilities increase in all areas and these students will be managing the business and print production. Scheduling, operator oversight, and Quality Assurance will lead to the student acquiring a certificate in Graphic Communications. Students at this level will oversee underclassmen in the creation and printing of posters, tickets, brochures, and forms, in increasingly complex tasks utilizing the Adobe Creative Suite and proprietary software. More in-depth use of digital photography and scanning for print and web page creation will be conducted. Folding, binding, and finishing techniques will be more complex and will require additional time on tasks. Eligible students may participate in the Cooperative Education Program at an approved worksite.

Prerequisite – A passing grade in Graphic Communications 2, and meeting attendance, discipline/conduct record, and safety requirements.

TV BROADCASTING

Program Overview:

As a member of the TV Broadcasting team, students will learn how to operate professional camera equipment, set up shots/locations, record and edit videos, write scripts, produce music videos, news reports, sporting events, and more. Students will work on in house assignments as well as production work for the schools, community, and local businesses. All classes emphasize safety and standards required by prospective future employers. The students will learn to work together safely as well as independently, developing their self-confidence. They will learn that “working with your hands” is not easy and requires knowledge and the ability to apply that knowledge. Students will have access to professional/commercial equipment and tools, and work in a large, well-ventilated shop area as well as opportunities to move throughout the school to capture events on film.

Program Expectations:

- 3 year commitment to this career pathway (Grades 10, 11, & 12)
- Ability to be PRESENT for all scheduled class periods with MINIMAL absences/tardies
 - 4 periods per week – Exploratory
 - 4 periods per week – TV Broadcasting 1
 - 8 periods per week – TV Broadcasting 2
 - 12 periods per week – TV Broadcasting 3
- Active participation is **REQUIRED** - students will be expected to work both on camera and behind camera as well as in groups
- Availability occasionally before and after school is **REQUIRED** as you may be asked to film school/community events that take place outside of the school day
- Commitment to purchasing and/or wearing all required safety gear daily

- o Student/Family Provides: casual business attire to be worn during filming, uniform/t-shirt with program logo*
- o School Provides: commercial camera equipment & accessories, access to computers and editing software, required materials for projects; press pass/name badges to be wore while filming

Sample Lessons:

Introduction to Final Cut Pro X
Music video competition
Producing WETV News

Skills & Aptitudes Needed:

Communication Skills
Computer Skills
Creativity
Problem Solving
Time Management
Organization
Interpersonal Skills

865 TV BROADCASTING 1

Grades 10,11

4 periods per week

5 credits

This course builds on the foundation learned during the TV Broadcasting Exploratory course. Students will review concepts and methods previously taught including learning the basics of creating programming using television, camera, computer and multimedia equipment and program & personal safety standards. Students will look more in depth at preproduction scripting and storyboarding as well as production and postproduction editing practices. They will look to become proficient at understanding the writing and technical skills required for quality video production. A more in-depth look at OSHA safety regulations and safety standards within the TV Broadcasting program will be covered.

Prerequisite – A passing score in the TV Broadcasting Exploratory Cluster, meeting attendance, discipline/conduct record, safety requirements, meeting minimum course requirements, and an accepted application to become a member of the CVTE Department Team.

866 TV BROADCASTING 2

Grades 11,12

8 periods per week

10 credits

This course builds on the foundation learned during the TV Broadcasting 1 course. Students will begin to work on assigned CBVE (Competency Based Vocational Education) projects that are progressively difficult to expand their knowledge to prepare them for a career as a Camera Operator, TV Producer, or related field. They will continue to expand their knowledge of “real world” roles of writers, producers, directors, actors, camerapersons, technical and audio directors, and editors. Students in this program will apply organizational production skills to produce a weekly newscast among many other projects throughout the year. Projects will demonstrate effective pre-production, production, and post-production using best practices all while reinforcing the fundamentals of digital video and broadcast journalism. This is a very fast paced deadline oriented course. Students will take part in a 10-Hour OSHA safety course, earning their OSHA safety certification if they achieve a passing score.

Prerequisite – A passing grade in TV Broadcasting 1, and meeting attendance, discipline/conduct record, and safety requirements.

