



CRLS Course Catalog

2018 - 2019



crls.cpsd.us

Academic Support / Peer Leadership

GACS | ACADEMIC SUPPORT

Academic Support classes are available to students during the school day. This is an opportunity to receive tutoring for an academic school subject from a Cambridge School Volunteer, student teacher, or peer tutor. Students should expect to work on homework or classroom work which may need enrichment. Students must discuss this placement with their guidance counselor. Students receive a pass/fail grade for this class. **Grades:** 10, 11, 12

GCRC | PEER LEADERSHIP

This course offers an opportunity for students to assist their peers in the College and Career Resource Center. Peer Leaders will assist other students with tasks such as on-line college applications, SAT and other college testing registration, researching colleges and assisting students with Naviance. Peer Leaders orient new students to Cambridge Rindge and Latin by giving tours of the school and helping students understand their course schedule. Students receive a pass/fail grade for this class. **Grades:** 10, 11, 12 **Pre-Reqs:** Permission from the Coordinator of Guidance

GTUT | PEER TUTORING

This course offers an opportunity to work with other students who need assistance in any subject. A student must have successfully completed a subject in order to tutor in that subject. Peer tutors must attend a peer training workshop as part of this class. Students receive a pass/fail grade for this class. **Grades:** 11, 12 **Pre-Reqs:** Passing grade in subject.

AVID

GAVID1 | CP | AVID YEAR 1

AVID (Advancement Via Individual Determination) is a college readiness elective class for highly motivated students who plan to attend a four-year college. Students are required to take a rigorous course load (some honors and AP), with the understanding that they will be supported in the AVID Elective class. **Grades:** 9 **Pre-Reqs:** Students will be selected through an application and interview process.

GAVID2 | CP | AVID YEAR 2

AVID (Advancement Via Individual Determination) is a college readiness elective class for highly motivated students who plan to attend a four-year college. Students are required to take a rigorous course load (some honors and AP), with the understanding that they will be supported in the AVID Elective class. **Grades:** 10 **Pre-Reqs:** AVID Year 1

GAVID3 | CP | AVID YEAR 3

AVID (Advancement Via Individual Determination) is a college readiness elective class for highly motivated students who plan to attend a four-year college. Students are required to take a rigorous course load (some honors and AP), with the understanding that they will be supported in the AVID Elective class. **Grades:** 11 **Pre-Reqs:** AVID Year 2

GAVID4 | CP | AVID YEAR 4

AVID (Advancement Via Individual Determination) is a college readiness elective class for highly motivated students who plan to attend a four-year college. Students are required to take a rigorous course load (some honors and AP), with the understanding that they will be supported in the AVID Elective class. **Grades:** 12 **Pre-Reqs:** AVID Year 3

English Language Acquisition

Expectation: A CRLS student communicates as a writer and speaker.

The Sheltered / English Language Acquisition Program has been established to meet the academic, linguistic and social needs of English Language Learners (ELL) in compliance with recently adopted federal and state regulations. It provides an environment in which students can progress academically through an intensive sequence of English language courses, supplemented where necessary, with native language facilitation. Courses offered in the program include coursework in math, science, and social studies. It follows a carefully designed sequence of courses that enables students to develop fluency in English, master the academic skills needed for successful integration into the standard curriculum, and become familiar with American culture.

XE001A | SE | ENGLISH

This course will help students increase their skills in the fundamental concepts of listening, speaking, reading, and writing in the English language. Students will focus on learning common letter patterns to increase their spelling skills and pronunciation of words. They will apply their learning to fiction and nonfiction readings to demonstrate an increased mastery in decoding, fluency, and comprehension as well as oral and written expression. This class alternates with XS100 Pre-Physics. **Grades:** 9, 10.

XE001B | SE | ENGLISH LITERACY DEVELOPMENT

This course will help SLIFE (Students with Limited or Interrupted Formal Education) students increase their skills in the fundamental concepts of listening, speaking, reading, and writing in the English language. Students will focus on learning common letter patterns to increase their spelling skills and pronunciation of words. They will apply their learning to fiction and nonfiction readings to demonstrate an increased mastery in decoding, fluency, and comprehension as well as oral and written expression. **Grades:** 9, 10 **Pre-Reqs:** Placement test

XE002 | SE | FOUNDATIONS OF READING

In this course students will focus on learning phonics, syntax, morphology and grammar to increase reading skills and lexile levels. They will be exposed to a variety of reading strategies to increase mastery in decoding, fluency, and comprehension as well as oral and written expression. **Grades:** 9, 10 **Pre-Reqs:** Placement test

XE101 | CP | ESL 1 (BEGINNING)

In this course students with little knowledge of English take their first steps toward mastery of the new language. The introductory unit focuses on the use of everyday words and phrases that express identity, personal needs, and experiences. Students develop comprehension of simple sentences including statements, questions and commands. They plan and present information orally and in writing about personal experiences and interests. As students progress, the curriculum focuses on the development of academic vocabulary, reading strategies and grammar. Students read multicultural texts from many genres. Throughout this full year course, students learn to listen actively for information and express higher level thinking by writing, speaking, and writing in English. Grades reflect English language proficiency as well as their ability to respond to and analyze English language texts. **Grades:** 9, 10 **Pre-Reqs:** Placement test

XE102 | CP | ESL 2 (EARLY INTERMEDIATE)

This course focuses on enhancing students' writing and reading skills and grammar development, as well as improving oral language skills. ESL 2 prepares students for a smooth transition to ESL 3. Reading selections include fiction and non-fiction at appropriate levels. Through cooperative learning techniques the students will develop the self-esteem and self-confidence necessary to learn new content and communicate effectively in the second language. A variety of pedagogical methods is used to ensure success with each student's learning style and to develop the whole student. This course will focus on:

- Extensive vocabulary development and skills practice
- Reading strategies
- Comprehensive grammar instruction
- Writing development

Grades: 9, 10, 11 **Pre-Reqs:** ESL 1 or Placement test

XE201 | CP | ESL 3 (INTERMEDIATE)

ESL 3 is a course for students who have already acquired a basic knowledge of the English language. In this course students will expand their vocabulary and refine their knowledge of English grammar structures and language patterns. During the second semester they will begin an exploration of carefully selected English language literature. Students will learn the academic skills necessary for literary analysis, while at the same time focusing on language structures that appear in the text to improve their language skills. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** ESL 2 or Placement test

XE202 | CP | ESL 4 (ADVANCED)

This course is designed to help English Language Learners progress to a higher level of English language in the areas of reading, writing, listening and oral skills. The main focus is on the development of English language skills through different genres of fiction and non-fiction. Using a variety of learning activities, the students will have daily opportunities to express academic ideas in both spoken and written English. Additionally, students will improve paragraph writing and be introduced to a variety of essay styles. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** ESL 3 or Placement test

XE301 | CP | SE LITERATURE AND WRITING

SEI Literature and Writing is a course designed for English language learners who are approaching Level 5 ("Bridging") in the WIDA ELD Standards. In this course, students will engage with both literary and informational texts dealing with a variety of themes. The texts are drawn from world literature and represent many different cultures and world views. As students examine the complexities of the human condition, they will reflect on the nature of power and agency in relationships, communities, and society at large. They will expand their capacity as thinkers, questioners, analyzers, and communicators. The course also aims to help students reinforce, solidify, and build upon their skills as readers and writers of English. Using ACCESS for ELLs test data and the WIDA ELD Standards, instruction will be differentiated to provide individual students with the support and scaffolding they need to improve these skills and to access grade level content independently. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** ESL 4 or Placement test

XH101 | CP | WORLD TODAY

This course introduces basic social studies skills and concepts such as the use of globes, charts and maps, continents, countries and states, climate, topography and natural resources, the role of the community, local government, and goods and services. The curriculum focuses on regions of the world. **Grades:** 9, 10 **Pre-Reqs:** Placement test

XH220 | CP | WORLD HISTORY 2

World History 2 looks at the economic, social, and political roots of the modern world while developing students' language skills as well as their content area knowledge through sheltered instruction. The course begins with an investigation of maps as an introduction to the critical thinking skills necessary for the study of history. Students then study the origins and consequences of the Industrial Revolution, including 19th century Imperialism. The course examines the great military and economic events of the 20th century, including World Wars 1 and 2. Next, students look at independence movements and decolonization in the middle of the 20th century. The course ends with an examination of the Cold War. **Grades:** 9, 10 **Pre-Reqs:** Placement test

XH301 | CP | U.S. HISTORY 1

In this course, students will learn about the United States' geographical, political, social, and economic history through sheltered instruction. The development of reading, writing, research, and oral communication skills is an integral part of the curriculum. Students will read both primary source and secondary source documents to analyze important events in United States history. They will learn about the United States and its origins as a land of many peoples including Native Americans, Africans, and Europeans. Major units will include the Revolutionary War, its consequences, and key ideas of the U.S. Constitution. Students will gain an overview of American democracy and government as well as an understanding of the rights and responsibilities of individuals. Other major units include Westward Expansion, the establishment of political parties, sectionalism, the Civil War, and Reconstruction. Throughout the year, students will make connections between relevant topics in history and their own lives and engage in analyzing how the work of individuals, both ordinary and extraordinary, have shaped the history of the United States. **Grades:** 10, 11 **Pre-Reqs:** Placement test

XH302 | CP | U.S. HISTORY 2

This class is a continuation of SE United States History 1. Students will look at the challenges of Reconstruction, and how the Civil War affected the lives of many. Other units will include the Industrial Revolution, America's growing role in diplomatic international affairs, the Progressive Movement and the New Deal, the Boom of the 1920s, the Great Depression - its impact on American values and society - and America's entry in World War I and World War II. Finally, students will trace the causes of the Cold War and identify the significant economic and political changes that came as a result, including the Civil Rights Movement and the Women's Liberation Movement, as well as recent events and trends that have shaped modern day America. **Grades:** 11, 12 **Pre-Reqs:** Placement test

XM001 | SE | FOUNDATIONS OF MATH

This course is designed for SLIFE (Students with Limited or Interrupted Formal Education) students and includes introduction to whole numbers, operations of whole numbers, exponents, graphs, statistics, measurements, integers, introduction to fractions, and operations of fractions. Problem solving will be part of all units. **Grades:** 9, 10 **Pre-Reqs:** Placement test

XM100 | SE | PRE ALGEBRA

This course is intended to ELL students who have low Math skills and no or limited English skills. The course begins to address the grades 9-10 Learning Standards of the Massachusetts Curriculum Frameworks. Students will review fundamental math skills and learn the concepts needed to be successful in Algebra 1. Units of study include basic operations with whole numbers, integers, fractions, decimals and percent, ratio and proportion; order of operations, variable; and evaluating expressions. Students will be introduced to place value, positive and negative numbers, linear equations; algebraic expressions and polynomials; also basic concepts of geometry and statistics (different types of graphs and calculations of mean, median and mode). This course involves students in active learning in order to build understanding of the very basic math concepts. **Grades:** 9, 10 **Pre-Reqs:** Placement test

XM101 | CP | ALGEBRA 1

This course helps ELL students develop both English language skills and Math problem solving skills. The course will address the grades 9-10 Learning Standards of the Massachusetts Curriculum Frameworks. The learning standards that will be covered are number sense and operations; patterns, relations and algebra; data analysis, statistics, and probability; as well as selected items from the geometry and measurements learning standards. The course will include the use of concrete, connecting, and abstract instructional methodologies and curricula. Technology will be used to provide students with the opportunity to explore, model and analyze. The course will be designed to involve students in active learning, inquiry based problems, and problem solving strategies to build conceptual understanding. The focus of this course is to strengthen students' abilities to think, reason, and problem-solve using mathematical understandings and skills. **Grades:** 9, 10, 11 **Pre-Reqs:** Placement test

XM201 | CP | GEOMETRY

This course is the second year of the High School Mathematics Program which integrates previously learned algebraic concepts with newly learned geometric concepts. This course strives to apply abstract geometry content to real world scenarios by investigating new content and practicing problem solving skills. The essential elements of this course are basic tools of geometry, understanding measurements and properties of circles, polygons, and polyhedrons, how these shapes can be manipulated and transformed, and MCAS preparation including algebra review and data analysis. The use of manipulatives, hands on projects, and the computer technology will provide students with the opportunity to explore, model, and analyze the concepts presented. This course helps ELL students develop both English language skills and Math problem solving skills. **Grades:** 10, 11 **Pre-Reqs:** Algebra 1 or Placement test

XS100 | SE | PRE PHYSICS

SEI Pre-Physics is a science course which addresses the needs of ELL students who have limited science skills or are beginner ELL students. It covers the steps of the scientific method, SI units, unit conversions, and introduces the branches of science. Hands-on experiments and projects are used throughout the units in order to get the students acquainted with laboratory science, and to promote language skills through group work. Scientific language and reading skills are stressed throughout in order to prepare ELL students for SEI Physics. This course develops the skills necessary to solve mathematical and conceptual scientific problems. **Grades:** 9, 10 **Pre-Reqs:** Placement test. This course does not fulfill the Physics requirement.

XS101 | CP | PHYSICS

The SEI Physics curriculum parallels the mainstream Physics First course and is offered to ELL students of 9th-12th grades. Scientific language and reading skills are stressed throughout in order to prepare ELL students for standard curriculum science. This course develops the skills necessary to solve mathematical and conceptual scientific problems. The curriculum is split into four major units: Motion, Electricity, Waves, and Energy. In the first unit, students will study velocity, acceleration, Newton's Laws, and momentum. The electricity unit will focus on electrostatics, charge and circuits, culminating in a project. During the third unit, students will study waves, sound, and light. In the final unit, students will study heat and energy. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Placement test

XS201 | CP | CHEMISTRY

The SE Chemistry curriculum parallels the mainstream Chemistry course and is offered to ELL students of 9th-12th grades. Scientific language and laboratory skills are stressed throughout in order to aid ELL students' understanding of complex conceptual topics. This course builds on the skills developed in Physics and further develops the skills necessary to solve more complex scientific problems. The curriculum is split into seven major units: Introduction to the methods of Chemistry, Atomic Structure, Bonding, Chemical Reactions, Moles, Stoichiometry, and Gases. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Physics or Placement Test

XS301 | CP | BIOLOGY

The SE Biology curriculum parallels the mainstream Biology course and is offered to ELL students of 11th-12th grades. Scientific language and laboratory skills are stressed throughout in order to aid ELL students' understanding of the principles of Evolution and Ecology, Homeostasis, Energy, Matter, Organization, Reproduction and Genetics. **Grades:** 11, 12 **Pre-Reqs:** Physics

English Language Arts

Expectation: A CRLS student will acquire the skills to read for information and understanding. Students will be exposed to a variety of genres and independent reading to develop a culture of lifelong readers.

In Grade 9, students are required to take English 9. This course is required for graduation and is offered at Honors level only. Students requiring additional support will be enrolled in E103 ELA Honors Access.

In Grade 10, students are required to take English 10. This course is required for graduation.

All 11th grade students are required to take CP English 11 or HN English 11. This course is also required for admittance into Advanced Placement level courses.

In Grade 12, students will choose an English elective course. Colleges and universities require students to earn 4 units of English as an entrance requirement. It is also a requirement for graduation. Each course in the sequence from grades nine through twelve is designed to help you prepare for college, work, and the world beyond high school.

E102 | HN | ENGLISH 9

In this course, students will explore how characters and people form their identities. Through their studies, students will develop reading, writing, and critical thinking, and research skills. They will expand their reading skills by learning how to make inferences, ask questions, and annotate texts from a variety of genres. Students will learn concepts and strategies to increase their comprehension. They will complete all stages of the writing process, practice Standard English conventions, and demonstrate their mastery through a variety of assessments. Students will document and evaluate their progress as writers through self-reflection and conferencing. **Grades:** 9

E103 | CP | ELA SEMINAR

The focus of this course is to support students in developing and applying positive academic behaviors and skills to increase their success in Honors ELA classes. This course, taught by an English Language Arts teacher, provides the opportunity to pre-teach concepts and vocabulary, review materials and receive additional instruction to further develop reading and writing skills. Students receive hands-on support to explore their learning strengths, obtain study strategies, and learn to manage and prioritize their time. Students will develop organizational skills, understand how to manage their school materials and will engage in ongoing goal setting and goal progress monitoring. Additionally, the course provides support to students in constructing a positive academic and social identity while developing skills to build positive relationships between their peers and adults within the school. **Grades:** 9 **Pre-Reqs:** Participation in this course requires the approval of the ELA Dean.

E203 | CP | ELA SEMINAR 2.0

The focus of this course is to support students in developing and applying positive academic behaviors and skills to increase their success. This course, taught by an English Language Arts teacher, provides the opportunity to re-teach concepts and vocabulary, review literary techniques and devices used by authors to enhance their writing and receive additional instruction to further develop reading and writing skills. Students will further develop organizational skills and will engage in ongoing goal setting and progress monitoring. Additionally, the course provides opportunities to enhance 21st century skills, focusing on using technology in school and in the workplace. **Grades:** 10 **Pre-Reqs:** English 10

E204 | | ENGLISH 10

How can we move beyond the single story? The course prepares students to meet the increasingly rigorous reading, writing, and thinking demands of future college classes through the essential questions: What is the danger of a single story? What does it mean to move beyond the single story? How does reading literature from a wide variety of cultures help us understand individuals' complex stories? What strategies, routines, and techniques can I use to understand more of what I read? How can I make reading and writing a life-changing experience? Students will further develop their love of literacy by reading their own independent book choices as well as analyzing shared class mentor texts. Students will read as writers by studying the craft of diverse authors; they will research, write creatively, think critically, and develop thesis-driven arguments. Communication, vocabulary, grammar, and reading strategies as well as MCAS preparation instruction will be embedded throughout the course. This is an earned Honors class. All students will participate in Common Formative Assessments and earn Honors credit based on performance. Honors credits will be designated upon completing the course. **Grades:** 10 **Pre-Reqs:** English 9



E301 | CP | ENGLISH 11 (HN OPT)

In this course, students will explore the American experience by reading and analyzing the works of notable American authors. Through a variety of genres including poetry, short stories, fiction, nonfiction, and drama, students will explore the following themes: individual freedom and the quest for the American dream; the conflict between conscience and conformity; class and alienation; and oppression in America. Students will continue to develop their critical reading skills and express their ideas in writing. They will refine their voice, style, and purpose as writers. They will also be expected to complete the American Authors research project. Students will continue to document and evaluate their evolving skills as readers, writers, and thinkers by updating their English Language Arts portfolios. Teachers will integrate instruction of vocabulary, Standard English conventions, and SAT preparation throughout the course. Required Course Texts: *The Great Gatsby*, a play (usually *The Crucible* or *A Raisin in the Sun*), and assorted poetry, nonfiction, and short stories. **Grades:** 11 **Pre-Reqs:** English 9 and 10

E302 | HN | ENGLISH 11

In this intensive course students are expected to be able to manage their time and organize their studies independently. Students will explore the American experience by reading the works of notable American authors. Through a variety of genres including poetry, short stories, fiction, nonfiction, and drama, students will explore the following themes: individual freedom and the quest for the American dream; the conflict between conscience and conformity; class and alienation; and oppression in America. Students will continue to develop their critical reading skills and express their ideas in writing. They will refine their voice, style, and purpose as writers. They will also be expected to complete the American Authors research project. Students will continue to document and evaluate their evolving skills as readers, writers, and thinkers by updating their English Language Arts portfolios. Teachers will integrate instruction of Standard English conventions, writing development and SAT preparation throughout the course. Honors English and college preparatory English 11 have the same course content, however, Honors English moves at a more intensive pace and is recommended for enrollment in ELA AP level courses. Required Course Texts: *The Great Gatsby*, a play (usually *The Crucible* or *A Raisin in the Sun*), and assorted poetry, nonfiction, and short stories. **Grades:** 11 **Pre-Reqs:** B or better in English 10 and teacher

E405 | HN | JOURNALISM 1

Students will learn the basic elements of a news story, study landmark court cases in the history of the free press, examine bias in the media, assess writing for fact and opinion, and understand the roles and responsibilities of a journalist in a democratic society. Students will also discuss current events and issues making the “headlines” on a local, national, and international level. Lastly, students will collaborate on investigative journalistic projects, improve their research writing skills, and contribute articles to the school newspaper, *The Register Forum*. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10

E406 | HN | JOURNALISM 2

Are you interested being an editor for the school newspaper? Building on skills acquired from Journalism I, students will learn how to successfully collaborate and run every aspect of *The Register Forum*, one of the oldest student-run publications in the country. Students will generate news stories, edit articles, democratically decide what is printed, write editorials, create special segments, and interview CRLS students, faculty, and members of the community. A significant portion of this class is also about graphic design, digital layout, and photography. Lastly, students will be fully involved in the printing, advertising, and distribution process. **Grades:** 12 **Pre-Reqs:** Journalism 1

E407 | CP | GENDER THEORY (HN OPT)

Do we have gender equality? How is gender performed and understood? How do race, social class, and gender intersect to create inequities in the United States and internationally? Students will critique the work of gender theorists from the Enlightenment to present-day and become informed readers of literature, nonfiction, film, social media, and current events. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10, 11

E409 | HN | AFRICAN LITERATURE

This course will introduce students to African Literature. Selected texts will focus on the African oral tradition and folklore, memoir/autobiography, the coming-of-age novel, the political novel, poetry, and modern short stories. These genres will introduce seniors to the power and complexity of modern African writing from across the continent, and to the connections between politics, social conditions, and the inner life of African writers in colonial and post-colonial societies. Students will improve their reading and writing skills through a variety of writing activities designed to focus on the style and content of selected texts. Required readings will also include short stories, and selected poetry from the Oral Tradition, the Negritude Poets, Colonial Period poets, and modern poetry. As part of this class, you will learn the skills to create and present a unique project that shows your understanding of the course content and highlights your interests and ideas. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10

E410 | CP | SELECTIONS IN LITERATURE

This course complements grade level English classes. Students will closely examine a breadth of nonfiction and fictional readings to identify their specific characteristics for deep comprehension. As they develop the ability to categorize various literary genres and text structures, students will learn and apply strategies for text analysis. Students will communicate their understanding through writing, visual presentations, group discussions, peer collaboration, and teacher conferences. **Grades:** 10, 11, 12 **Pre-Reqs:** English 9

E414 | HN | COLLEGE WRITING

This course is an Honors level introduction to college writing. Students will develop skills in expository, analytical, creative, and persuasive writing. They will learn research skills and become familiar with the MLA guidelines used in college writing. Students will write first drafts and learn to revise and edit until they produce a paper that is well organized and reflects their understanding of the topic. Looking at purpose and audience, while developing style and content, will allow students to expand their perspectives and create responses reflecting various purposes, ideas, and opinions. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10, 11

E416 | CP | CONSPIRACY THEORIES (HN OPT)

In this course, students will investigate the assassination of JFK and the conspiracy theories that have endured fifty-five years after Kennedy's death. Students will view footage and read news articles as they were released in the immediate aftermath of the assassination. Then, they will conduct research to seek answers. What have various investigations revealed? Why are there so many theories about the assassination? Is there any validity to the theories? After researching Kennedy, students will choose another conspiracy theory to explore. They will conduct research independently and in teams, and they will present their findings. **Grades:** 12 **Pre-Reqs:** English 9, 10, 11

E417 | CP | EXAMINING THE CIVIL RIGHTS MOVEMENT THROUGH GRAPHIC NOVELS (HN OPT)

The civil rights movement represents one of the most dynamic, exciting, and prescribed moments in United States history. Often, the African American civil rights movement complicated issues of representation, institutional racism, and basic rights, that were not only represented by the time of the marches on Selma and Washington, but incited those calls for equality from a history of inequality, and continues forcing us to ask questions of things not fully resolved in today's society. Through graphic novels, students will develop their knowledge and understanding of the civil rights movement in the United States by examining the before, during, and after effects of the movement itself, while engaging with texts that allows for development of a critical engagement with representations of African Americans in media as well as a development of critical engagement that moves beyond words on the page and into analyzing how images affect and allow us a new understanding into the long history of civil rights in the United States **Grades:** 12 **Pre-Reqs:** English 9, 10, 11

E418 | HN | UNDERSTANDING *MOBY-DICK*: AN IN-DEPTH STUDY OF AN AMERICAN CLASSIC

An undisputed American classic, *Moby-Dick* is often touted as the greatest of all American literary achievements. The epic story of the white whale and obsessed sea captain thirsting for revenge has become part of the American mythos. Throughout this course, students will engage in an in-depth study of Herman Melville's masterpiece, exploring influences, themes, motifs, symbolism and impact. Over the semester, there will be opportunities for travel around New England; such as the Mystic Seaport, the New Bedford Whaling Museum, the Nantucket Whaling Museum, and Arrowhead, where Melville originally wrote *Moby-Dick*. **Grades:** 12 **Pre-Reqs:** English 9, 10, 11

E419 | CP | EXAMINING THE WORKS OF ALFRED HITCHCOCK (HN OPT)

There is arguably no filmmaker more innovative with or thoughtful about his work than Alfred Hitchcock. A master of suspense, Hitchcock created critically acclaimed films to thrill and terrify, inventing entire genres of cinema along the way. Throughout this course, students will spend their time dissecting Hitchcock's cannon, tracing his influences, critiquing his technique, and exploring his impact. Class discussions will revolve around analyzing the psychology of Hitchcock's characters, as well as examining the various themes and motifs that appear throughout his films. Course texts include the extensive series of interviews Hitchcock conducted with French director Franois Truffaut, along with different works pertaining to film theory. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10

E425 | HN | CREATIVE WRITING, LITERATURE, AND THE ARTS

This course is designed for students who are interested in expressing themselves through creative writing and other artistic means. The students will be asked to think deeply about themselves and their place in the world, and will work to articulate their thoughts and ideas through the creative arts. The students will also realize that such expression does not exist in isolation; creative writing is a communal activity in which all participants support, encourage, edit, and share with their fellow artists. This course will also be an exploration of a multitude of art forms: literature, painting, oratory, photography, music, film, and more. The students will be immersed this intertwining, fascinating world of artistic expression. The study of these art forms will be the inspiration for their own work, with the ultimate goal of developing thoughtful writers, thinkers, and art appreciators **Grades:** 11, 12 **Pre-Reqs:** ELA 9, 10

E427 | HN | LITERATURE IN RELIGION

How are different religions understood? How important is it that they be understood? Students will explore the idea of religion and spirituality. They will develop some basic understandings of five world religions: Hinduism, Buddhism, Judaism, Christianity, and Islam. Students will examine articles, textbook selections, religious texts, short stories, poems, and novels in order to formulate ideas about what it means to be part of these religions, or to live in societies shaped by the beliefs and institutions of particular religions. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10

E429 | CP | MUSIC AND LITERATURE (HN OPT)

This course explores the relationship between musicians and authors and their various texts. It looks at music as a literary text and analyzes the literature that has inspired music. Jay Z's *Decoded* and Levitin's *This is Your Brain on Music*, will assist students explore the relationship between the mind and music through insight into how background and personal influences shapes the work of a musician as well as recent findings in the fields of neuroscience and evolutionary psychology. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10

E430 | CP | DYSTOPIA, SCIENCE FICTION & FANTASY (HN OPT)

In this course, students will examine classic and contemporary examples of science-fiction and fantasy texts which focus on the concept of dystopia: an alternate reality or futuristic society in which life is supposed to be wonderful, but instead has been corrupted. Students will examine how authors use this genre of literature and film to analyze and critique certain elements of their own worlds, such as politics, environmental and social issues, technology, religion, and more. Students will read a combination of classic novels and short stories, watch and analyze films, conduct short and sustained research projects, and create products which reflect their analysis of contemporary society. This course will ask students to push beyond pop culture to examine pressing topics and grapple with these issues. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10

E431 | CP | AFRICAN AMER LITER (HN OPT)

Through reading challenging and thought-provoking texts from the canon of African-American literature, students will develop their ability to discern the attributes of quality writing. They will read texts by authors such as Frederick Douglass, Harriet Jacobs, Ralph Ellison, Assata Shakur, Toni Morrison, and Barack Obama. By analyzing thought-provoking texts on the African-American experience/s students will express and develop their views about key past and present sociological issues. They will develop their ability to communicate insightful responses to key themes in African-American literature. Students will continue to develop skills in expository, analytical, creative, and persuasive writing. They will reinforce research skills and incorporate the MLA guidelines used in college-level English classes. Students will collect their writings from a range of genres in an English Language Arts Portfolio which will document their growth as writers, readers, and thinkers. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10

E432 | CP | CLASSICAL LITERATURE: SHAKESPEARE

This course will explore Shakespeare's poetry and plays, examining both texts from the canon as well as some lesser-known works. Through their study of his language and artistry, approaching the texts as both works of drama and of literature, students will develop both versatility and comfort with Shakespeare's work. They will learn to critically examine challenging texts and analyze complex and difficult language. Engaging with some of the most popular and enduring work in classical literature, students will continue to develop and reinforce critical thinking, reading, research, and writing skills. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10, 11

E435 | CP | GREEK MYTHOLOGY (HN OPT)

This course allows students to delve more deeply into classical texts and to see how they influence modern literature. Students will go beyond a "Percy Jackson" understanding of Greek mythology to broaden their understanding of the Greek Pantheon, to explore key themes in Greek works, and also to investigate differing versions of the same myth to better understand how the ancients understood story. As we read and write about ancient texts, we'll also be looking for allusions and connections between them and modern language and stories, not to mention psychology. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10

E445 | CP | IMMERSION JOURNALISM (HN OPT)

Two kinds of journalism have emerged in recent years. The first is called variously called experiential writing, deliberate living, Walden in the city, and immersion journalism. To write this brand of nonfiction, the authors live deliberately and differently for a period of time, immersing themselves in a new experience. By venturing into the unfamiliar, they can then look at things with new eyes and write in innovative, immediate ways. For this class the student will start to use their life as an experiment. What if, for a period of time, you withdrew from the internet? Gave up your cell phone? Abstained from sugar? Stopped looking at mirrors? Kept a gratitude journal? Meditated? Followed Thumper's Rule and only said kind things? Spent regular time in nature? Stopped buying anything that would end up in a landfill? Went carbon neutral? Students will do these experiments as a whole class and by individual design. Each experiment will include research on the topic as well as the personal endeavor, and all will accumulate in thoughtful essays about these forays into deliberate living. The second type of journalism is the documentary about an important social issue. Students will view such documentaries, discuss the issues presented, and study the techniques used by the documentarians. Students may then have a chance to produce a short documentary of their own. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10

E446 | CP | STATISTICS & SOCIETY: HUMANITIES (HN OPT)

Every day we are surrounded by claims of all kinds. This course helps students to see why a given claim is being made, and what the conditions, parameters, influences, contexts, and goals are that guide the argument. As students come to understand the construction of claims and their persuasive elements, they will be able to further understand how to utilize and manipulate data to increase the soundness of their own claims. Ultimately these new understandings will be employed in their mathematically-based writing projects. The underlying goal is to continually explore and articulate personal beliefs and to defend them using sound statistical analysis, while allowing those beliefs to shift and change as students participate in robust discussions. Major themes will include Education, Gender and Race, Language and Literacy, Popular Culture, and Politics and Satire, and these themes will be analyzed using one- and two-variable statistics and facts about polling and sampling. This course needs to be taken along with Statistics & Society: Math (M417). By taking both classes, students will earn 10 credits in Math and 10 credits in ELA. **Grades:** 11, 12 **Pre-Reqs:** Passing grades in ELA 9, 10, and 11 & Algebra II. Students must also take Statistics & Society: Mathematics (M417)

E541 | AP | ENGLISH LITERATURE AND COMPOSITION

This course, students will read and write extensively about major works of imaginative literature. This course is designed for students eager to engage with and passionate about literature. Students should have strong analytical skills and be willing to meet the challenge of difficult reading and writing assignments. Students will learn how to recognize common literary devices to interpret literature; how to write literary analysis essays that conform to standard formats; and how to apply close reading, and critical thinking skills to the interpretation of various texts. Students must complete a pre-course packet for this course. Pre-course packets can be found on the CRLS home page. All students enrolled in this course are required to take the AP English Literature and Composition exam. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10, 11.

E542 | AP | ENGLISH LANGUAGE AND COMPOSITION

In a sense, everything is an argument. When we speak, when we write, when we create art, and when we interact with the world we are always making appeals about who we are and what we want. This course helps students to see why a given argument is being made, and what the conditions, parameters, influences, contexts, and goals are that guide the argument. As a crucial form of intellectual self-defense, students will understand the construction of an argument and what makes it persuasive. By developing this skill, they will be able to understand what makes a sound argument, as well as the techniques of manipulation. Ultimately these new understandings will be employed in their own writing. The underlying goal is to continually explore and articulate personal beliefs, while allowing those beliefs to shift and change as students participate in robust discussions. Students must complete a pre-course packet for this course. Pre-course packets can be found on the CRLS home page. All students enrolled in this course are required to take the AP English Literature and Composition exam. **Grades:** 11, 12 **Pre-Reqs:** English 9, 10, 11.

Enhanced Senior Year Program (EYS)

By engaging in Enhanced Senior Year opportunities, students will:

- apply the content-area knowledge gained through the CRLS academic program as well as through their participation in extracurricular activities;
- strengthen the important 21st century skills necessary for success after high school, including project management, communication, collaboration, digital media literacy, and civic literacy
- become more prepared to participate fully and responsibly as young adults in their communities.

EYS Projects are meant to highlight academic gains, but equally important is the demonstration of a “learning stretch” that takes place as a result of the project. While students will be drawing from their unique skills, talents, and interests, projects must challenge and push each student to learn new skills.

Y000 | HN | SENIOR INTERNSHIP

The CRLS Senior Internship offers meaningful work and learning experiences aligned with students’ academic interests and achievements; and provides opportunities for 21st century career exploration. The program comprises two components: an off-site internship placement and a classroom seminar. Internship placements vary according to each student’s interests and abilities. Past sites have included locally owned businesses, university research centers, and non-profit organizations. These are unpaid internships that happen during the school day, for school credit. All interns participate in the GoodWork Seminar. **Grades:** 12

Y000B | HN | GOODWORK SEMINAR

The purpose of the seminar is to provide students with opportunities to reflect on, share, document, and learn from the internship experience. Through readings, discussions, and research, including case studies from the GoodWork Tool Kit (developed by Project Zero at the Harvard School of Education), the seminar group will explore what it means to do good work that is “ethical, excellent, and engaging”. Students create and present an extensive portfolio of their work that highlights their experiences and accomplishments. Participants also engage in a number of “work readiness” workshops. Interested students must be independent, reliable, and have demonstrated the commitment to portray to the community a positive image of the CRLS student. Applications are available from Ms. FitzGerald (kfitzgerald@cpsd.us) and from the Guidance Department.

Y002 | HN | TEACHING ASSISTANTSHIP

The CRLS Teaching Assistant Program deepens the work of students acting as Teaching Assistants in CRLS classrooms. Qualified Student TAs strengthen their content skills and begin to explore the teaching profession by assisting the supervising teacher with classroom duties and through the development of a lesson plan and presentation. Student TAs complete a weekly log and collaborative reflection forums on Moodle. They are supported to complete a final inquiry project based on their experience. A passion for teaching and/or the subject, as well as permission of the instructor and guidance counselor are required. This program is open to juniors and seniors who have passed the TA class assignment with a B+ or better..

Y003 | HN | HONORS SENIOR THESIS

A senior thesis is an extensive, independent research project that demonstrates advanced research, writing, and subject mastery skills. Students work closely with a faculty advisor and choose a question or topic to explore in depth, following discipline-specific research methods. As a culminating work, a Senior Thesis exhibits rigorous and interdisciplinary thinking, knowledge, and understanding. The final Senior Thesis product includes an oral presentation and a college level paper.

Y004 | HN | INDEPENDENT GRADUATION PROJECT

The HN Independent Graduation Project Program allows motivated, responsible and self-directed learners to pursue a community-based research project that reflects a personal passion. Interested students must submit a formal proposal detailing the inquiry and idea they will explore, as well as what they plan to make or do as a result of or in conjunction with their research. Students must identify and work with a Community Partner, develop a portfolio of their work, and make a formal presentation. An Independent Graduation Project demonstrates a student’s proficiency in Academic, Social and Civic Learning Expectations.

History & Social Science

Expectation: A CRLS student communicates as a writer and speaker.

The 6-12th grade “pathway” for History/Social Science is as follows: (Upper Schools) World Geography and Ancient History; World History, Philosophy and Religion; World History (to 1800) and Civics, (High School) World History (1900-present), United States History 1 (1763- 1920); and, United States History 2 (1877-present).

In grade 9 students will take World History. This course is required for graduation and is offered at the Honors level only. In grade 10 students will take US History 1 (Colonial America through 1920). This course is required for graduation and is offered at the College Preparatory and Honors level. This course is a prerequisite for students who wish to enroll in AP US History. Students interested in taking AP US History must enroll in HN US History 1. In grade 11, students should take United States History 2 (Reconstruction to the 21st Century). This course is required for graduation and is offered at the College Preparatory, Honors and Advanced Placement level. Many colleges and universities require students to earn 4 units of History and Social Science as an entrance requirement, so seniors are encouraged to take another history elective, or explore other areas of the social sciences.

H202 | HN | WORLD HISTORY 2

In this course students will study the social, economic, and political roots of the modern era. They will begin the course with a brief study of the causes and consequences of the Industrial Revolution in Europe and how it enabled European nations to colonize vast parts of Africa and Asia. Students will then explain the causes and consequences of the great military and economic events of the past century including World War I, the Interwar period, and World War II. Next, students will examine three country case studies highlighting changes in the post-war decolonization and independence period, including Israel and the Palestinian territories, India and Pakistan, and Kenya. Lastly, students will analyze the causes and consequences of the Cold War on nations around the world. Throughout the course students will be encouraged to develop and use critical thinking skills to challenge assumptions and to make connections between today and the historical events of the past. Students will write a research paper in which they craft an argument and support it with evidence and analysis from scholarly sources. **Grades:** 9

H291 | CP | U.S. HISTORY 1 (HN OPT)

In this course students will examine the historical and intellectual origins of the United States during the revolutionary and Constitutional eras. They will learn about the important social, political and economic factors that contributed to the outbreak of the Revolutionary War, the consequences of the war and key ideas of the U.S. Constitution. Students will also study America's westward expansion, the establishment of political parties and economic and social change. Students will learn about the growth of sectionalism and how slavery and regional division led to the Civil War. Students will study the outcomes of the Civil War and the legacy of Reconstruction, and finish the course by delving into the Progressive Era with a focus on the rise of the Labor and Women's Movements as well as look at the overall changing economic and social structures of the United States during the early 20th Century. **Grades:** 10 **Pre-Reqs:** World History 2

H292 | HN | U.S. HISTORY 1

The content for Honors U.S. History 1 is the same as College Preparatory U.S. History 1. The College Prep and Honors level courses differ in the expected proficiency levels of the students' historical analysis, reading and writing skills. **Grades:** 10 **Pre-Reqs:** World History 2 and teacher recommendation.

H301 | CP | U.S. HISTORY 2

Students will analyze Reconstruction, post Civil War industrial growth, America's international diplomatic relations, the Progressive Movement, the New Deal, various factors that led to America's entry into both World War I and II. Students will study consequences of both wars and their impact on American life. Also studied will be the causes and course of the Cold War, important economic and political changes during the Cold War, including the Civil Rights movement, and recent events and trends that have shaped the modern-day United States **Grades:** 11 **Pre-Reqs:** World History 2 and US History 1.

H302 | HN | U.S. HISTORY 2

The content for Honors U.S. History 2 is the same as College Preparatory U.S. History 2. The College Prep and Honors level courses differ in the expected proficiency levels of the students' historical analysis, reading and writing skills. **Grades:** 11 **Pre-Reqs:** World History 2 and US History 1 and Teacher Recommendation.