863 TV BROADCASTING 3

Grades 12

12 periods per week

15 credits

This course builds on the foundation learned during the TV Broadcasting 2 course. Students will be exposed to advanced concepts in Television Production. Students enrolled in this class will be responsible for a wide variety of projects that will solidify their skills. This class covers single camera film style production. This class meets concurrently with the Television Broadcasting II so these students will serve as mentors for the TV II students. Students will direct live studio productions as well as direct and produce ENG and EFP productions. Students in this class should expect a large amount of extra-curricular production work, as they will be involved in creating their own production company and videotaping sports and school events as part of their curriculum. Students completing this course will have gained the skills and knowledge needed to advance into a college level program or seek gainful employment in a rapidly growing field. Eligible students may participate in the Cooperative Education Program at an approved worksite.

Prerequisite – A passing grade in TV Broadcasting 2, and meeting attendance, discipline/conduct record, and safety requirements.

CULINARY ARTS

Program Overview:

As a member of the Culinary Arts team, students will learn all aspects of working in the foodservice industry.. They will learn about the many positions needed to run a successful restaurant, bake shop or catering company, and apply that knowledge in a practical, hands-on shop setting. Students will produce and serve food for our inhouse teachers restaurant, Watch City Cafe. They will also be responsible for supplying food, beverages, and desserts for a number of school sponsored events. The culmination of this course is the end of the year catering event for a local non-profit at the historic Paine Estate. All classes emphasize safety and sanitation standards required by prospective future employers. The students will learn to work together safely as well as independently, developing their self-confidence. They will learn that “working with your hands” is not easy and requires knowledge and the ability to apply that knowledge. Students will have access to professional/commercial equipment and kitchen tools, and work in a large, well-ventilated shop area.

Program Expectations:

- 3 year commitment to this career pathway (Grades 10, 11, & 12)
- Ability to be PRESENT for all scheduled class periods with MINIMAL absences/tardies
 - 2 periods per week – Exploratory
 - 4 periods per week – Culinary 1
 - 8 periods per week – Culinary 2
 - 8 periods per week—Culinary 3
- Active participation is **REQUIRED** - students will be expected to work independently on projects as well as part of a kitchen group
- Availability occasionally before and after school is **REQUIRED** as you may be asked to prepare and serve food at school/community events that take place outside of the school day
- Commitment to purchasing and/or wearing all required safety gear daily
 - o Student/Family Provides: non slip, closed toe shoes, clean & properly fitting clothing, uniform/chef/coat*
 - o School Provides: commercial equipment, required materials for projects; hairnets, gloves; some basic kitchen tools (for use in the shop only)

Sample Lessons:

Menu Planning
Nutrition
Safe Food Handling

Skills & Aptitudes Needed:

Communication
Patience
Manual Dexterity
Problem Solving Skills
Creativity
Positive Attitudes
Math & Science skills

1620 CULINARY ARTS 1

Grades 10,11

4 periods per week

5 credits

This course builds on the foundation learned during the Culinary Arts Exploratory course. Students will review concepts and methods previously taught including kitchen safety, proper food handling practices and sanitation, knife skills, beginning stages of food preparation as well as shop & personal safety standards. Students will look more in depth at the baking strands of the culinary arts curriculum. Students will be exposed to homemade breads, pastries, cakes, and cake decorating. They will provide the baked goods/desserts for all catering/restaurant events at the school. A more indepth look at OSHA/ServeSafe safety regulations and safety standards within the Culinary Arts program will be covered.

Prerequisite – A passing score in the Culinary Arts Exploratory Cluster, meeting attendance, discipline/conduct record, safety requirements, meeting minimum course requirements, and an accepted application to become a member of the CVTE Department Team.

1621 CULINARY ARTS 2

Grades 11,12

8 periods per week

10 credits

This course builds on the foundation learned during the Culinary Arts 1 course. Students will begin to work on assigned CBVE (Competency Based Vocational Education) projects that are progressively difficult to expand their knowledge to prepare them for a career as an Executive Chef or related field. They will continue to expand their knowledge of kitchen safety, knife safety and begin exploring menu planning, nutrition, and complex multistage recipes. Students will take part in a 10-Hour OSHA safety course and ServeSafe curriculum, earning their OSHA safety & ServeSafe certifications if they achieve a passing score.

Prerequisite – A passing grade in Culinary Arts 1, and meeting attendance, discipline/conduct record, and safety requirements.

EARLY EDUCATION & CARE

Program Overview:

As a member of the Early Education & Care team, students will learn about caring for children, one of the fastest growing professions in America. Upon completion of this program, the Massachusetts Office may certify students as childcare teachers for Children. The course includes: required class work, learning activities, and field placements at local child care programs. The course is designed so students develop a complete understanding of the physical, intellectual, social and emotional needs of children and their families. Through a wide variety of hands-on activities, students learn the importance of play, how to plan and implement curriculum for children, and develop a portfolio of art and cooking projects. All classes emphasize safety and standards required by prospective future employers. The students will learn to work together safely as well as independently, developing their self-confidence. They will learn that “working with your hands” is not easy and requires knowledge and the ability to apply that knowledge. Students will have access to professional equipment and supplies, and work in a classroom area.

Program Expectations:

- 3 year commitment to this career pathway (Grades 10, 11, & 12)
- Ability to be PRESENT for all scheduled class periods with MINIMAL absences/tardies
 - 2 periods per week – Exploratory
 - 4 periods per week – Early Education & Care - Child Development 1
 - 12 periods per week – Early Education & Care 2
 - 12 periods per week – Early Education & Care 3
- Commitment to purchasing and/or wearing all required safety gear daily
 - o Student/Family Provides: proper footwear for moving around and standing for potentially long period of time, clothing that is appropriate for working with young children, & classroom uniform/t-shirt*
 - o School Provides: professional equipment, required materials for projects; safety glasses; craft/art supplies

Sample Lessons:

How to Write a Lesson Plan
Basic Child Psychology

Skills & Aptitudes Needed:

Creativity
Patience
Sense of Humor
Compassion
Confidence
Commitment
Problem Solving

1660 EARLY EDUCATION & CARE - CHILD DEVELOPMENT 1

Grades 10,11 4 periods per week 5 credits

This course builds on the foundation learned during the Early Education & Care Exploratory course. Students will review concepts and methods previously taught including basic child development, classroom management techniques, and curriculum models, as well as shop & personal safety standards. Students will look more in depth at how children develop from infancy through preschool. They will look to become proficient at understanding the physical, social, emotional, and intellectual growth of children. The Baby Think It Over dolls are an integral part of this program. A more in-depth look at OSHA safety regulations and safety standards within the EEC program will be covered.

Prerequisite – A passing score in the Early Education & Care Exploratory Cluster, meeting attendance, discipline/conduct record, safety requirements, meeting minimum course requirements, and an accepted application to become a member of the CVTE Department Team.

1661 EARLY EDUCATION & CARE 2

Grades 11,12 12 periods per week 15 credits

This course builds on the foundation learned during the Early Education & Care - Child Development 1 course. Students will begin to work on assigned CBVE (Competency Based Vocational Education) projects that are progressively difficult to expand their knowledge to prepare them for a career as a Preschool teacher or related field. They will continue to expand their knowledge of children, but the focus becomes how to teach preschool students. The class is broken down into three components: class work, learning activities, and field placements at local day care centers. Course work is designed so students develop a complete understanding of the physical, intellectual, social, and emotional needs of children and their families. Activities will include a variety of hands on activities, lesson planning, and classroom maintenance. Students will be responsible for planning and implementing lessons with their classmates as well as visiting preschool students from a local center. Students will take part in a 10-Hour OSHA safety course, earning their OSHA safety certification if they achieve a passing score.

Prerequisite – A passing grade in Early Education & Care 1, and meeting attendance, discipline/conduct record, and safety requirements.

1662 EARLY EDUCATION & CARE 3

Grades 12 12 periods per week 15 credits

This course builds on the foundation learned during the Early Education & Care 2 course. In addition to continuing activities listed above, students will work on developing cooking activities they can complete with preschoolers and complete extensive work on their portfolios. Eligible students may participate in the Cooperative Education Program at an approved worksite.

Prerequisite – A passing grade in Early Education & Care 2, and meeting attendance, discipline/conduct record, and safety requirements.