H403 | HN | PSYCHOLOGY

This is an introductory course on the study of individual human behavior and experience in society. This course will guide students to explore the content, terminology, methodology, and application of this discipline to understand and improve oneself and society. The course will explore four (Identity, Violence and Obedience to Authority, Nature and Nurture, and Psychopathology) concepts, with a 3-step process to develop a comprehensive analysis: (1) introduction, (2) application, and (3) reformation. Applying personal, interpersonal, and aged and modern societal examples, this college-level course will explore and critically challenge human thought. **Grades:** 11, 12 **Pre-Reqs:** World History 2, US History 1 and U.S. History 2 or AP US History

H404 | CP | CIVICS (HN OPT)

This course offers students an opportunity to explore and understand the principles and challenges of democratic government. We will learn how the United States government operates and analyze politics and current media. We will speak with local leaders, politicians, and activists to see how the major current events of our times impact our community, nation, and world. Students will also learn and practice the civic skills they need to effectively participate in our democracy, including how to effectively engage policy makers; how to speak and write persuasively on public issues, and how to engage in respectful civil discourse. **Grades:** 11, 12 **Pre-Reqs:** World History 2, US History 1 and 2 or AP US History

H405 | CP | CONSTITUTIONAL LAW (HN OPT)

Students in this course will understand the relevance of the U.S. Constitution through the examination of Supreme Court cases involving the rights of young people at school and in the juvenile justice system. Co-taught by a CRLS History teacher and 2nd year Suffolk University Law School, students in this course will analyze historical issues from multiple perspectives, enhance their written and oral communication skills and further develop their individual political and social beliefs. Students in this course are required to deliver at least four oral arguments as part of their assessment. Additionally students enrolled in the course will prepare for and participate in the Marshall Brennan Moot Court local and regional competitions. **Grades:** 11, 12 **Pre-Reqs:** World History 2, US History 1 and 2 or AP US History

H406 | HN | SOCIOLOGY

This course offers students an introduction to the study of sociology with a focus on the role of social institutions and social forces in creating and maintaining social inequality or inequity in the United States. Using an introductory sociology textbook, various forms of media, and numerous sociological articles, students will have the opportunity to learn some of the basic principles behind the science of sociology and its application to the community around them. The course will culminate with a comprehensive research project and presentation in which students apply their learning to their community. **Grades:** 11, 12 **Pre-Reqs:** World History 2, US History 1 and 2 or AP US History

H407 | CP | CRIMINAL JUSTICE (HN OPT)

This course offers a “hands on” approach to legal realities encountered in and out of courtroom situations, as you study criminal matters involving persons and property within the U.S. legal system. Students will examine and analyze various cases ranging from the *Miranda v. Arizona*, *Furman v. Georgia* to a few current cases coinciding with previously established Criminal Law units. Students will learn to apply legal terms to real-life cases examined. Students will engage in cooperative learning activities that augment critical thinking skills, lending itself to meaningful discussion. Students will meet with various professionals in law-related work. Students will develop skills in persuasive and reflective writing. Research assignments, including the construction of a formal paper and projects on various law related topics, are required. **Grades:** 11, 12 **Pre-Reqs:** World History 2, US History 1 and 2 or AP US History

H409 | CP | AFRICAN-AMERICAN HISTORY (HN OPT)

This course begins with an exploration of the roots of African American culture in the traditions and institutions of African societies. The evolution of African American institutions as well as the contributions and influence of black politicians, scientists, authors, teachers will be explored. Later coursework transitions into mid twentieth century history including the Harlem Renaissance, the Great Depression, and other major eras with emphasis on current events that relate to particular topics. You will be required to read historical documents, take notes, write historical essays and complete at least one historical research paper. **Grades:** 12 **Pre-Reqs:** World History 2, US History 1 and 2 or AP US History

H415 | CP | LEADERSHIP AND COMMUNITY ACTION-STARs

The STARs course is designed to provide students with a comfortable arena to discuss, debate and honestly confront contemporary issues affecting their lives. Topics include cultural diversity, global awareness, healthy relationships, personal identity, school and community culture and climate, stereotyping, substance use, teen violence and teen wellness. Students will receive leadership and issues training opportunities so that they can work as peer educators in the high school and the elementary and upper schools. As a part of this class, students will learn the skills to create and implement a unique project that shows their understanding of the course content and highlights their interests and ideas. In addition to their work in classrooms, the STARs conduct awareness campaigns and host, organize, and design school wide assemblies and conferences. As members of the STARs program, students are expected to uphold the school motto and reinforce attitudes and behaviors that promote awareness, equity and student engagement. This course may be taken for Wellness credit. **Grades:** 11, 12 **Pre-Reqs:** World History 2, US History 1 and 2 and prior approval of the STARs Teacher.

H416 | CP | RACIAL & CULTURAL IDENTITY (HN OPT)

This course is a critical forum for the study of identity, culture, and race, especially as they pertain to education and academic achievement in the United States. Through substantial reading assignments and reflective writing assignments, students will explore their own personal identity development and examine their beliefs, assumptions, and understandings about identity, culture, and race. Students will also gain awareness and empathy for “others” identity development through ample class discussion time, simulations, and small-group projects. In the final part of the course, students will complete an original independent project to be showcased as part of an end-of-year symposium that applies the political, social, cultural, historical, economic, and power dynamics they have studied throughout the semester. Ultimately, the goal of this course is to help students view academic achievement as the basis for a positive identity. Students will complete a collaborative, public project as a required performance of understanding in this course. **Grades:** 11, 12 **Pre-Reqs:** World History 2, US History 1 and 2 or AP US History

H418 | HN | KIMBROUGH SCHOLARS HONORS GRADUATION PROJECT

This seminar and related project offer students an opportunity to contribute to the important work of seeking justice for African-Americans who were victims of racial violence, but whose cases have remained unsolved and under-reported. Students work with staff from the Civil Rights and Restorative Justice Clinic (CRRJ) at Northeastern University Law School to investigate a racially motivated cold case from the early 20th century. Participants learn about time period and work as a part of a team to discover the true facts of the case by uncovering evidence previously ignored, and exploring ways that the evidence can be used to provide restorative justice for the victims and their families. The project involves participating in a semester long in-school seminar, and then, as the semester progresses, going two times a week during seminar time to Northeastern University Law School to research and investigate the assigned case. Participating students will engage in regular writing and documentation related to the project. They will collaborate to make a major final public presentation and will present individual portfolios of their work at the end of the semester. The Kimbrough Scholars Project Seminar is a part of the Cambridge Rindge and Latin School Enhanced Senior Year program and requires an application. Priority is given to seniors. **Grades:** 11, 12 **Pre-Reqs:** World History 2, US History 1 and 2 or AP US History



H419 | CP | BLACK AMERICAN EXPERIENCE (HN OPT)

This course will examine the study of Black Americans from a thematic approach. Four units will be addressed. The course begins with an examination of Black culture. Students will begin to think about: What defines Black culture? How has Black culture been shaped by external factors? How has it influenced the wider culture? Students will study speeches and written work that address issues of race, oppression and perseverance. The second unit explores Black Music over time stemming from Slave Work Songs to Hip Hop culture. Students will analyze and research the origin of the music and its impact. The third unit will analyze Race, Reform and the Civil Rights movement during the 1950s-70s from the South to the North. The third unit will emphasize black political and social leadership from the Civil Rights Movement to today's movements such as Black Lives Matter. Students will evaluate how Black leadership has changed over time. Students will also examine changes taking place in South Boston, MA in relation to mandated busing and the reaction. The final unit focuses on Blacks in Media. Students will compare and contrast the roles Blacks play in various television programs and films. The course will culminate with an independent project. **Grades:** 12 **Pre-Reqs:** World History 2, US History 1 and 2 or AP US History

H421 | HN | ECONOMICS

This course will examine society's allocation of scarce resources, as well as the economic reasoning made by people as consumers, producers, savers, investors, workers, voters, and government agencies. Important elements will include the study of scarcity, the role of incentives, supply and demand, market structures, the role of government, national income determination, money and the role of financial institutions, economic stabilization, and trade. In their study of the fundamental principles of economics, students will master the ability to use the basic analytical tools used by economists. In addition to examining the traditional content of economics, students will participate in a three week long Urban Plan project in which they will be asked to develop a five and a half block portion of a city. Working as a team of five, students will ultimately defend their final project in front of a team of volunteers who work in the field of land development. **Grades:** 12 **Pre-Reqs:** World History 2 and US History 1 and 2 or AP US History

H422 | HN | MODERN WORLD HISTORY

Modern World History is a study of how nations around the world have interacted politically, economically and culturally from the Cold War to today. We will examine the relationship between the Soviet Union and the United States and how foreign policy between the nations shifted (and did not shift) after 1990. We will analyze how the rise of the global world economy has both integrated parts of the world while also creating wider gaps between the rich and poor. We will explore modern conflict in Africa and the Middle East and the impacts it is having on people within those nations as well as between nations. The more we understand the roots of modern issues, the better we can understand how societies have developed to their present state, why people face certain problems, and what solutions we should seek in the future. **Grades:** 12 **Pre-Reqs:** World History 2, US History 1 and 2 or AP US History

H425 | CP | THROUGH THE LOOKING GLASS: AN INTRODUCTION

This course will focus on combining history, philosophy, sociology, economics, anthropology and civics in a broad-spectrum introduction to the social sciences. In mini-units, students will learn about the different disciplines within the social sciences, and then use their knowledge to do investigations and projects both within Cambridge, and on the global level. We will bring in current events and local happening to discuss and debrief, as students are pushed to become critical thinkers and observers of the world around them. Students will create a long term project to show their understanding of at least one discipline within the social sciences, and make connections to the world at large. The goal of this course is to allow students to have a basic knowledge of the different social science disciplines, and become critical participants in the world around them. Students will be required to have a standing field trip for the duration of the course. **Grades:** 11, 12 **Pre-Reqs:** World History, US History 1, US History 2 or AP US History.

H502 | UM | AMERICAN IDENTITIES

American Identities is offered in collaboration with the American Studies Department at UMass-Boston, and students are eligible to earn college credit for AMST 100, the department's required introductory course. The central academic and personal question of this UMass-Boston course is: "What is an American?" This course examines the construction, definition and explanation of the diverse "American identities" of North Americans. Through examination of a variety of resources including historical sources, material artifacts, fiction, poetry, film, photography, and popular music and using the concepts and methodologies of American Studies, students explore individual, family, community, ethnic, class, gender, and racial identities in relation to regional, national, and transnational identities. Over the course of the semester, students will be guided in writing a three-generation family history that incorporates political, cultural and family events from 1945 to the present. After completion of this course, students who choose to attend the University of Massachusetts can receive UMass credit. **Grades:** 12 **Pre-Reqs:** World History, US History 1 and US History 2 or AP US History

H504 | AP | WORLD HISTORY

AP World History focuses on developing students' abilities to think conceptually about world history from approximately 8000 BCE to the present and apply historical thinking skills as they learn about the past. Five themes of equal importance -- focusing on the environment, cultures, state-building, economic systems, and social structures -- provide areas of historical inquiry for investigation throughout the course. AP World History encompasses the history of the five major geographical regions of the globe: Africa, the Americas, Asia, Europe, and Oceania, with special focus on historical developments and processes that cross multiple regions. Students taking this course are strongly encouraged to take the AP exam in May. **Grades:** 12 **Pre-Reqs:** World History 2, US History 1 and 2 or AP US History

H506 | AP | COMPARATIVE GOVERNMENT AND POLITICS

AP Comparative Government and Politics is equivalent to an introductory college course. Our study will focus on important themes and concepts in comparative government through the lens of six core countries and one supranational body: United Kingdom, Mexico, Nigeria, Iran, Russia, China and the European Union. Students will engage in thoughtful cross-country comparison as we explore each case study. This course emphasizes the diversity of political life around the world and the challenges and opportunities facing states in the 21st Century. As a college-level course, there are considerable expectations of students in terms of rigor, quality, and dedication to their work. **Grades:** 12 **Pre-Reqs:** World History 2, US History 1 and 2 or AP US History

H531 | AP | U.S. HISTORY

Advanced Placement U.S. History is a college-level course designed to provide students with the analytical skills and factual knowledge necessary to investigate United States History. This course intertwines four historical thinking skills with nine historical eras, and seven historical themes: Identity; Work, Exchange, and Technology; Peopling; Politics and Power; America in the World; Environment and Geography--Physical and Human; Ideas, Beliefs, and Culture. Students will use a learning methodology that requires taking notes from readings, lectures, and videos outside of school, which frees up the in-class time for discussions, collaborative projects, skill building activities, and analytical-evaluative writing. In addition, students are expected to write a well-documented research paper. Students in Advanced Placement courses are expected to take the AP exam in May and part of the class will focus on that preparation. Successful completion of the APUSH exam may qualify students for college credit or exemption from initial college history classes. Students taking this course are strongly encouraged to take the AP exam in May. **Grades:** 11 **Pre-Reqs:** World History 2 and HN U.S. History 1 and Teacher Recommendation

Mathematics

Expectation: A CRLS student uses deliberate thinking processes to solve problems and develop ideas.

The CRLS Mathematics Department offers a wide range of courses for students of different abilities and interests from ninth grade Algebra I through our Advanced Placement Calculus Statistics and Computer Science classes. We also offer several electives including Math Reasoning, FST and Computer Programming. This year we are excited to offer a full year course in collaboration with the ELA Department, Introduction to Statistics & Society. The Math Department curriculum is aligned with the Massachusetts Curriculum Framework Incorporating the Common Core Standards for Mathematics.

CRLS has adopted the State's recommendation that students be required to take and pass four years of mathematics during high school including at least one class in their senior year.

Students must complete a pre-course packet for every math class they take. For Full Year and Semester 1 classes this means students have a summer assignment. For Semester 2 classes students must finish the pre-course packet before the 1st day of class in mid-January. Pre-course packets can be found on both the CRLS and CRLS Mathematics Department home pages.

M101 | CP | ALGEBRA 1

This course will address the newly adopted Massachusetts Curriculum Framework for Mathematics Incorporating the Common Core Standards for Massachusetts. The eight Standards of Mathematical Practice will be incorporated throughout the year as students discuss, among other topics, rational and irrational numbers, writing and interpreting polynomial and rational expressions, creating and reasoning with equations and inequalities, interpreting and building functions including linear, quadratic and exponential models, and summarizing and interpreting statistical and probability data. The course is designed to involve students in active learning, inquiry based problems, and problem solving strategies to build conceptual understanding and to strengthen students' abilities to think, reason, and problem-solve using mathematical understandings and skills. Students who excel during the 1st semester of the course will be given the opportunity, with teacher recommendation, to move into Honors for the 2nd semester. **Grades:** 9 **Pre-Reqs:** Grade 8 math.

M111 | HN | ALGEBRA 1

This course is an accelerated version of M101. An advanced course that will address the newly adopted Massachusetts Curriculum Framework for Mathematics Incorporating the Common Core Standards for Mathematics. The eight Standards of Mathematical Practice will be incorporated throughout the semester as students discuss, among other topics, rational and irrational numbers, writing and interpreting polynomial and rational expressions, creating and reasoning with equations and inequalities, interpreting and building functions including linear, quadratic and exponential models, and summarizing and interpreting statistical and probability data. The course is designed to involve students in active learning, inquiry based problems, and problem solving strategies to build conceptual understanding and to strengthen students' abilities to think, reason, and problem-solve using mathematical understandings and skills. **Grades:** 9 **Pre-Reqs:** Grade of B or better in 8th grade math and 8th grade teacher recommendation

M121 | CP | GEOMETRY

This course will cover the newly adopted Common Core Standards for Massachusetts outlined in the Massachusetts Curriculum Frameworks. Students will engage in the eight Standards of Mathematical Practice while learning about congruent and similar figures, geometric proofs, transformations, coordinate geometry, properties of 2-dimensional figures (triangles, quadrilaterals, and circles), trigonometry, and basic probability. Students will engage in the eight Standards of Mathematical Practice by acquiring specific knowledge using active, hands-on learning and then applying that knowledge to real-life scenarios. Students will also obtain useful problem solving strategies to strengthen their ability to think about, reason through, and explain difficult mathematical concepts. Students who excel during the 1st semester of the course will be given the opportunity, with teacher recommendation, to move into Honors for the 2nd semester. **Grades:** 9, 10 **Pre-Reqs:** Passing grade in Algebra 1

M122 | HN | GEOMETRY

This course is an accelerated version of M121. This advanced course will cover the newly adopted Common Core Standards for Massachusetts outlined in the Massachusetts Curriculum Frameworks. Students will engage in the eight Standards of Mathematical Practice while learning about congruent and similar figures, geometric proofs, transformations, coordinate geometry, properties of 2-dimensional figures (triangles, quadrilaterals, and circles), trigonometry, and basic probability. Students will engage in the eight Standards of Mathematical Practice by acquiring specific knowledge using active, hands-on learning and then applying that knowledge to real-life scenarios. Students will also obtain useful problem solving strategies to strengthen their ability to think about, reason through, and explain difficult mathematical concepts. **Grades:** 9, 10 **Pre-Reqs:** Grade of B or better in Algebra 1 or, for incoming 9th graders, an 80% on the Algebra 1 Skills Assessment and 8th grade teacher recommendation

M201 | CP | ALGEBRA 2

This course requires that students work closely with the expressions that define functions, are comfortable with the algebraic manipulations of functions, and continue to hone their abilities to model situations and to solve equations. Graphing is emphasized and geometry is applied. Topics include a study of patterns and functions. Students will describe, extend, analyze and generalize linear functions as well as exponential and logarithmic relationships, and radical, rational and polynomial functions. This course also addresses topics in statistics. **Grades:** 10, 11, 12 **Pre-Reqs:** Passing grade in Algebra 1 and Geometry

M211 | HN | ALGEBRA 2

This course requires that students work closely with the expressions that define functions, are comfortable with the algebraic manipulation of expressions, and continue to expand and hone their abilities to model situations and to solve equations. **Grades:** 10, 11, 12 **Pre-Reqs:** Grade of B or better in Algebra 1 and Geometry or teacher recommendation

M311 | CP | FUNCTIONS, STATISTICS, AND TRIGONOMETRY

Functions, Statistics & Trigonometry (FST) strengthens and expands upon students' understanding of Algebra II concepts. Students examine many facets of statistics with an emphasis on analyzing and interpreting various statistical measures. Probability is explored and connected to real-life scenarios. In addition, students will expand their understanding of trigonometric ratios, the Unit Circle and applications of trigonometry. This course serves as an effective precursor to CP Pre-Calculus and also prepares students for introductory college math courses for potential liberal arts or business majors. **Grades:** 11, 12 **Pre-Reqs:** Passing grade in Algebra 2

M410 | CP | PRE-CALCULUS WITH QUANTITATIVE REASONING

Students in this course will study functions including real world situations and how they are modeled algebraically, numerically, and graphically. This course will demonstrate how algebra and geometry can be used to model real-world situations. Students will use conceptual understandings to become critical thinkers when using quantitative information and connections will be made between statistics and everyday life and work. Students will also explore matrices and vectors to define and solve real-world problems. Students completing this course with a B or better typically enroll in AP Statistics or Mathematical Reasoning with Applications. **Grades:** 11, 12 **Pre-Reqs:** Grade of B+ or better in Algebra 2 or teacher recommendation

M411 | HN | PRE-CALCULUS

Students in this course will study functions including real world situations and how they are modeled algebraically, numerically, and graphically. This course will demonstrate how algebra and trigonometry can be used to model real world problems. Students will demonstrate an understanding of trigonometric functions and formulas for sine and cosine. Students will relate the slope of a tangent line at a specific point on a curve to the instantaneous rate of change. Topics in Discrete Mathematics are included and technology is fully integrated. Students will use induction to prove theorems and verify formulas. This is a demanding course designed for motivated students. Students completing this course with a B/B+ or better typically enroll in AP Calculus AB/BC. **Grades:** 11, 12 **Pre-Reqs:** Grade of B or better in HN Algebra 2 or teacher recommendation

M412 | CP | MATHEMATICAL REASONING WITH APPLICATIONS (HN OPT)

This course provides an alternative to Pre-Calculus for students who wish to continue to study mathematics beyond topics found in Algebra 2 and FST. The course curriculum focuses on answering the question "Why do I need to learn math?" Students will look at how mathematical concepts such as cash flow, interest rates, linear and exponential growth, percentages, probability, statistics and estimation are encountered in areas such as business, personal finance, casinos, media, economics, sports, medicine and the environment. These topics are investigated in a way that conveys the extent in which modern mathematics is used on a daily basis. As a part of this class, you will learn the skills to create and present unique projects that will show your understanding of the course content and highlights your unique interests and ideas. Students will receive either CP or HN credit at the end of the course depending on their final grade. **Grades:** 11, 12 **Pre-Reqs:** Passing grade in HN Algebra 2, FST or Pre-Calculus with Quantitative Reasoning

M415 | CP | INTRODUCTION TO COMPUTER SCIENCE (HN OPT)

This beginner course is designed for students who have had no previous programming experience. Computing has opened up wonderful new ways for people to connect, design, research, play, and express themselves. This survey course offers students a hands-on introduction to computer science. Students will program using a block-based graphical interface as they learn how to translate their ideas into code. The course is intended not only to familiarize students with computer programming, but also to sharpen problem-solving skills. Honors designation can be earned by completing additional assignments and projects. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Passing Grade in Algebra I



M416 | AP | COMPUTER SCIENCE

This advanced course can be taken by students with or without programming experience. Because the design and implementation of computer programs to solve problems involve skills that are fundamental to the study of computer science, a large part of the course is built around the development of computer programs that correctly solve a given problem. These programs should be understandable, adaptable, and, when appropriate, reusable. At the same time, the design and implementation of computer programs is used as a context for introducing other important aspects of computer science, including the development and analysis of algorithms, the development and use of fundamental data structures, the study of standard algorithms and typical applications, and the use of logic and formal methods. In addition, the responsible use of these systems is an integral part of the course. This course is a joint CRLS and Microsoft Corporation TEALS Program initiative and will be co-taught by a Microsoft employee and a CRLS teacher. Students will earn math credit for this course. **Grades:** 10, 11, 12 **Pre-Reqs:** Passing grade in Algebra 2

M417 | CP | STATISTICS & SOCIETY: MATHEMATICS (HN OPT)

Every day we are surrounded by claims of all kinds. This course helps students to see why a given claim is being made, and what the conditions, parameters, influences, contexts, and goals are that guide the argument. As students come to understand the construction of claims and their persuasive elements, they will be able to further understand how to utilize and manipulate data to increase the soundness of their own claims. Ultimately these new understandings will be employed in their mathematically-based writing projects. The underlying goal is to continually explore and articulate personal beliefs and to defend them using sound statistical analysis, while allowing those beliefs to shift and change as students participate in robust discussions. Major themes will include Education, Gender and Race, Language and Literacy, Popular Culture, and Politics and Satire, and these themes will be analyzed using one- and two-variable statistics and facts about polling and sampling. This course needs to be taken along with Statistics & Society: ELA (E446). By taking both classes, students will earn 10 credits in Math and 10 credits in ELA. **Grades:** 11, 12 **Pre-Reqs:** Passing grades in ELA 9, 10 & Algebra II.

M501 | AP | CALCULUS AB

This course is an in depth and rigorous study of single variable calculus, which follows honors level work in the Pre-calculus, Algebra 2, and Geometry CRLS course sequence. Major skills to be developed/mastered will include numerical, analytical, and visual methods involved in the study of differential and integral calculus of polynomial, exponential, logarithmic, and trigonometric functions. The skills learned will be applied to model and solve problems in a variety of contexts. Advanced Placement curriculum for this course will be addressed and AP Calculus Exam problems will be used to supplement course topics. Students taking this course are strongly encouraged to take the AP Calculus AB exam in May. **Grades:** 11, 12 **Pre-Reqs:** Grade of B or better in HN Pre-Calculus and/or teacher recommendation

M502 | AP | CALCULUS BC

This course is an in depth and rigorous study of single variable calculus, which follows honors level work in the Pre-calculus, Algebra 2, and Geometry CRLS course sequence. Major skills to be developed/mastered will include numerical, analytical, and visual methods involved in the study of differential and integral calculus of polynomial, exponential, logarithmic, trigonometric, parametric, polar, vector functions, along with sequences and series. The skills learned will be applied to model and solve problems in a variety of contexts. All topics identified in the Advanced Placement curriculum for this course will be addressed and AP Calculus Exam problems will be used to supplement course topics. This is a demanding course designed for motivated students. This class can be taken for mathematics or RSTA credit. Students taking this course are strongly encouraged to take the AP Calculus BC exam in May. **Grades:** 11, 12 **Pre-Reqs:** Grade of B+ or better in HN Pre-Calculus and/or teacher recommendation.

M510 | AP | STATISTICS

This course will provide students with an in-depth and rigorous study of statistics with the goals of improving students' statistical fluency and interpretation of statistical data and ideas. The course will follow a curriculum approved by the Advanced Placement Committee of the College Board. Topics included as part of this curriculum will be distribution analysis, probability & simulations, sampling methods and making inferences based on data. AP Statistics Exam problems will be used to supplement course topics. Students taking this course are strongly encouraged to take the AP Statistics exam in May. **Grades:** 11, 12 **Pre-Reqs:** Grade of B or better in Pre-Calculus or teacher recommendation

Media Arts

Expectation: A CRLS student uses specialized technology tools to convey meaning through media.

The Media Arts program addresses the ever-increasing need for 21st century citizens to create media and utilize new technologies. Students may choose media making courses from introductory through advanced multi-media production and distribution. Courses offer theory, pre-production, production and distribution skill development, and include collaborative projects that provide first hand experience with professional media makers. Media Arts classes are offered in conjunction with English, RSTA, Science, and Visual and Performing Arts departments, and are open to all CRLS students. Completed student work is shown on our two Cambridge cable channels, Smart TV98 and CPS TV99, streamed on our web site, and archived on the CPS MediaCAST student portal.

MART100 | CP | MULTIMEDIA SPORTS REPORTING (HN OPT)

Write, research and present the stories of Falcon Sports Teams and address the pressing issues in high school sports for a general audience. Students in this class will practice writing for television and web as well as expand their media technology skills. Over the course of the semester students will learn the basics of reporting sports and sports stories through audio, photojournalism, field and studio production. Homework will focus on recording stories about Falcon athletes and game coverage. Can be taken for English elective credit. **Grades:** 9, 10, 11, 12

MART102 | CP | MUSIC COMPOSITION / PRODUCTION (HN OPT)

Learn to record your own music and tracks. Use ProTools, Audition, Noteflight and other studio software/hardware to bring your audio ideas to life while collaborating with the music video class to add a visual component to your music. This course will explore the roles and responsibilities of music producers and engineers from idea inception to finished product. Comprised of 3 mini units - Basics of Audio Technology, Hands on Original Experiences, and Critical Listening - the course will also address basic music composition and arrangement techniques related to analog and digital workflow. Can be taken for VPA elective credit.

Grades: 10, 11, 12

MART103 | CP | MUSIC VIDEO PRODUCTION

Students will learn to write lyrics, record footage and edit together original, synced music videos using professional audio and video editing software. This class will also collaborate with the Music Composition class and will cover some historical and social issues to explore their impact on the evolution of music through the decades. Students will acquire advanced practices in the studio and field in the areas of field camera production, lighting design, directing, editing and producing through music video production. **Grades:** 9, 10, 11, 12

MART104 | CP | FRESHMAN MUSIC AND SOUND DESIGN

In this introductory course students will work in the CRLS Media Arts Studio to study the basics of audio production and sound design. The course will cover recording with microphones, basic digital music composition and mixing, designing sound for film and video, and the fundamentals of sound-physics. Can be taken for VPA elective credit.

Grades: 9

MART105 | CP | MUSIC AND SOUND DESIGN (HN OPT)

Students will learn the basics of audio engineering and sound design. The course will cover recording with microphones in the field and in the studio, basic digital music composition and mixing, designing sound for film and video, and the fundamentals of sound-physics. Can be taken for VPA elective credit. **Grades:** 10, 11, 12

MART970 | HN | EXPERIMENTAL MEDIA

This is an advanced class for students who can demonstrate advanced media and web production skills. Challenge yourself as a media-maker and artist to produce non-traditional media projects that will also be shared with the community via installations, broadcasts and screenings.

Grades: 11, 12

MART971 | CP | MEDIA JOURNALISM (HN OPT)

Driven by your civic awareness and passion for elevating youth voices, learn the principles and skills of writing for television and news production. Learn about the production cycle and develop the ability to file time-sensitive stories. Learn visual storytelling and experience working in front and behind the camera. Work as a team in this cooperative, multi-disciplinary learning environment as you create segments for Community Meeting - The Word. Your work will be shown in Community Meeting during the school day and on CEATV 98. Can be taken for English elective credit. **Grades:** 11, 12

RSTA

Expectation: A CRLS student applies a variety of technologies to build and convey understanding.

Welcome to the exciting world of Career & Technical Education (CTE) at the Rindge School of Technical Arts. The City of Cambridge and its surrounding communities are rich in technology and we have designed our programs to reflect our commitment to prepare young people for continuing education at post-secondary institutions or to enter their field of study upon graduation. Since 2006, approximately 90% of CRLS graduates who have majored in a CTE field of study at RSTA have been accepted to college. RSTA offers twelve (12) three-year CTE programs of study (“majors”) and a number of one-semester electives in several programs, including Automotive, Engineering, Business Education, Carpentry, Banking, and Culinary Arts. Students who matriculate through RSTA one-semester courses and/or multi-year programs gain skills, knowledge, confidence, and self-esteem. The programs in the RSTA department provide hands-on experiences that reflect the real world of work in career fields of student interest. Remember, at some point in life, everyone earns his or her own living!

The Rindge School of Technical Arts is the CTE department of CRLS and is open to all Cambridge Rindge & Latin School students. Our freshman Technical Arts Exploratory electives offer ninth graders the opportunity to experience RSTA programs in a way that will expand their knowledge and experiences in making choices about their futures. Typically, students who choose to “major” in one of our programs take the Level 1 course in that field as sophomores, the Level 2 course as juniors including clinical experiences for those who qualify and who choose it, and the Level 3 course, with the possibility of a Co-operative Education experience for seniors who apply and are qualified. The twelve Chapter 74-approved three-year programs are: Auto Technology, Biotechnology, Carpentry, Computer Science, Creative Design, Culinary Arts, Early Education and Care, Engineering, Print & Production, Health Assisting, Information Technology, and Media Technology.

Our facilities are exceptionally well-equipped and our dedicated faculty is highly qualified and fully-licensed. RSTA students receive challenging experience-based training complemented by appropriate academics to help round out their career and technical education. All of our technical areas offer pathways to technical, two-, or four-year college matriculation, as well as offering college credit at selected schools for those who qualify. All RSTA students develop a career plan with the help of the RSTA Career Counselor. A career plan helps students identify their skills and interests, discover what careers best suits them, and what skills and training they will need. By developing a career plan, students focus on what they want to do and plan a route to get there.

B627 | CP | ENTREPRENEURSHIP/BUSINESS

Students will learn why entrepreneurs are the backbone of the American economy. Students will be challenged to take a business concept and develop it into a working model after learning about: business plans, the Four (4) P's of marketing, target markets, competition, business ethics, and more. Students will learn about "Current Events" from around the world and their effect on businesses in our own neighborhood. Student will showcase their business model/business plan in the "Shark Tank" format by presenting their business plan to a panel of their classmates, to convince them to invest in the business. **Grades:** 10, 11, 12

B630 | CP | MARKETING & RETAIL MGMT

The Marketing course exposes students to the fundamental principles of marketing: consumer behavior, product pricing, promotion, distribution, and retail management. Students are given the opportunity to practice their marketing and managerial skills in a "live work" setting, The School Store. In The School Store, students will assume various roles in the operation such as: sales, inventory control, finance, security, advertising, merchandising, and personnel management. **Grades:** 11, 12

B940 | CP | BANK OPERATIONS

Bank Operations is a course for SENIORS only. Students serve as members of the operational team, in conjunction with bank supervisors of the East Cambridge Savings Bank (ECSB), CRLS branch, and a business teacher/supervisor. Students have the opportunity to experience the Real World in a bank setting during the one week PAID summer training at the main branch of the ECSB before the beginning of the fall semester. East Cambridge Savings Bank also offers CRLS seniors who either enrolled in this program or plan to attend business schools an opportunity to win a \$1500 scholarship at the end of their high school year. All student bankers automatically get their special one-page display in the year book, a courtesy of the bank. Following the paid training, all students are required to write a narrative regarding their professional experience in a real bank setting and publish it in the spring issue of the Register Forum to educate other juniors about this course/internship. **Grades:** 12 **Pre-Reqs:** Induction Program and Instructor Approval.

B985 | CP | PERSONAL FINANCE

Welcome to the real world, because "money matters!" Today's graduates are faced with multiple financial decisions affecting their future. Financial Literacy is important as graduates move forward in life through the workforce, college, and other endeavors. To compete in today's world, they need to have some basic understanding of the financial situations they will face. This course will introduce students to a variety of topics, including money management, credit, loans, taxes, insurances, savings, investing, personal budgets and the value of bank reconciliation. Buying a home or a car, choosing retirement plans, preparing a will and testament are also integral parts of the course. Students will be introduced to the Consumer Protection Act and related regulations that would help them become knowledgeable consumers. In addition to field trips and documentaries, many components will be presented by financial advisors/bankers from the community to support the curriculum. Knowing how to manage and protect one's assets is important for everyone to know. It is a practical life skill! **Grades:** 10, 11, 12

T120 | TC | TECHNICAL ARTS EXPLORATORY

Students rotate through hands-on learning activities in all RSTA program areas: Automotive Technology, Business Education, Biotechnology, Career Planning, Carpentry, Computer Science, Creative Design, Culinary Arts, Early Education & Care, Health Assisting, Hospitality, Information Technology, Media Technology, Print & Production. In the Technical Arts Exploratory students learn fundamental elements of each area and what it's like to work in that field. Students are provided with a broad range of experiences including problem-solving, working in teams, and completing basic projects which are both fun and challenging. In every rotation, students learn and apply the rules of safety. In the Career Planning segment, students take a basic career interest inventory and learn about their strongest career type. **Grades:** 9

T131 | TC | FRESHMAN CHILD STUDY & HEALTH CAREERS

This introductory course for freshmen is designed for the student who likes to work in a caring way with others and who wants to explore careers in education, health care, and the many fields related to them. Students will spend half of the semester learning about human growth & development and the types of careers one can explore related to young people, and one half of the semester learning about health/medical terminology & protocols, working with patients, and the many careers related to the health care industry. **Grades:** 9

T133 | TC | FRESHMAN CULINARY ARTS

In this one semester, introductory course, students learn the fundamental concepts and practices related to preparing food in a commercial kitchen. Safety, sanitation, measurements, knife skills, customer service, and basic cooking and baking skills are practiced. Students will begin to develop a foundation for employment in the food service industry and gain an understanding of the many professions it encompasses. **Grades:** 9

T135 | TC | FRESHMAN FILM

This course allows you to explore the world of media making through creating your own personal and group video projects. Learn basic camera operations such as what makes good composition, different types of shots and angles, effective camera movement, different visual storytelling techniques and studio production. Gain an introduction to basic audio recording, lighting design, and editing tools such as Final Cut Studio and Adobe Premier. This class is an opportunity for students to learn how to make different types of videos such as documentaries, movie trailers, narrative shorts, PSAs, music videos and stop motion animation. Completed student work will be shown on SMART TV98 and on the Media Arts Studio web site. **Grades:** 9

T501 | TC | AUTOMOTIVE UPKEEP

This course is reserved for Grade 11 or 12 students interested in learning basic car care. Automotive Upkeep will introduce students to the nuts and bolts of basic car care and the proper maintenance techniques of an automobile. Coursework will focus on safety in and around cars, basic automobile tools, buying your first car, automotive expenses, auto care & cleaning, understanding automotive fluids, common problems, roadside emergencies, alternative fuels and hybrid automobiles and the future of the automotive industry. **Grades:** 11, 12 **Pre-Reqs:** Open to grade 11 or 12 students not currently or previously enrolled in Auto Level 1, 2 or 3 and with approval by the auto instructors. Space limited to 10 students

T502 | TC | FAST TRACK ENGINEERING

This course is an accelerated offering for students considering a career in engineering. This is an accelerated version of Engineering 1, described above. Students will learn to communicate their ideas using hand sketching and Computer Aided Design (CAD). Students will generate prototypes and incorporate computer integrated manufacturing in this process. Students who successfully complete this course will also be eligible to continue as Level 2 Engineering students. (students who continue in this program may also become eligible for a Co-Op Ed. Position in their senior year.) **Grades:** 9, 10, 11 **Pre-Reqs:** Open to grade 9, 10, and 11,

T503 | TC | ROBOTICS/FIRST

In this course students learn ways of making a robot using the state-of-the-art RSTA facility in conjunction with MIT faculty and students and other local engineers. This hands-on course will focus on the fundamentals of robot design, building, function, and programming. The required culminating project will be a robot presentation in a regional competition and possibly participation in a national FIRST robotics contest. The classes will be required to meet at least twice a week (after school hours required) during the FIRST robot build season which runs through January and early March. Additional after school hours and Saturday participation will be required for students enrolled in this course and will be considered as part of their grade. **Grades:** 10, 11, 12 **Pre-Reqs:** Open to grade 10-12 students with approval by the Engineering instructor. This course is different each semester, so it can be taken multiple times with permission of the instructors

T504 | HN | ROBOTICS 2

Level 2 robotics is for students that have successfully completed Introduction to Robotics (Level 1). Building on knowledge of robots and sensors, students complete more advanced robotic and programming tasks. The Arduino controller is introduced. After reviewing robotic concepts, students create a project of their own choice and apply what they have learned. **Grades:** 10, 11, 12 **Pre-Reqs:** Open to grade 10, 11, 12 students with approval by the Engineering instructor. This course is different each semester, so it can be taken multiple times with permission of the instructors

T520 | TC | BASIC HOME REPAIR

In this introductory course, students learn about the operations of the major systems in the home (electrical, heating, plumbing), the safe and proper use of many household tools and products, and how to perform minor repairs and maintenance around the home. This course covers aspects of energy efficiency as well as when and how to call in the services of the appropriate professional contractor. **Grades:** 9, 10, 11, 12

T527 | HN | COMPUTER SCIENCE 2

Computer Science 2 is a continuation of the RSTA Computer Science curriculum. Students will spend half the year learning web design and development and half the year learning game design and development (see electives T527 & T627 below for details). Over the course of the year, students will learn HTML5, CSS3, JavaScript, and Unity as well as career readiness skills for the software industry. This course includes an embedded Wellness component. **Grades:** 11, 12 **Pre-Reqs:** Students in this course will not be required to take a separate Wellness course. Prerequisite: CS/IT 1 or AP CSP; AP CS (may be concurrent)

T527A | TC | WEB DESIGN & DEVELOPMENT

The Web Design & Development curriculum is an introduction to the design, creation, and maintenance of web pages and websites. Students learn how to critically evaluate website quality, how to create and maintain quality web pages, learn about web design standards, and learn to create and manipulate images. The course progresses from introductory work on web design to a culminating project in which students design and develop websites for local community organizations. **Grades:** 10, 11, 12

T527B | HN | VIDEO GAME DESIGN & DEVELOPMENT

The Video Game Design & Development curriculum is an introduction to the design and creation of video games. Video game development combines many of the most challenging concepts in computer science including computer graphics, artificial intelligence, human-computer interaction, and more. Students will work in two week cycles to program their own ideas or recreate existing games. Knowledge of object oriented programming from successful completion of AP CS is required **Grades:** 10, 11, 12 **Pre-Reqs:** AP Computer Science

T601 | TC | CARPENTRY 1

Using a competency-based, industry-relevant curriculum, students in Carpentry 1 learn introductory techniques and materials of building construction, which includes basic shop and tool safety, project planning, measurement, power tools, building materials, rough cutting, assembly, and finishing techniques. **Grades:** 10, 11 **Pre-Reqs:** Career Interest Survey

T602 | TC | CULINARY ARTS 1

Using a competency-based, industry-relevant curriculum, students learn basic skills needed to work in a professional kitchen or bakery. Through direct experiences, students develop and apply basic cooking and baking skills, sanitation and kitchen safety skills, demonstrate cooperative and productive work habits, as well as develop and demonstrate an understanding of basic nutrition through menu planning. This course also includes a Hospitality/Tourism Management component. **Grades:** 10, 11 **Pre-Reqs:** Career Interest Survey

T603 | TC | ENGINEERING 1

This course consists of two Project Lead the Way (PLTW) units of study: "Introduction to Engineering Design" (IED) and "Computer Integrated Manufacturing" (CIM). Students in this course develop problem solving skills and learn the engineering design process, using Computer Aided Design (CAD). Projects consist of challenging, hands-on activities that lead to conceptual learning. CIM is a course that continues to build on skills in computer in computer modeling design and exposes students to fundamentals of computer controlled machinery. This course emphasizes design fundamentals such as engineering documentation, and using the design process to solve engineering problems, including prototyping solutions. Students also learn new skills related to the use and programming of CNC equipment, Computer Assisted Manufacturing (CAM), robotics, and flexible manufacturing systems. **Grades:** 10, 11, 12 **Pre-Reqs:** Career Interest Survey. This course includes an embedded Wellness unit; students are not required to enroll in an additional Wellness class.

T604 | HN | INFORMATION TECHNOLOGY / COMPUTER SCIENCE 1

This full-year class is intended for students interested in beginning the RSTA Computer Science or Information Technology programs. Students will spend half the year learning information technology basics and the other half learning computer science. CS will follow the same curriculum as the math version of the class (T608) with an additional focus on software career readiness. The IT component is an introductory course in which students acquire an understanding of IT fundamentals. The class will cover operating systems, virtual machines, cloud computing, information security, networking, laptops, databases, printers, and operational procedures. This course includes an embedded Wellness component.

Grades: 9, 10, 11 **Pre-Reqs:** Students in this course will not be required to take a separate Wellness course. For the one semester version of CS/IT 1 that does not include wellness component, see the AP Computer Science Principles (T608). Prerequisite: Career Interest Survey

T605 | TC | CREATIVE DESIGN 1

Students in this introductory level course begin learning & applying the fundamentals of graphic design in ways that are both challenging and fun. Using up-to-date Macs, students learn how to use design software including Adobe Illustrator and Photoshop, digital cameras, scanners, and drawing tablets. Students create and design original artwork that will be applied to many different projects including: t-shirts, personal logos, magnets, buttons, holiday cards, vinyl license plates, and more. Students also further their understanding of the design process through client-based live work projects. Student participation and classroom collaboration is an essential component of this course. This course includes frequent individual and group critiques of student work. Strong computer skills are necessary. A student cannot be placed in this course after September 30th unless they can demonstrate to the instructor adequate Adobe Illustrator knowledge & skills to proceed at the level at which the class is functioning. This course includes a Wellness component.

Grades: 9, 10, 11 **Pre-Reqs:** Consideration will be given to 9th graders who petition in writing to the Director of RSTA (mananis@cpsd.us) by March 1.

T606 | HN | COMPUTER PRINCIPLES

This intermediate course can be taken with or without programming experience. It is an honors version of the M418 AP Computer Science Principles course and is intended for freshman and sophomore students. Students will learn the same skills as APCSP (python and computer basics), but this honors course will be slightly slower-paced. Students who successfully complete this course will be eligible to continue as RSTA Level 2 IT or CS students (Level 3 may include a paid co-op position). Students may not take M418 AND T604. **Grades:** 9, 10

T607 | TC | PRINT & PRODUCTION 1

In this course students learn the fundamentals of the production processes as they apply to modern paper and fabric printing. Students learn all facets of the printing industry, including press operations and pre-press. Students learn how to use professional level software for desktop publishing, a wide variety of silk screen applications, dye sublimation as well as how to operate press, bindery, and digital imaging equipment. This course includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 10, 11 **Pre-Reqs:** Career Interest Survey

T607L | TC | INTRO TO DIGITAL PRINTING

Students in this introductory course will learn the fundamental aspects of digital, dye sublimation, and silk-screen printing. Students will learn how to use computers for desktop publishing as well as acquire production skills in the areas of press, bindery, silk-screen printing, and digital printing. **Grades:** 10, 11 **Pre-Reqs:** Open to grade 10, 11, students not currently or previously enrolled in Print & Production Level 1, 2 or 3, and with approval by the instructor

T608 | AP | COMPUTER SCIENCE PRINCIPLES

Students with or without programming experience can take this intermediate level course, in which students will learn the central ideas of computer science, inviting students to develop the computational thinking vital for success across multiple disciplines. The course is taught in Python and is unique in its focus on fostering students to be creative and encouraging students to apply creative processes when developing computational artifacts. Students who successfully complete this course will be eligible to continue as RSTA Comp Sci 2 or Info Tech 2 students, which can lead to Level 3 paid Co-Op Ed positions, if eligible. AP CSP is complementary to AP CS and can be taken in any order or at the same time. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Passing grade in Algebra 1

T609 | TC | AUTO TECHNOLOGY 1

Students in this course learn the principles and operations of the many automotive systems. This course is designed to introduce students to vehicle preventative maintenance, basic repairs, and how to use an electronic service manual. All students must pass a safety course before they are allowed to perform any hands-on competencies in the automotive lab or the service area. This course also includes an embedded Physical Education and Health component. Students in this course will not be required to take a separate Wellness course. **Grades:** 10, 11

T610 | TC | INTRODUCTION TO BIOTECHNOLOGY (BIOTECH 1)

Biotechnology 1 (Honors) is a laboratory course designed to introduce students to the field of biotechnology including fundamental techniques, lab safety, career exploration, and bioethical issues. Students learn a range of laboratory skills from solution preparation to polymerase chain reaction (PCR), genetic transformation, gel electrophoresis, chromatography, and spectrophotometry. Students formulate research questions, design experiments, generate and analyze data, and document results. They engage in independent research projects to explore areas of interest and to develop problem-solving abilities. Through field trips, guest lectures, and self-directed outreach, students interact with professionals in a variety of contexts and explore a range of careers within the biotechnology industry. Writing and presentation skills are emphasized and practiced throughout the course. **Grades:** 9, 10

T611 | TC | HEALTH ASSISTING 1

Students in this course learn to use proper medical terminology and acquire the basics of health care techniques and procedures. The students gain an understanding of anatomy and physiology as they relate to each disease process. The emphasis of learning is on the application of the fundamental medical skills as they relate to the human body. (Example: The Cardiac System -- learning to take a Blood Pressure). The students also explore health careers and gain a general knowledge about procedures used in various health care settings (Nursing Homes, hospitals, ambulances, etc.). Community projects and some learning may take place at local health care facilities. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 10, 11 **Pre-Reqs:** Career Interest Survey

T612 | TC | MEDIA TECHNOLOGY 1

Using basic production equipment, this course provides an overview of the elements and vocabulary common to all types of media production. It treats basic techniques of production planning, studio and field camera operation, lighting, audio, and editing. Students learn the fundamental stages of preproduction, production, and post-production. Students also learn the basic elements of storytelling, the foundation of all filmmaking. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course.

Grades: 9, 10 **Pre-Reqs:** Career Interest Survey

T612L | CP | DIGITAL FILM & TV PRODUCTION

This course allows you to explore the world of media making through creating your own personal and group video projects. Learn basic camera operations such as what makes good composition, different types of shots and angles, effective camera movement, different visual storytelling techniques and studio production. Gain an introduction to basic audio recording, lighting design, and editing tools such as Final Cut Studio. This class is an opportunity for students to learn how to make different types of videos such as documentaries, movie trailers, narrative shorts, PSAs and music videos. Completed student work will be shown on SMART TV98 and on the Media Arts Studio web site **Grades:** 9, 10, 11, 12

T627 | TC | COMPUTER SCIENCE 3

Computer Science 3 is a continuation of the learning done in CS1 and CS2. Students will continue to hone their programming skills through either a project-based class or a work experience with a local software company. Students will focus on increasing their knowledge of a computer language of their choice and learn at least two new languages. This course includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 11, 12 **Pre-Reqs:** Computer Science 2

T712 | TC | MEDIA TECHNOLOGY 2

Advancing from Media Technology 1, students will endeavor on a deeper technical aspect of television broadcasting. Students in this course acquire advanced practices in the studio in the areas of sound engineering, lighting design, switching, character generation, directing, and producing. Fieldwork expands into documentary assignments and more detailed pre-production planning, including writing treatments and scripts. Students edit shows live-to-tape, as well as learn advanced techniques in non-linear editing software. Student work is frequently entered into festivals and contests, as well as serve as programming for Cambridge Educational Access Channels 98 and 99. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 10, 11 **Pre-Reqs:** Media Technology 1

T746 | TC | INFORMATION TECHNOLOGY 2 (HN OPT)

IT 2 is a continuation of the RSTA IT curriculum. Topics include mobile computing, hardware support, information security, advanced networking, advanced server configuration, and hardware support. Students learn how to maintain computers in a business environment and how to troubleshoot and solve hardware, network, printers, and software problems. This course includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 10, 11 **Pre-Reqs:** CS/IT 1 or AP CSP IT; Grades: 11, 12; Prerequisite: Information Technology 1 and Introduction to Computer Science

T750 | TC | EEC1: CHILD GROWTH & DEVELOPMENT

This course introduces students to the study of Child Growth and Development from birth to age 5. Students will learn about the brain development of infants and toddlers and attachment theory. Students acquire the knowledge to promote health and safety with the children in their care and ways to make a difference in the lives of children. Students will learn and practice observational skills as a tool to learn about how children grow and develop. Through reflection, students will develop an increased self-awareness to uncover the influence their own experiences play in their interactions with children. Students will compare and contrast child rearing practices across different cultures to acquire an appreciation for cultural perspectives other than their own. Students learn about developmentally appropriate practice and apply their knowledge by selecting developmentally appropriate books, toys, and activities to engage young children. Students will begin to practice their DAP knowledge through direct interactions with young children. Students in this course will not be required to take a separate Wellness course. **Grades:** 10, 11

T751 | TC | EEC2: EARLY CHILDHOOD PROFESSIONAL (HN OPT)

Students in this course begin to acquire the knowledge and skills prerequisite for becoming an early childhood professional. Students will study the social, emotional and physical development of preschool to school-age children. Students will develop their research and technology skills as they prepare for class presentations and technology based projects. Students will develop their writing skills as they prepare for college and professional careers. Students learn how to promote children's health and safety in the child care setting. Students will apply theory to their observations and work with children in a child care center. Students will develop skills to work directly with children 2-3 days per week, second semester. Students will assess and develop the 21st century skills needed to work directly with children. Students will explore careers in Early Childhood Education and related fields. Students develop strategies and skills for the guidance and discipline of young children. Students learn about developmentally appropriate practice and apply their knowledge by selecting DAP activities that engage young children. Students will learn to facilitate a small group activity and perform a small group read aloud. Students develop an increased sense of their own cultural awareness as they plan and facilitate activities that support diversity and foster understanding of differences in the classroom. Only students who have successfully met performance expectations will be placed at a practicum site. Students in this course will not be required to take a separate Wellness course. **Grades:** 11, 12 **Pre-Reqs:** *Satisfactory completion of Level 2, T750 or *Instructor permission *Ability to work independently and consistently follow instructions.



T752 | TC | EEC3: CHILD CARE TODAY (HN OPT)

This is a full year course that meets 1st block Fall semester and 1st & 2nd block Spring semester to accommodate field placement. Students in this course will continue to strengthen their 21st century skills pre-requisite for working as an early childhood professional. Students will develop skills to work directly with children 3 days per week, second semester with hands on learning in a child care classroom. Students will develop and apply strategies for the guidance and discipline of young children. Students will build on their observational skills as a tool to assess children's development. Students plan for and gain practice promoting children's health and safety in the child care setting. Students will apply theory to their observations and work with children in a child care center. Students apply their knowledge of developmentally appropriate practice by designing a curriculum for young children. Students will learn how to promote an anti-biased approach to curriculum that embraces diversity and fosters an understanding of differences. Students will learn how to design and plan for the set-up of an early childhood classroom. Students will learn to facilitate group activities and perform large group read-alouds and lead circle time. Students will hone their communication and writing skills as they prepare for college and professional careers. Students will engage in project based learning to enhance their research, technology and professional presentation skills. Only students who have successfully met performance expectations will be placed at a practicum site. Students in this course will not be required to take a separate Wellness course. **Grades:** 12 **Pre-Reqs:** Prerequisite: *Satisfactory completion of Level 2, T750 or *Instructor permission *Ability to work independently and consistently follow instructions

T841 | TC | CARPENTRY 2

This course is for students interested in developing marketable skills in building construction and carpentry. Students learn the basics of rough and finish carpentry, which includes foundations; wall, floor, and roof framing; installation of windows and doors; and some exterior finish work. Students learn to use a full range of woods, techniques, tools, and woodworking machines as they complete their projects. Students will also be exposed to CAD for carpentry and will participate in the 10-hour OSHA course. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 11, 12 **Pre-Reqs:** Carpentry 1

T842 | TC | CULINARY ARTS 2

Students rotate through cooking, catering, bakery, and front of the house management. Through direct application, students develop and demonstrate an understanding of the theory and practice of Culinary Arts and food service management. Students further refine their skills and knowledge during the first semester and then complete a culinary arts project, sanitation and safety skills, and basic nutrition, as seen through menu planning, cooperative work skills, and food preparation for the Falcon's Nest Cafe. Projects will be exhibited to the Culinary Arts Advisory board for critique. This course will also include a Hospitality/Tourism Management component. This course includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 11, 12 **Pre-Reqs:** Culinary Arts 1

T843 | HN | ENGINEERING 2

This is an Honors Level course in Engineering (also called "Principles of Engineering") where more classical engineering systems are learned in order to prepare students for the type of calculations they will be asked to perform on the job or in college. Many engineering problems from hydraulics and pneumatics to simple machines are introduced. Theoretical and hands-on problem-solving activities are emphasized. Project examples include robotics, materials testing, developing a gear train, and additional advanced CAD modeling skills. In the second half of the year, students learn digital electronics (DE). The DE component is a unit of study in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. Students will also learn basic skills related to the new Advanced Manufacturing Lab. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 11, 12 **Pre-Reqs:** Engineering 1, Engineering Design/CIM (FastTrack), or approval by the engineering instructors

T845 | HN | CREATIVE DESIGN 2

Students in this Honors Level intermediate course continue developing and refining their skills through a combination of client based "live-work" projects, teacher generated and self-directed assignments, projects, and exercises. Students continue to develop problem solving and visual design skills while improving their care and attention to detail while gaining proficiency with studio equipment. Students further their understanding of design through "live" work projects. Students continue to develop visual, illustration and photography skills. Students continue to expand their knowledge and further develop computer skills using Adobe Creative Suite software (Illustrator, Photoshop, InDesign, Acrobat) and learn various forms of multimedia design—creating animations, websites, and digital video. Students will develop a digital and print portfolio. This course includes a Wellness component. **Grades:** 11, 12 **Pre-Reqs:** Creative Design 1 or with the approval by the instructor

T847 | CP | PRINT & PRODUCTION 2

This course encourages students to develop their skills based on printing requests from real clients. Students continue to learn more skills of the industry including desktop publishing and pre-press techniques. Students acquire higher level skills in the areas of press, screen printing, dye sublimation, bindery, and digital imaging by planning and executing jobs for clients in these areas. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 11, 12 **Pre-Reqs:** Print & Production 1

T849 | TC | AUTO TECHNOLOGY 2

This intermediate level course provides opportunities for second year auto students to learn more advanced automotive systems. Students will become familiar with the operation, maintenance, and repair of hydraulic and ABS brakes, suspension systems, and engine performance. This course will include a review of Level 1. This course also includes an embedded Physical Education and Health component. Students in this course will not be required to take a separate Wellness course. **Grades:** 11, 12 **Pre-Reqs:** Automotive Technology 1

T851 | CP | HEALTH ASSISTING 2

This course of study allows students to apply basic health care skills to a health care setting. The curriculum emphasis is on the physical changes and health problems related to the aged. Students learn to use knowledge and skills in communication, ethics, confidentiality, interpersonal relations, problem-solving, and critical thinking. The acquisition of knowledge occurs in the classroom, lab, and off-site facilities with the Primary site being a skilled nursing facility. After completion of this course, students may take the Massachusetts Department of Public Health's Nursing Assistant test and become certified as a CNA. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 11, 12 **Pre-Reqs:** Health Assisting 1

T870 | HN | INTERMEDIATE MOLECULAR BIOLOGY (BIOTECHNOLOGY 2)

Biotechnology Level 2 (Honors) is an intermediate course through which students build upon the foundation established in Biotech 1. Students engage in projects that involve manipulation of recombinant DNA, restriction analysis, PCR analysis, transformation, protein expression and purification, bioinformatics and ELISA. Independent projects throughout the year provide opportunities to investigate individual areas of interest, promote independence, and develop problem-solving abilities. The course is designed for continued development of 21st Century Skills important for success in the workplace. Through field trips and guest lectures, students have the opportunity for exposure to a wide range of science careers and to interact with professionals from the biotech industry, academia, and hospitals. Sound research and presentation skills continue to be emphasized and practiced. Students in this course will not be required to take a separate Wellness course. **Grades:** 11, 12 **Pre-Reqs:** Biotechnology 1 or the prior approval of the instructor.

T980 | HN | ADVANCED BIOTECHNOLOGY (BIOTECHNOLOGY 3)

Biotechnology 3 (Honors) is an advanced laboratory course where students mimic processes relevant to drug development by generating recombinant DNA, performing genetic transformation, expressing and purifying proteins, and developing assays to test for activity. Biomanufacturing training includes both upstream and downstream processing. Students will use large-scale bioreactors for protein production in bacterial and mammalian cells. Emphasis includes industry-specific technical knowledge and practical training in biomanufacturing processes from large-scale cell cultures (upstream processing) to protein purification (downstream processing), and the chemical and biochemical analytical tools for characterizing products (quality control). The overarching goal is for students to acquire an in-depth understanding of principles underlying biomanufacturing processes, knowledge of emerging technologies, and a foundation for process design and validation. Journal Club provides the opportunity to develop presentation and communication skills while deepening understanding of emerging scientific issues. Qualified students have the opportunity to refine and practice their laboratory skills through summer and after school research experiences. Students completing Level 3 are well suited for post-secondary educational opportunities and are attractive candidates for college laboratory work-study programs. Field trips, guest lectures, and their student-initiated outreach promote professional interactions and network building. This course includes Embedded PE/Wellness; students do not need to enroll in another PE/Wellness course. **Grades:** 12 **Pre-Reqs:** Biotechnology 2 or the prior approval of the instructor

T981 | CP | HEALTH ASSISTING 3

This course offers students the opportunity to receive academic and employability skills necessary for entry level health care positions, such as nursing assistant, dietary aid, & continuous care observers. Students may advance their academic, medical, and employability skills by learning special advanced procedures and applying them to the work force. The goal of the course is to allow students to make the connections from school-to-work within a health care setting. Level 3 seniors who are eligible may apply for Cooperative Education placement opportunities in their area of study. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 12 **Pre-Reqs:** Health Assisting 1 & 2

T983 | HN | ENGINEERING 3

Students learn concepts of robotics and automated manufacturing in this Honors Level course, using "Computer Aided Design" (CAD) and "Computer Integrated Manufacturing" (CIM). CAD continues to expand students' skills in computer modeling design and exposes students to fundamentals of computerized manufacturing technology. Students refine and expand their knowledge of prototyping, CNC equipment, CAM software, robotics, and skills used in the Advanced Manufacturing Lab. Students have the opportunity to invent a new product or make improvements to an existing one. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. Qualified students will be offered the opportunity to participate in a Cooperative Education placement at one of the local engineering firms. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 12 **Pre-Reqs:** Engineering 1 or FastTrack Engineering and Engineering 2

T986 | HN | INFORMATION TECHNOLOGY 3

Information Technology 3 is a continuation of the learning done in IT1 and IT2. Students will continue to hone their IT skills through either a projectbased class or a work experience with a local company. Students will continue to learn about advanced server and networking technologies as well as working in a business environment. This course includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 11, 12 **Pre-Reqs:** Information Technology 2

T987 | TC | PRINT & PRODUCTION 3

This course allows students to work independently on real printing request with minimal instruction. Students specialize in one area to develop strong skills for industry. Those areas include desktop publishing, pre-press, press, bindery, screen printing, dye sublimation and digital imaging. Level 3 seniors who are eligible may apply for Cooperative Education placement opportunities in their area of study. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 12 **Pre-Reqs:** Print & Production 2

T988 | TC | MEDIA TECHNOLOGY 3

This is an advanced course for those students who have excelled in their training in the TV Broadcasting program. Students at this level work as independent producers creating original programming for television, and may be eligible for a Co-op position either away from the high school or on-location. Level 3 students will be responsible for writing budgets, obtaining all appropriate releases and permits, managing studio and field productions as well as overseeing a crew on location and demonstrating advanced skills in technical areas as well as impeccable employability skills. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 11, 12 **Pre-Reqs:** Media Technology 1 and 2

T989 | TC | AUTO TECHNOLOGY 3

Students in this third level of automotive study will be introduced into high tech computer diagnostics and the electrical and electronic automotive systems used in today's vehicles. Students will learn to identify automotive input and output sensors and their operation. Using desktop computers and simulators students will learn to diagnose and assemble automotive circuits. Level 3 students who are eligible may apply for Cooperative Education placement opportunities in their area of study. A review of levels 1 and 2 will conclude this course of study. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 12 **Pre-Reqs:** Automotive Technology 1 and 2

T991 | TC | CARPENTRY 3

This advanced level course is for seniors who have a serious interest and want a future career in the Construction Industry. Students apply the skills they acquired in Carpentry 2 on interior finish work of doors, floors, and ceilings; stairs; walls; and roof systems. Hands-on experience is obtained in the shop, school, and community. Students will also learn about apprenticeship opportunities in the construction field and qualified Level 3s will have the opportunity to apply for Cooperative Education placement. This course also includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 12 **Pre-Reqs:** Carpentry 1 and 2

T992 | TC | CULINARY ARTS 3

Students propose and implement an in-house project during part of the school year. Using skills and competencies which the students have developed, students supervise the operation of the Falcon's Nest Cafe. Seniors are made aware of possible Cooperative Education work, internship opportunities, and community service projects. Students enrolled in Culinary 3 who are applying to post-secondary colleges, have the opportunity to earn the ServeSafe certification. Students also prepare demonstrations for Culinary 1 and Culinary 2 students as well as mentor Culinary 2 students. This course also includes a Hospitality/Tourism Management component. This course includes an embedded Wellness component. Students in this course will not be required to take a separate Wellness course. **Grades:** 12 **Pre-Reqs:** Culinary Arts 1 and 2

T995 | HN | CREATIVE DESIGN 3

Students in this Honors Level advanced course continue developing and refining their skills necessary to be successful in either entry-level positions as a design professionals and preparation for postsecondary education. This course is geared towards independent projects. Advanced and highly motivated students continue to create visual messages through "work assignments and design projects. Students focus on practical applications of previously learned skills with an emphasis on portfolio development and college and career exploration and preparation. Students continue to expand their computer skills using Adobe Creative Suite (Illustrator, Photoshop, InDesign, Acrobat) software. Student will develop and assemble a digital and print portfolio. Qualified students will be offered the opportunity to participate in RSTA's Cooperative Education program in the design field. This course includes a Wellness component. **Grades:** 12 **Pre-Reqs:** Creative Design 2

Science

Expectation: A CRLS student applies a variety of technologies to build and convey understanding.

Science courses are designed to produce an organized sequence of experiences to help students to develop the ability:

- To distinguish between scientific evidence and personal opinion by inquiry and questioning;
- To recognize the role of observation and experimentation;
- To understand scientific theories;
- To gather information through laboratory, field trips, and library work;
- To understand, in some depth, the unifying themes of life and physical sciences.

Physics is the first course in a coherent order of science courses, taught conceptually and using the math of 8th and 9th grades; chemistry is the second course, building on the knowledge of atomic structure to study the structures and properties of matter, and chemical reactions. Modern molecular-based biology is the third course in this hierarchy of science courses. In this sequence, physics concepts and topics underlie chemistry, and physics and chemistry support modern biology.

CRLS requires successful completion of three specific science courses for graduation: S101 Physics First, S201/S202 Chemistry, and S301/S302 Biology. If a student fails physics, chemistry or biology, he/she must repeat the course until successfully completed. A student may enroll in a required science course and an upper level science course at the same time with permission of instructors. S400 level courses are advanced science courses that assume students have solid foundations in physics, chemistry and biology. The course expectations reflect this advanced content.

Beginning with the class of 2010, all Massachusetts students must pass a Science MCAS exam in order to graduate from high school.

S101 | CP | PHYSICS (HN OPT)

Physics is a dynamic hands-on laboratory science course. The curriculum for Physics is split into four major units, each of which includes a laboratory report and a culminating performance assessment. Lab work requires students to collect and mathematically analyze experimental data and communicate the results. In the first unit, students will study velocity, acceleration, Newton's Laws and momentum, in order to use the engineering design process to reduce forces during a collision. In the energy unit, students will study heat and energy to understand and present about renewable and innovative energy resources. The electricity unit will focus on charge, electric circuits, and electromagnetism in order for students to design an electrical toy or game. During the fourth unit, students will study waves, sound and light and create a multimedia presentation about applications of waves in our lives. Honors Designation A student will receive Honors Designation on their transcript for Physics by completing a series of requirements throughout the year, such as: more in-depth assignments, rigorous analysis of their experimental data, and extended research and analysis for their culminating performance assessments. At the end of the course, students will demonstrate their understanding and achievements by creating and presenting an honors portfolio that draws together their body of work and relates it to the overarching goals for the course. **Grades:** 9

S201 | CP | CHEMISTRY

Chemistry emphasizes science and engineering practices related to design and evaluation as well as investigation and modeling in order to explore matter and its interactions. The course is divided into three major units: 1) Form and Function, 2) Chemical Reactions, 3) Energy. The first unit focuses on students developing both molecular and subatomic models of matter and learning to rely on the periodic table as a powerful model for predicting a wide variety of properties of elements and compounds. Throughout the second unit, students are expected to apply mathematical reasoning when considering conservation of matter in chemical reactions and in comparing strength of acid-base solutions. Students will also refine their understanding of conservation of matter by making quantitative predictions of theoretical yields if reactions are driven to completion using stoichiometric molar proportions and molar mass calculations. During the third unit, students will rationalize observation of endothermic and exothermic changes in terms of energy required to break and form chemical bonds when structural rearrangements occur in chemical processes. Students will also build on the basic particle model of matter studied in upper school to add quantitative predictions of externally controllable or measurable properties of gases. During the semester, students are challenged to complete two Curriculum Embedded Performance Assessments (CEPAs), which are project based assessments, in order to demonstrate their knowledge of Unit 1 and Unit 2 topics. **Grades:** 10 **Pre-Reqs:** Physics and a successful completion of a grade 9 math class

S202 | HN | CHEMISTRY

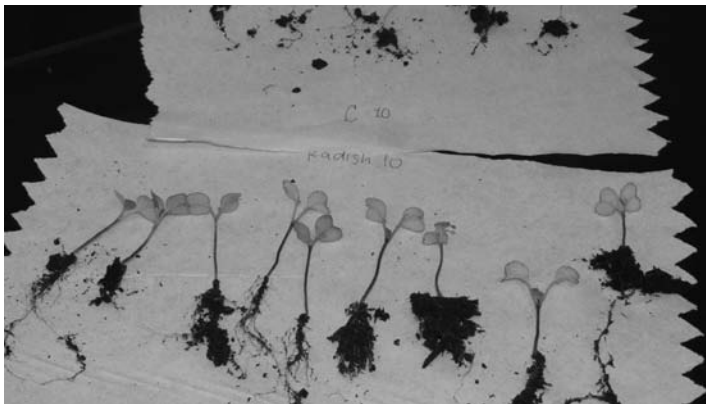
The curriculum of Honors Chemistry will address the three units that are explored in CP Chemistry; however the units will be studied more in depth. For example, during the "Form and Function" unit, students will explore intermolecular bonding and be able to rationalize why some classes of substances are better than others for specific practical uses. Students will also be asked to design molecular level structural specifications of substances that could have desired properties. During the "Chemical Reactions" unit, students will be asked to practice using two major models of reaction processes, the Bronsted-Lowry acid-base reaction model and the oxidation-reduction reaction model, to explain reaction patterns observed in many common phenomena in the natural world. Furthermore, during the "Energy" unit, students will demonstrate understanding of energy transfer and dissipation of energy in chemical systems. They will practice comparing the efficiency of various fuels through the use of stoichiometric heat calculations. Students will also be required to complete two Curriculum Embedded Performance Assessments (CEPAs) throughout the semester. **Grades:** 10 **Pre-Reqs:** S101 Physics and a grade of B or better in freshman math class

S301 | CP | BIOLOGY

This course will explore the biological world from organic chemistry through basic ecological principles, and provide a foundation for advanced scientific investigation and study. This course will focus on current research in the dynamic and diverse field of biology through the following units: 1. Evolution; 2. DNA to Disease (protein synthesis and genetics); 3. Grow Something (ecology, biodiversity, reproduction); 4. You Are What You Eat (molecular biology, ecology). Research in scientific literature, lab skills, student presentations and problem solving techniques will complement the course. **Grades:** 11 **Pre-Reqs:** Physics and Chemistry

S302 | HN | BIOLOGY

This course will explore the biological world from organic chemistry through basic ecological principles, and provide a foundation for advanced scientific investigation and study. This course will focus on current research in the dynamic and diverse field of biology through the following topics: (1) Evolution; (2) DNA to Disease (protein synthesis and genetics); (3) Grow Something (ecology, biodiversity, reproduction); (4) You are what you eat (molecular biology, ecology). Research in scientific literature, lab skills, student presentations and problem solving techniques will complement the course. This course moves at an accelerated pace, and students taking this course are strongly encouraged to take the SAT II Biology Exam at the end of the course. **Grades:** 11 **Pre-Reqs:** Physics and Chemistry grades of B or better or recommendation of previous science teacher



S403 | CP | ASTRONOMY

An introduction to Astronomy, this class will focus on the application of physics to the study of the universe. Intended for highly motivated students interested in science, this class expects students to think critically as well as to make use of mathematical reasoning in the solving and creation of problems related to astronomical phenomena. Students are expected to have a working knowledge of Algebra II concepts. This course will also teach and apply trigonometry and logarithms to astronomy problems. Topics may include: the history of observational astronomy, building a simple telescope and trips to observatories to study the night sky; celestial navigation; stellar evolution from how stars are born to supernovae; black holes; the large scale structure of the cosmos; space-based astronomy and astronomy in the news. **Grades:** 11, 12 **Pre-Reqs:** Physics, Chemistry and Biology. Students can be concurrently enrolled in Biology. Recommended prerequisites: Algebra 2

S404 | CP | CONTEMPORARY APPLIC GENETICS (HN OPT)

Why are some diseases inherited from parents who are perfectly healthy? What is the difference between infectious and genetic disease? Can you find out if you will get a genetic disease? How does one decide whether to learn about one's genetic make-up and what to do with that information? How do we develop guidelines for these advancements that are equitable for ALL? Who pays for the research and who makes a profit? Students use the same cutting edge lab techniques that scientists do in their labs to try to answer these questions about devastating diseases. Finally, students learn how the biotechnology industry is using these modern techniques by investigating how an idea is turned into a profit-making product. This course is lab oriented with an emphasis on investigative skills. **Grades:** 12 **Pre-Reqs:** Physics, Chemistry and Biology. Biology may be taken out of sequence with the permission of the instructor.

S405 | CP | ECOLOGY

From our days as a hunter-gatherer society to the information age, humans have always had a close relationship with the environment. This relationship will be examined through the study of ecological principles that govern population dynamics, community interactions and ecosystem processes. Students gain an understanding of the biosphere as we examine the ways humans have altered the natural ecological processes during our species time on Earth. Human ecological issues to be covered include over-population, pollution, environmental justice, urban sprawl, habitat loss, invasive species, biodiversity loss and global climate change. Over the semester, students will find local solutions to global, ecological problems. Students will design and conduct ecological studies and experiments to engage in research and environmental education advocacy activities. Partnerships with Earthwatch, Massachusetts Audubon Society, and MIT will support student environmental research and study. **Grades:** 12 **Pre-Reqs:** Physics, Chemistry and Biology. Biology may be taken out of sequence with the permission of the instructor.

S406 | CP | EPIDEMIOLOGY

Why are some diseases “catching”? What tools do scientists use to study and control disease? How does my body fight off invaders? What kind of organisms can and do invade my body? Why do Third World countries experience more diseases than developed countries? What ethical issues arise in studying and treating disease? How has biotechnology contributed to making new treatments for these diseases? Students use current lab techniques, read current literature and participate in research projects and design their own epidemiologic study. **Grades:** 11, 12 **Pre-Reqs:** Physics, Chemistry and Biology. Biology may be taken out of sequence with the permission of the instructor.

S407 | CP | HUMAN ANATOMY & PHYSIOLOGY (HN OPT)

This course is a challenging and intensive investigation of human body systems that includes the molecular, cellular and tissue level of the organ systems. Students will engage in discussion, activities and laboratories, and write research papers to gain a better understanding of the structure and physiologic processes of the healthy body. Current trends and treatments in medicine as well as medical ethics are explored. Guest speakers are invited to make presentations. Class will consider career opportunities within the medical field. **Grades:** 11, 12 **Pre-Reqs:** Physics, Chemistry and Biology. Biology may be taken out of sequence with permission of the instructor.

S408 | CP | MARINE BIOLOGY

Students who take Marine Biology will gain a deeper understanding into the variety and diversity of living organisms in the world's oceans through an ecological and evolutionary lens. From Algae to Zooxanthellae and everything in between, we will examine and study the diverse organisms and complex relationships that make life in the ocean possible. Understanding human impact and conservation will be an underlying theme to the course. Wet and dry labs, snorkeling, microscopy, dissections, field trips, lectures and discussions are all used to engage students into the wonderful world of life beneath the waves. As a part of this class, you will learn the skills to create and present a unique project that shows your understanding of the course content and highlights your interests and ideas. **Grades:** 11, 12 **Pre-Reqs:** Chemistry and Biology. Biology may be taken out of sequence with the permission of the instructor.

S409 | CP | FORENSICS

This elective integrated science course is ideal for those interested in future studies and/or careers in law, criminal justice, and public safety. Essential questions including the following will be explored: How can someone be wrongfully convicted? What is the history of forensic science, its advancements, and how did it become integrated into the criminal justice system? What are the types of evidence utilized to analyze a crime scene and how are they gathered and processed? When is forensic evidence admissible and when is it not? **Grades:** 12 **Pre-Reqs:** Physics, Chemistry and Biology. Biology may be taken out of sequence with the permission of the instructor.

S410 | IN | MARINE SCIENCE INTERNSHIP (ACADEMIC INTERNSHIP)

The CRLS MSI is intended for students who are interested in gaining advanced lab and research experience in any of the fields of Marine Science. Students will be placed in a research facility, beginning during period 4 three days per week for a total time commitment of 12 hours per week. Students will also be responsible for keeping a lab journal of their experiences, participate in a student led seminar each week and present their research to a group of invested adults as the culmination of their placement experience. Previous placements have included Harvard, MIT, New England Aquarium, Boston University, Northeastern, BlueFin Robotics. **Grades:** 11, 12 **Pre-Reqs:** Marine Biology or Oceanography and permission of the instructor

S411 | CP | ORGANIC CHEMISTRY

This advanced chemistry course addresses structures, reactions and uses of carbon compounds. The classes of carbon chain and ring molecules will be studied with emphasis on stereochemistry, reactivity and reaction mechanisms. The practical applications of hydrocarbons and biomolecules will be explored, and laboratory activities will be performed. Familiarity with organic chemistry is excellent preparation for all types of medical careers. **Grades:** 11, 12 **Pre-Reqs:** B or better grade in Chemistry and Biology. Biology may be taken out of sequence with permission of the instructor.

S415 | IN | SCIENCE & ENGINEERING RESEARCH (ACADEMIC INTERNSHIP)

The Science and Engineering Research course provides students the opportunity to design and/or carry out a long-term experimental or engineering project. Students will have the opportunity to visit labs at Harvard, Draper, MIT, the Broad Institute, the Cambridge Water department and other sites. After visiting, students will select a lab they'd like to work in. Once students have identified a project, they will conduct experiments and/or engineering work, make presentations and produce a final research paper, poster and materials for the Science Fair. Students will be supported in their work by attending class at CRLS at least once a week. The course is offered in Block 4, allowing the student to leave school to do work in a lab. Students are expected to spend 10-20 hours weekly on their research. **Grades:** 11, 12 **Pre-Reqs:** Application, including resume, transcript and letter of recommendation- See Ms. Dorritie in room 3408 for application.

S416 | CP | EXERCISE PHYSIOLOGY (HN OPT)

Knowledge and application of scientific principles are prerequisites for this intensive, advanced biology course. The course covers how the body functions during exercise, the adaptations that occur in response at a tissue, cellular and molecular level. Focus will be on changes that occur in the circulatory, respiratory and muscular systems; students will conduct labs, plan experiments and write research papers. Please note that this is not a class that will involve general fitness goals or means to achieve them. **Grades:** 11, 12 **Pre-Reqs:** Physics, Chemistry and Biology. Biology may be taken out of sequence with the permission of the instructor.

S418 | CP | OCEANOGRAPHY

Oceanography is the study of all of the physical, chemical and biological processes that make up the world's ocean. Topics will include the origins of the world's oceans, history of ocean exploration and examples of marine technology that allowed this exploration. We will study the forces that have shaped our oceans over time and the features of the sea floor resulting from these forces. Physical processes in the Ocean like tides, currents, waves, erosion of coasts and environmental concerns will make up the bulk of the course content. The capstone project in the course will be designing, building and flying an underwater remotely operated vehicle (ROV) in a competition in the school pool. As a part of this class, you will learn the skills to create and present a unique project that shows your understanding of the course content and highlights your interests and ideas. **Grades:** 11, 12 **Pre-Reqs:** Chemistry

S419 | CP | ZOOLOGY

This course is a challenging elective that studies animals of all shapes and sizes, from ants to whales. Students will examine the diversity of the animal kingdom, focusing on the major groups of invertebrates and vertebrates. They will learn about the physical features and survival strategies of the various phyla, evolutionary relationships between organisms, and the ecological connections between them. Student will engage in authentic inquiry projects, discussion, lab experiences, field trips, and research as they learn about the animal kingdom. This course is essential for anyone interested in animal evolution, veterinary medicine, environmental science, ecology, wildlife biology, and global warming's effect on biodiversity. **Grades:** 11, 12 **Pre-Reqs:** Physics, Chemistry, and Biology. Biology may be taken out of sequence with the permission of the instructor.

S421 | CP | ETHICS AND SCIENCES

We live in a fast pace, high tech, ever increasing digital age. Science has allowed us to do more than most could have imagined a generation ago. **Your** generation has the huge responsibility to decide what we SHOULD or SHOULD NOT do with the advancements. In this course, we will examine current, noteworthy scientific developments and ask ourselves if the developments create and social, moral, and philosophic dilemmas. Much of the course topics will be student driven, but some example questions are: *Who should have access to your DNA? Should we be allowed to edit the human germline? Would the DNA of three people be allowed to be merged to create one baby? (UK has said yes!) Who is responsible for the new antibiotic development? How do we make sure medical devices like pacemakers are secure from computer hackers? From guns to organs, how should we utilize 3D printing? Remote warfare: what are the implications? Climate change preparation: will all be able to face the threat equally?* **Grades:** 11, 12 **Pre-Reqs:** Physics, Chemistry, and Biology. Biology may be taken out of sequence with the permission of the instructor.

S423 | CP | BECOMING DA VINCI - THE INTEGRATION OF ARTS AND SCIENCE

In this course we will investigate how science and art are interrelated. Some topics we may cover are: the chemistry behind art dating and restoration; using engineering to ensure safety in theater; creating animations to visualize proteins and enzymes; how light can affect the way we view colors; ceramic glazes; or other topics that interest the class. We will also take some field trips to see how the intergration of arts and science exist beyond the classroom. **Grades:** 11, 12 **Pre-Reqs:** Physics, Chemistry, and Biology. Biology may be taken out of sequence with the instructor's permission.

S425 | CP | BRAIN & BEHAVIOR (HN OPT)

This course is about the biology of the brain. How are signals transmitted in the brain? How do neurons create memories and how do we learn? How are nervous systems organized? How does the brain control complex animal behaviors such as migration, mating, altruism and echolocation? To answer these questions, students will read varied advanced texts, interpret models and data, participate in class discussions, complete projects and demonstrate understanding on written assessments. **Grades:** 11, 12 **Pre-Reqs:** Physics, Chemistry, and Biology. Biology may be taken out of sequence with the permission of the instructor.

S435 | CP | FOOD, FARMING, & OUR PLANET

Humans have been farming for over 40,000 years! We rely on agriculture for everything from food to animal feed to clothing and fuel. With the looming consequences of overpopulation and global climate change, understanding agriculture is more important than ever. In this course students will learn about agriculture by studying plants, soil, water, microbes, insect pollinators and pests. We will look closely at large agro-business and sustainable organic farming; we will understand environmental degradation and the impact that agriculture has had on our ecosystems; we will learn about solutions and ways that agriculture can sustain our growing human population. Students will conduct independent research projects, write lab reports, read primary sources, and convey scientific information to their peers and the community. **Grades:** 11, 12 **Pre-Reqs:** Physics, Chemistry, and Biology. Biology may be taken out of sequence with the permission of the instructor.

S440 | CP | PROJECT PHYSICS: THE WAY THINGS WORK (HN OPT)

Project Physics is an engineering-based physics course that explores both practical and theoretical aspects of physics. The course brings together physics, technology, mathematics and engineering to build and analyze devices and machines. Students will use the Engineering Design Process to complete a series of design challenges, such as mousetrap cars that travel the fastest, catapults that launch projectiles the furthest, handmade musical instruments, and circuits you can draw with a pen. Projects may change from year to year depending on student interest and outside competitions. **Grades:** 11, 12 **Pre-Reqs:** Physics and Algebra 2

S501 | AP | BIOLOGY

This college level course builds on knowledge obtained in physics, chemistry and biology. The course emphasizes biological principles from an evolutionary perspective. The first semester examines the structure and function of molecules and cells, the molecular basis of heredity and evolution. The second semester examines organismal diversity and the structure and function of plants and animals, followed by a study of interactions in populations and communities. Students taking this course are highly encouraged to take the AP Biology Exam in May. **Grades:** 11, 12 **Pre-Reqs:** Grades of B- or better in Physics, Chemistry and Biology; The Biology requirement may be waived with a science teacher recommendation. Students will be expected to complete a summer assignment before course begins.

S502 | AP | CHEMISTRY

This course is designed to teach chemistry at the college freshman level and prepare students for the AP Chemistry Exam. Emphasis will be on inorganic chemistry, atomic structure, bonding, reactions, periodicity and equilibrium. Laboratory experiments are an integral part of the course. Students should be prepared to do university level work. Students taking this course are strongly encouraged to take the AP Chemistry Exam in May. **Grades:** 11 **Pre-Reqs:** Physics, Chemistry and Biology and previous or concurrent enrollment in Pre-calculus. **ACCELERATED ACCESS:** Freshmen with a 95 or better GPA, who are on track to be in Algebra 2 or higher in their sophomore year, and have a guidance recommendation will receive an invitation from the Dean of Science to take AP Chemistry as a sophomore. **NOTE:** Student in the accelerated access pathway of AP Chemistry, who drop the course beyond the first progress report deadline will receive the requisite WF or WP on their transcript.

S503A | AP | PHYSICS C: MECHANICS (SEMESTER 1 OF AP PHYSICS C)

This course is the equivalent of a calculus-based, introductory, college level physics course on Newtonian Mechanics. It covers the foundation topics of kinematics; Newton's laws of motion; work, energy, and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation. The course focuses on building strong conceptual, theoretical development and problem solving skill for students interested in pursuing science, medicine, engineering or technology college programs and careers. The course also teaches the use and application of the prerequisite math courses: calculus, trigonometry, geometry and algebra. The course has an experimental component for the student to gain first hand experience observing the physics and using experimental equipment. The course is the equivalent of a calculus-based college introductory physics mechanics course and prepare the student to take the AP Physics C: Mechanics exam. Students typically take this course in the fall and subsequently take AP Physics C: Electricity and Magnetism in the spring. Students taking this course are strongly encouraged to take the AP Physics C: Mechanics Exam in May. **Grades:** 11, 12 **Pre-Reqs:** AP Calculus BC recommended but NOT required

S503B | AP | PHYSICS C: ELECTRICITY AND MAGNETISM (SEMESTER 2 OF AP PHYSICS C)

This course is the equivalent of a calculus-based, introductory, college level course on Electricity and Magnetism. It covers the major introductory areas of E&M including: electrostatics; conductors, capacitors, and dielectrics; electric circuits; Maxwell's Equations, magnetic fields; and electromagnetism. The course focuses on building strong conceptual, theoretical development and problem solving skill for students interested in pursuing science, medicine, engineering or technology college programs and careers. The course also teaches the use and application of the prerequisite math courses: calculus, trigonometry, geometry and algebra. The course has an experimental component for the student to gain first hand experience observing the physics and using experimental equipment. The course also prepares the student to take the AP Physics C: Electricity and Magnetism exam. Students taking this course are strongly encouraged to take the AP Physics C: Electricity and Magnetism Exam in May. **Grades:** 11, 12 **Pre-Reqs:** AP Calculus BC. Students often take this course in the spring following AP Physics C: Mechanics, but the Mechanics course is not a prerequisite.

S504A | AP | PHYSICS 1

This is a one semester introductory, algebra-based college physics course covering a wide spectrum of physics topics. The course covers all major topics of mechanics: Newton's laws of motion; work, energy, and power; systems of particles and linear momentum; circular motion and rotation; gravitation; oscillations and mechanical waves. However, AP Physics 1 does not parallel AP Physics C: Mechanics, in that the scope of the course extends beyond mechanics to include an introduction to topics such as electrostatics and waves. This course has an inquiry-based experimental component, designed for the student not only to gain hands-on experience observing physical phenomena and using laboratory equipment, but to engage in scientific questioning and to design investigations and implement data collection strategies to answer a particular scientific question. This course prepares the student for the AP Physics 1 exam, the AP Physics 2 course offered in the spring semester, and for calculus-based college physics. Students taking this course are strongly encouraged to take the AP Physics 1 Exam in May. **Grades:** 11, 12 **Pre-Reqs:** Previous or concurrent enrollment in Algebra 2 (required) and Pre-Calculus (preferred).

S504B | AP | PHYSICS 2

This course continues the treatment of electricity and magnetism introduced in AP Physics 1 in much more depth and detail. However, AP Physics 2 does not parallel AP Physics C: Electricity and Magnetism, in that the scope of the course includes an in-depth treatment of topics such as thermodynamics, fluid mechanics, atomic and nuclear physics, quantum mechanics and the limitations of classical mechanics, optics, and electromagnetic waves. This course has an inquiry-based experimental component, designed for the student to not only gain hands-on experience observing physical phenomena and using laboratory equipment, but to engage in scientific questioning and to design investigations and implement data collection strategies to answer a particular scientific question. This course prepares the student for the AP Physics 2 exam and for calculus-based college physics. Students should plan on taking this course in the spring following AP Physics 1. Students taking this course are strongly encouraged to take the AP Physics 2 Exam in May. **Grades:** 11, 12 **Pre-Reqs:** AP Physics 1, Previous or concurrent enrollment in Algebra 2 (required) and Pre-Calculus (preferred).

S510 | AP | ENVIRONMENTAL SCIENCE

This course is the equivalent of a one-semester, introductory college course. Environmental science is offered from a wide variety of disciplines, including geology, biology, environmental studies, environmental science, chemistry and geography. This course has been designed to enable students to undertake an advanced study of environmental topics in college. The goal is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, identify and analyze environmental problems both natural and human-made, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving and/or preventing them. **Grades:** 11, 12 **Pre-Reqs:** Physics, Chemistry, Biology and Algebra. Biology may be taken out of sequence with the permission of the instructor.

Visual & Performing Arts

Expectation: A CRLS student represents ideas through an expressive medium.

The Department of Visual and Performing Arts offers students a comprehensive arts education in a conservatory-like atmosphere. A full array of course offerings in dance, drama, music, and the visual arts enables students to build skills and understandings. Sequenced paths lead to proficiency and new ways of perceiving and interpreting ideas. Course offerings support the development of a life-long love of the arts as well as a solid preparation for those who wish to continue studying the arts after graduation from CRLS. This is done in a supportive learning environment, and is enriched by regular encounters with professional visual and performing artists.

A020 | CP | PORTRAITS

The main focus of this course is for students to become comfortable with drawing and painting people by drawing what they see, not the symbols in their heads. Students will explore drawing and painting portraits in graphite, and acrylic. Students will visit Youville Retirement Home to draw, paint and interview the residents. Portraits class is a family-like environment where students become comfortable with each other through development of their art. **Grades:** 10, 11, 12 **Pre-Reqs:** Foundations of Art or permission of the instructor.

A021 | CP | FOUNDATIONS OF ART

This introductory level course will consider the variety of ways that art is used for expressive purposes. This class will focus on the elements of art and the principles of design, using two- and three- dimensional media. Students will draw upon a wide range of materials and techniques to foster their creativity and enhance their problem solving skills. Assignments as well as individual and class critiques will support the development of critical thinking skills. **Grades:** 9, 10, 11, 12

A022 | CP | PAINTING

Students will explore the materials and properties of acrylic painting through a series of demonstrations and classroom assignments. Composition, perspective, realism, abstraction, and non-objective painting will be addressed. Students will examine different periods and genres such as the Renaissance, Impressionism, Abstract Expressionism, still life, and portraiture. The class will participate in visits to local museums and engage in critical thinking exercises to sharpen their visual skills. **Grades:** 10, 11, 12 **Pre-Reqs:** Foundations of Art or permission of instructor.

A025 | CP | PHOTOGRAPHY 1

Introduction to Photography is designed to make a seamless entry into the basics of digital and analog photography. This beginning level course emphasizes the interdependence of the latest analog and digital techniques. It encompasses digital capture, film and digital processing, and printing using digital technology and enlargers to make photographic prints. Students will learn to operate digital and film SLR cameras, and how to edit in Camera Raw and Photoshop, develop film, and produce fine art prints in both the wet and dry labs. Students will be introduced to the foundations of design concepts including line, shape, color, composition, value, and form. Students will write research papers on the contemporary and historical masters of photography as well as create an artist statement. **Grades:** 9, 10, 11, 12

A028 | CP | JEWELRY MAKING 1

This course will explore basic jewelry making and metal working processes. Assignments will introduce techniques including bead weaving, chain and maille, shaping wire, cutting metal, cold joinery, light forming, surface treatments and finishing methods. Projects will be based on skills and concepts as they relate to creating jewelry with additional opportunities to explore the creation of utilitarian objects. By the end of the course, students will become proficient in beading and working with metal, both technically and as a means of artistic expression. Projects include but are not limited to: Beaded jewelry, necklace pendants, drop earrings, cuff bracelets, rings and keychains. **Grades:** 10, 11, 12 **Pre-Reqs:** Introduction to Wearable Art or permission of instructor.

A029 | CP | ANIMATION 1

This is a beginning level course designed to teach time-based media concepts through the creation of short animated pieces. Students will learn to draw their own characters and scenes, put them in motion, and use these building blocks to tell engaging stories using Adobe Animation. The class will include periodic critiques of student work as well as viewings of professionally animated shorts and movies. **Grades:** 9, 10, 11, 12

A030 | CP | STUDIO ART 1

This course is designed for students who have satisfactorily completed Foundations of Art and would like to continue to develop their technical and expressive skills. Projects addressing individual and contemporary issues will be assigned as students continue to explore a variety of tools and media including drawing, painting, printmaking and two- and three-dimensional design. Assignments will emphasize development of the artist's personal voice and the ability to express ideas visually. Students will develop intermediate skills in drawing, the use of elements of art, and principles of design. **Grades:** 10, 11, 12 **Pre-Reqs:** Foundations of Art

A038 | CP | JEWELRY MAKING 2

This course is designed for those students who want to continue their study of jewelry making. Emphasis will be placed on individual projects that integrate all the skills learned in Jewelry 1 while learning new techniques such as soldering and stone setting. Additional areas of study may include: Casting, Repouse/chasing, Mokume Gane, mechanisms, and faceted stone setting. **Grades:** 10, 11, 12 **Pre-Reqs:** Jewelry Making 1

A040 | CP | PHOTOGRAPHY 2

Intermediate Photography requires that students have an introductory knowledge of both digital and analog photographic capture taught in Photography 1. Students will learn to edit their creative images in Photoshop using layers, and scan their black and white film. Students will develop an understanding of the aesthetics of photography and art criticism through class critiques and digital media. Students will assess their own and other photographers' images using contemporary photographic vocabulary and critical thinking skills. Students will formulate their own digital and analog projects with the emphasis on the importance of image making and visual literacy in the 21st century. Students will write research papers on the contemporary and historical masters of photography as well as create an artist statement. **Grades:** 10, 11, 12 **Pre-Reqs:** Photo 1

A045 | CP | ANIMATION 2

This is an advanced level course intended for students who have completed Animation 1 who want to further develop their skills with time-based media. The class will include periodic critiques of students' work as well as frequent viewings of professionally animated shorts and movies by major studios such as Pixar, Studio Ghibli, and Disney as well as smaller, independent studios and animators. **Grades:** 10, 11, 12 **Pre-Reqs:** Animation 1

A050 | CP | INTRODUCTION TO WEARABLE ART

Perfect for the designer at heart, this introductory course focuses on creating art that is meant to be worn. Using metals, fibers, textiles, paper, beads, stones, found objects and recycled materials, students will create projects that explore fashion, art, jewelry, costume and body decorations from a variety of cultures. Students will design and construct pieces of wearable art as a way to inspire and generate fuel for a deeper understanding of how the human body is both celebrated and decorated. Emphasis will be placed on development of concept, skill, and voice through material investigation, research, discussions, lectures, individual and group projects. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** This class is a prerequisite for Fashion Design 1, 2 & 3 and Jewelry Making 1 and 2.

A070 | CP | FASHION DESIGN 1

Students in this course will learn to illustrate the fashion figure, clothing and accessories using the tools and techniques practiced today in the fashion industry. The class will explore past, current and personal fashion concepts through research of fashion designers and brands. This will help them to promote their fashion designs and to understand the progress of fashion throughout history. Students will also learn fashion design skills ranging from basic textile identification, pattern making, drawing, hand and machine sewing to embellishing projects that utilize the principles of art and the elements of design. Both women's wear and men's wear will be examined. The course will be enhanced by the formal review process and students will assess their own and each other's work through journal writing and oral critiques. **Grades:** 10, 11, 12 **Pre-Reqs:** Introduction to Wearable Art or permission of instructor.

A075 | CP | BEGINNING CERAMICS

This is an introductory course in sculpture using clay as the medium. Students will learn to apply the elements of design as they relate to three dimensional artwork. This will include form, texture, glaze application as well as exploring ones self in their artwork. Students will be introduced to the clay building techniques of slab construction, coil construction, and pinch pots. Students will also explore the difference between functional and nonfunctional artwork as it relates to the clay medium. **Grades:** 9, 10, 11, 12

A465 | AP | STUDIO/PORTFOLIO ART

This course is designed for serious art students who intend to submit a portfolio for evaluation by the Advanced Placement Program and/or pursue admission to a program in the visual arts at the post-secondary level. The course is designed to help students develop a portfolio that reflects the rigor of first-year college-level standards. Students will be asked to develop a body of work that demonstrates breadth, depth of sustained investigation and quality. **Grades:** 12 **Pre-Reqs:** Foundations of Art, plus two of the following: Studio Art 1 and 2, Portraits, Painting. Final selection for all students will be based on a portfolio review. Preference given to students who follow the traditional track: Foundations, Studio 1, Studio 2, permission of the instructor

A926 | CP | DIGITAL STUDIO 1

This beginning level course is intended to give students an introduction to making fine art on the Apple computer. Students will learn the basics of Adobe Photoshop and Illustrator, and will use digital cameras, scanners, and drawing tablets to manipulate and create their own original imagery. The class will include periodic critiques of student work. **Grades:** 9, 10, 11, 12

A960 | CP | DIGITAL STUDIO 2

This is an advanced course for students who have completed Digital Studio 1 and would like to further develop their skills. Students will build their understanding of Photoshop and Illustrator techniques and learn how to convey more complex visual narratives. As with the previous course in the sequence, scanners, digital cameras, and drawing tablets are available for students to use as needed for their work in class. The class will include frequent critiques of students' work. **Grades:** 10, 11, 12 **Pre-Reqs:** Digital Studio 1

A962 | HN | FASHION DESIGN 2

Students will diligently practice their drawing, designing, and garment construction skills, as well as be introduced to several modern fashion design concepts. Using deconstruct and reconstruct methods, they will embellish on existing product designs while creating their own designs. Students will keep up on current trends using technology, while also practicing traditional drapery and pattern design techniques. An in-depth study of designers will be integrated throughout the course. Digital documentation for a portfolio will be practiced. The course will culminate with the design of a clothing line that emphasizes individual style. **Grades:** 10, 11, 12 **Pre-Reqs:** Fashion Design 1

A963 | HN | STUDIO ART 2

This course is designed for students who want to continue to develop as an artist. A complete understanding of the elements of art and the principles of design as well as the ability to express one's ideas visually in a variety of media is emphasized. This course consists of in-depth assignments that encourage students to become independent, creative and critical visual thinkers who will contribute creatively and critically to their communities through the making of art. **Grades:** 11, 12 **Pre-Reqs:** Foundations of Art and Studio Art 1 or permission of the instructor

A964 | HN | PHOTOGRAPHY 3

Advanced Photography is a course emphasizing creative, technical, and aesthetic control in the digital and analog labs to achieve high quality, expressive images. This course will provide an in-depth exploration of the inter-dynamics of computer based and historical black and white creative processes. Students will use these as the tools to create meaningful bodies of work and encourage more mastery in image making. Students will go to galleries and exhibitions and interview professional photographers working in the medium in order to build the necessary foundation for Portfolio Photography. Students will write research papers on the contemporary and historical masters of photography as well as create an artist statement. **Grades:** 10, 11, 12 **Pre-Reqs:** Photo 2

A965 | CP | ADVANCED CERAMICS

This advanced course builds on the skills and understandings developed in Beginning Ceramics. Students will refine their techniques striving for mastery of the clay medium. This course is designed for serious art students who would like to expand their knowledge of sculpture and clay. If taken for multiple semesters, students can focus on developing a portfolio that can be used to apply to either a liberal arts college or an art school. Students are encouraged to repeat this course in consecutive semesters and over multiple years to continue development of their technical and artistic skills. **Grades:** 10, 11, 12 **Pre-Reqs:** Beginning Ceramics A075

A966 | CP | DIGITAL PORTFOLIO 3

This course is for the Digital Studio student who would like to explore expert-level techniques and/or develop a portfolio using digital tools. Students will learn to express their own voices as fine artists, and will learn to convey personal and heartfelt messages through their work in their chosen digital medium. Projects become progressively more independent as the semester goes on, and the course culminates in an independent project that is entirely created by the student from concept to execution. The class will include frequent critiques of students' work. **Grades:** 10, 11, 12 **Pre-Reqs:** Digital Studio 2, or Animation 2 with instructor permission



A968 | CP | PORTFOLIO PHOTOGRAPHY

Portfolio Photography emphasizes independent projects using advanced digital and analog processes. Students will use various creative techniques in the digital and analog darkrooms in order to produce exhibition quality prints, panoramic digital files, and archival fiber prints in the wet lab. Students will envision and create a body of work that is cohesive, compelling, and creative. Students will create original portfolios that can be used as a personal record and can be presented for admission to college and professional photography programs. Students will investigate avenues of publishing and exhibiting their work through the many venues available today including the internet, publishing books, galleries and museums. Students are required to work independently and to write their own proposals and follow through on well-conceived personal projects with rigor and commitment. Students will write research papers on contemporary and historical masters of photography and give presentations on their work as well as create an artist statement. **Grades:** 10, 11, 12 **Pre-Reqs:** Photo 3

A969 | AP | PHOTOGRAPHY

This course is designed for serious photography students who intend to submit a portfolio for evaluation by the Advanced Placement Program and/ or pursue admission to a program in the visual arts at the post-secondary level. The course is designed to help students develop a photography portfolio in either digital format or analog film format that reflects the quality, quantity and breadth of first year college-level standards. Students will develop a portfolio that demonstrates depth of technical knowledge, depth of conceptual knowledge and knowledge of contemporary and historically relevant photographers from the history of photography. **Grades:** 10, 11, 12 **Pre-Reqs:** Photo 1, Photo 2 & Photo 3 or portfolio. Final selection for all students will be based on a portfolio review.

A972 | HN | FASHION DESIGN 3

This class is for the serious fashion student who may pursue admission to a program in fashion at the post-secondary level. Students will continue to grow their skills, wardrobe and portfolio through the development of a line of clothing that exhibits quality, quantity, and breadth. Students will be asked to develop this body of work to demonstrate their strengths in innovation and the entire design process from initial concept, to composition and execution. **Grades:** 11, 12 **Pre-Reqs:** Fashion Design 2

D090 | CP | DANCE 1

This is an introductory modern dance technique course intended for students who have little or no formal dance training. We physically explore dance forms such as modern, jazz, and ballet, as well as dances from around the world. In addition to teaching basic dance skills and etiquette, this course will help students develop self-awareness, flexibility, strength, balance, and coordination. Class activities also include viewing dance on film, writing assignments, and discussions on dance. Dance 1 is a serious study of dance requiring a consistent high level of participation, physical effort, and focus. This course may be taken for PE credit and alternates every other day, with health for those students who need to fulfill the health requirement, or with other alternate day courses. **Grades:** 9, 10, 11, 12

D095 | CP | ELEMENTS OF THEATER

This class presents an overview of drama while providing practical training in improvisation, voice, speech, characterization and stage movement. Special attention is given to creating original material and preparing the actor for performance. This course is a prerequisite to all other acting courses. **Grades:** 9, 10, 11, 12

D863 | CP | FILM STUDIES

Film studies will introduce the art, technology, language and appreciation of film, exploring history and genres of cinema. Students will learn about the basic cinematic design aspect and how they evolved from silent films to the present. The class will analyze the fundamentals of film production, directing, acting and editing; how the elements of the production process are analyzed separately, then brought together to show how they create the emotional and intellectual impact of the film experience. Films will be screened both inside and outside of class. **Grades:** 11, 12

D864 | HN | ACTING & DIRECTING

This course offers an intensive approach to the study of theatre arts with an emphasis on exploring directing techniques and theory as well as advanced acting to prepare students for Senior directing projects. Class projects require students to have a high level of acting proficiency and the self-discipline to work independently in small groups. Coursework includes lectures, workshops, play reading, scene work from both a director's and actor's point of view, and scene study analysis. A showcase of scenes and monologues will be presented at the end of each semester. Students are encouraged to repeat this course in consecutive semesters and over multiple years to continue development of their acting and performance skills. **Grades:** 11, 12 **Pre-Reqs:** Elements of Theater and Acting and Play Study

D865 | HN | ADVANCED ACTING

This course offers an intensive approach to the study of theatre arts with an emphasis on acting styles and theory. Class projects require students to have a high level of acting proficiency and the self-discipline to work independently in small groups. Coursework includes lectures, workshops, play reading, monologue preparation, and/or scene study analysis. A showcase of scenes or monologues will be presented at the end of each semester. Students may repeat this course in consecutive semesters and over multiple years to continue development of their acting and performance skills. **Grades:** 11, 12 **Pre-Reqs:** Elements of Theater and Play Study



D867 | CP | LATIN DANCE

Do you like to be challenged? Are you willing to work hard? Study Latin to build your critical thinking skills and to stretch your memorization muscles. Are you a word lover? Do you want to improve your English vocabulary? Study Latin to learn the origin of approximately 60% of our English vocabulary. The Latin language and ancient Roman culture have greatly influenced our own modern lives. If you are interested in mythology, gladiators, Roman art and architecture, cities buried by volcanic eruptions, politics, Roman emperors and struggles for power, and any other aspect of daily life in Ancient Rome, take Latin to find out more. Course Description: Latin Dance is open to all students regardless of their dance experience. Basic dance technique of Latin dance forms will be taught from a sociocultural perspective. We will practice movement exercises and dance combinations to develop skill in the areas of rhythm, balance, coordination and partnering. In addition, we will explore how these Latin dances became an integral part of their respective cultures. We will also compare popular Latin dance styles to better understand, experience and celebrate the dance vocabulary and customs of Latin America. This course may be taken for PE credit and alternates every other day with health for those students who need to fulfill the health requirement. **Grades:** 9, 10, 11, 12

D868 | HN | DANCE TECHNIQUE & CHOREOGRAPHY

HN Dance Technique and Choreography is intended for students who have successfully completed Dance 2. This class requires a thorough knowledge of dance vocabulary, technical proficiency, and the self-discipline to work independently. Emphasis is on dance composition, dance technique, quality of work (both written and practical), and artistic growth. This course will culminate in a fully produced public concert each semester. Students may repeat this course as they continue to develop their composition, technique, and performance skills. Course D868 may be taken for Wellness credit. **Grades:** 10, 11, 12 **Pre-Reqs:** Dance 1 D090 and Dance 2 D945

D869 | HN | PLAYWRITING

In this workshop based course, students will learn various techniques and tools a playwright uses to write an original play, including source material, theme, structure, setting, character, language and revision. Students will engage in a variety of writing exercises to develop their skills in playwriting, while also reading and discussing the work of playwrights from classical to contemporary. Students will also explore basic acting techniques to enhance their writing skills and to help them interpret one another's work, however acting experience is NOT required. There will be regular class critiques and students will be expected to write a short play. Juniors and Seniors may take this course as an English elective. **Grades:** 10, 11, 12



D870 | CP | MODERN DANCE COMPANY

Modern Dance Company is an after-school course designed for students who exhibit extraordinary commitment to dance at CRLS. Acceptance into the course as a dancer is based on an audition held at the beginning of each semester. Juniors and seniors interested in applying to choreograph are required to have taken HN Dance Technique & Choreography and must submit a written application. The focus of this course is on dance making, refining technique, and enhancing performance skills through rehearsals with student and guest choreographers, weekly dance classes and written reflection. The course culminates in a performance, "Dance/works," which takes place in January or May. [All students are required to perform and attend technical rehearsals during performance week (typically 3:00-8:00 M-Th and 5:00-10:00 Fri-Sat).] This course may be taken for PE credit. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** No prerequisite, enrollment based on audition.

D945 | CP | DANCE 2

Dance 2 is a challenging dance technique course intended for students who have successfully completed Dance I or have equivalent dance training who want to further develop their movement skills. Students improve their movement skills through units in concert dance technique, dances from around the world, dance history, and choreography. Class activities also include self-reflection, group discussions on dance, viewing and responding to dance on film, and studying dance history and anatomy. This course may be taken for Wellness credit. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Dance 1 D090 or audition.

D955 | HN | ACTING AND PLAY STUDY

This course in acting and play study is for students who wish to refine and further develop their acting skills. We will explore plays from world literature in order to better understand the context in which acting occurs. Class projects will emphasize character analysis and interpretation through improvisation and scene study. Students must have a high level of motivation and should be able to work independently on class assignments. **Grades:** 10, 11, 12 **Pre-Reqs:** Elements of Theater

D965 | CP | MUSICAL THEATRE PERFORMANCE

This class will explore some of the basic elements of performing musical theatre. Topics will include acting in the musical theatre style, acting a song, song structure, genre, placement, lyrics construction, and vocal techniques as employed in various styles of music theatre. The students will explore scenes from the musical theatre canon, in which the DIALOGUE of a musical is integrated with THE MUSIC focusing on the skills needed to perform in THE MUSICAL THEATRE STYLE. Duets, trios, and group scenes will be assigned. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Enrolled students will be expected to work independently.

1025 | HN | JAZZ WORKSHOP

Jazz Workshop is designed to teach the students the art of improvisation through listening and performance of quality jazz literature. Students will explore the early roots of jazz beginning with blues and progressing through bebop, cool jazz, fusion and contemporary styles. The philosophy used in learning the language of jazz will be based on the following model: imitate, assimilate and innovate. Any instrumentalist and vocalist with two or more years experience on their instrument can enroll in the course. The class is geared towards beginning/intermediate jazz students. Students may repeat the course. **Grades:** 10, 11, 12 **Pre-Reqs:** Two or more years experience as an instrumentalist or vocalist.

I040 | HN | DRUM LINE/PERCUSSION ENSEMBLE

In this course, students learn how to play as an ensemble. The instrumentation includes traditional and non-traditional percussion instruments such as snare drum, bass drum, multi-toms, mallets, cymbals, timpani and world percussion instruments. Students in Drumline/Percussion Ensemble make up the percussion section of the CRLS Concert Band, as well as being members of the Drumline, and Percussion Ensemble. The Concert Band and the Drumline perform at the Memorial Day Parade and Thanksgiving football game. Percussion Ensemble plays a featured piece at the winter and Spring concerts and performs as band members. This course is for drummers, percussionists and all instrumentalists who have been playing for at least one year. Students are encouraged to take this course for continuous semesters and over multiple years to continue development of their composition, technical, and performance skills. This class includes rhythmic ear training, composition, arranging and improvisation. **Grades:** 9, 10, 11 **Pre-Reqs:** By audition.

I050 | HN | PIANO STUDIES

Honors Piano Studies is for students who have successfully completed Beginning Piano with teacher approval, or who have recently studied piano elsewhere for at least one year and are proficient at reading musical notation. This course is designed to help students expand their piano technique and overall musicianship while studying more advanced piano selections. Students will be expected to be able to work independently and may choose from a wide variety of music literature. Students will also improve their performance and listening skills. Opportunities will be provided for outside and in-class performances. Students are encouraged to repeat this course in consecutive semesters and over multiple years. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Students are encouraged to take it for continuous semesters; Prerequisites: Beginning Piano with teacher approval or one year of piano instruction.

I055 | HN | CONCERT BAND

Concert Band is designed for students who have played a brass, woodwind, or percussion instrument for at least one year. Students will study and play a wide range of music literature, from light classics and popular to the traditional music of both Western and non-Western cultures. In addition to performance skills, students will study music theory and ear training. Students electing this course will be expected to participate in events at which the Band performs including assemblies, competitions, football games, concerts, and civic affairs such as the Thanksgiving Football game and the Memorial Day Parade. Students are encouraged to take this course for continuous semesters and over multiple years to continue development of their technical and performance skills. **Grades:** 10, 11, 12 **Pre-Reqs:** One year of instrument instruction.



I055A | HN | FRESHMAN CONCERT BAND

Freshmen Concert Band is designed for freshmen who have played a brass, woodwind, or percussion instrument for at least one year. Freshman Concert Band students will always perform with the upperclassmen sections of Concert Band. Students will study and play a wide range of music literature, from light classics and popular to the traditional music of both Western and non-Western cultures. In addition to performance skills, students will study music theory and ear training. Students electing this course will be expected to participate in events at which the Band performance including assemblies, competitions, concerts, and civic affairs such as the Thanksgiving Football Game and Memorial Day Parade. This is a yearlong course on an alternating Black and Silver day rotation. Upon completion of this course, students are encouraged to take I055 Concert Band for continuous semesters and over multiple years to continue development of their technical and performance skills. **Grades:** 9

I059 | HN | STRING ORCHESTRA

String Orchestra is open to all string players (violin, viola, cello, upright bass) who are proficient on their instrument. Students will study and perform a wide range of music literature. In addition to performance skills, students will also learn how to navigate and interpret an orchestral score and develop their critical listening. Students electing this course will be expected to participate in events at which the orchestra performs. These events may include assemblies, competitions, concerts, and civic affairs. Students are encouraged to repeat this course in consecutive semesters and over multiple years to continue the development of their performance skills and overall musicianship. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Students are encouraged to take it for continuous semesters; Prerequisite: One year of string instruction.

I059A | HN | STRING ORCHESTRA BEFORE/AFTER SCHOOL

String Orchestra meets on Monday evenings from 7 - 9PM and on Friday mornings from 7AM- 8AM. It is open to all string players (violin, viola, cello, upright bass) who are proficient on their instrument and have the independence and discipline needed to practice on their own. . Students will study and perform a wide range of music literature. In addition to performance skills, students will also learn how to navigate and interpret an orchestral score and develop their critical listening. Students electing this course will be expected to participate in events at which the orchestra performs. These events may include assemblies, competitions, concerts, and civic affairs. Students are encouraged to repeat this course in consecutive semesters and over multiple years to continue the development of their performance skills and overall musicianship. This section is for those students who love to play, but cannot fit orchestra into their schedule. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** permission of the instructor

I070 | CP | CHORUS

The CRLS chorus is open to all students in grades 9,10,11,12 with or without singing experience. It is designed for students who are interested in learning the fundamental principles of ensemble choral singing. We will explore two-, three-, four-part and a cappella singing formats from a variety of historical periods and styles of choral literature, including classical, jazz, gospel, and popular music. Emphasis will be placed on proper singing techniques. Students will also develop music theory and sight-singing skills. Students electing this course will be expected to participate in events at which the CRLS choruses perform including concerts, festivals, competitions and assemblies. Students are encouraged to repeat this course in consecutive semesters and over multiple years to continue development of their vocal performance skills. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Students are encouraged to take it for continuous semesters.

1072 | CP | INTRODUCTION TO A CAPPELLA

This course is for any student interested in learning how to perform and arrange music in the a cappella style made famous by groups like Pentatonix and the movie Pitch Perfect. The class will emphasize essential elements of participating in an a cappella group such as singing solo, bass or harmony, developing an arrangement, beat boxing, microphone technique, and staging of performances. Students will be expected to perform in a cappella jams, concerts, festivals, school assemblies, and civic functions. This course is offered in alternate semesters with the Music Theater class. **Grades:** 9, 10, 11, 12

1073 | HN | A CAPPELLA CHOIR BEFORE SCHOOL

This course is designed for students who possess above-average singing ability and exhibit commitment to their own vocal development. The A Cappella Choir is a year-long course meeting three hours a week before school, with additional performance requirements after school and some evenings. Acceptance into the program is based on an audition held at the beginning of the school year. Students who pass the audition are encouraged to register for the course and receive graduation credit. Students electing this course will be expected to participate in events at which the a cappella groups perform including a cappella jams, concerts, festivals, competitions and assemblies. Students are encouraged to take this course over multiple years to continue development of their vocal performance skills. The course earns 4 credits each semester. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Audition in the fall

1080 | CP | BEGINNING PIANO

Beginning Piano Studies is open for students who have never played piano or who have limited to no experience in note reading. Students will develop their playing technique, music reading and listening skills. Students will also become proficient in performance and listening etiquette. Opportunities will be provided for outside and in-class performances. Students are encouraged to repeat this course in consecutive semesters and over multiple years **Grades:** 9, 10, 11, 12

1085 | CP | DRUMMING AND PERCUSSION

This drumming course teaches rhythms like hip-hop, rock, pop, jazz, bossa-nova, and cha-cha. It covers Brazilian and Afro-Cuban styles. Class material is modified each semester according to student needs, so this course is appropriate for beginners, intermediate or advanced students – and it can be taken more than once. Audio and video examples will be used to learn different artistic styles. Students will bring a favorite tune to work on in class, and encouraged to perform as a group. Students will learn how to read music charts, and to create a groove for the drumset and percussion instruments. It includes rhythmic and melodic ear training and focuses on foundations of music including music notation, scales, basic chords, time and key signatures. This course is open to any instrumentalists, not just drummers, as well as dancers and actors who would like to learn more about creative improvisation and rhythmic patterns. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** None.

1090 | HN | BIG BAND JAZZ ENSEMBLE AFTER SCHOOL

Big Band meets all year, one evening per week for three hours. This course provides an opportunity to study and perform various styles of jazz in a highly challenging setting. The course emphasizes music theory, ear training and improvisational technique. Students will be expected to participate in all events at which the Big Band performs including assemblies, competitions, concerts and civic events. Students are encouraged to take this course over multiple years to continue development of their technical and performance skills. Participation is by audition only. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** By audition.

1091 | HN | WORLD JAZZ ENSEMBLE AFTER SCHOOL

This jazz ensemble will focus on the performance of a variety of musical styles from many areas of the world, such as South America, Europe, the Middle East, Africa, and Asia. Instrumentation will be piano, bass, drums, guitar, horn, strings, woodwinds, and vocals. This ensemble will include original materials written and performed by the students as well as the instructor. The course will also focus on how the rhythm section works in many different styles. In addition it will include recording and basic music production using professional music software. The World Jazz Ensemble will perform at school concerts and community events. This advanced ensemble is for students who have played their instruments for at least two years. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** By audition.

1945 | HN | VOCAL ENSEMBLE

Vocal Ensemble is an advanced choir for students with above-average singing ability. It is designed for students who can perform advanced-level choral literature. Auditions for Vocal Ensemble are held in the spring. Students new to CRLS may audition in September. Emphasis will be placed on the study and practice of advanced singing techniques. Students will regularly perform at civic functions, school assemblies, concerts, competitions and festivals. Students are encouraged to repeat this course in consecutive semesters and over multiple years to continue development of their vocal performance skills. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** By audition or invitation.



Wellness

Expectation: A CRLS student pursues a lifestyle that fosters physical, emotional, and psychological health.

OVERVIEW

The Health, Physical Education and Wellness Department offer courses that teach students to make healthy decisions and develop lifelong physical fitness. Our students are provided with an educational setting through which they can gain knowledge and understanding of themselves physically, socially and emotionally. Our program is based on themes of character and value that teach students lifelong lessons which they can use in the larger school community and in their personal lives.

Freshman students are required to take one of the following:

- Wellness 1 (10 credits) available as a semester or alternate day yearlong course
- Grade 9 Health Education (5 credits) and Dance 1 (5 credits)

Sophomores, Juniors and Senior students may choose one of the following courses:

- PE Before School Lifetime Fitness (Sem. 1 Only)
- PE Before School Swim Development And Aquatic Fitness (Sem. 1 Only)
- PE Before School Lifeguard Certification (Sem. 2 Only)
- Before School Yoga And Stress Management
- Health Education For English Language Learners
- Swim Development & Aquatic Fitness
- PE Athletics
- Wellness Elective 5 Credits

Students will have an opportunity to select 2 wellness quarter courses from those offered each period which may include: Basketball, Volleyball, Flag Football, Soccer, Badminton, Tennis, Pickleball, Nutrition*, Substance Abuse Issues*, Self Defense, Financial Health, Sports Psychology, Cpr, Olympic Weightlifting, Cardiovascular Fitness, Muscular Fitness, High Adventure Climbing, Fitness Walking, Yoga & Stress Management, Basic Yoga Poses, Relaxation and Mindfulness, Swim Development & Aquatic Fitness, Water Safety Instructor, Lifeguard Certification

WELLNESS ELECTIVE 10 CREDITS

Students Will Have An Opportunity To Select 4 Wellness Quarter Courses From Those Offered Each Period Which May Include: Basketball, Volleyball, Flag Football, Soccer, Badminton, Tennis, Pickleball, Nutrition*, Substance Abuse Issues*, Self Defense, Financial Health, Sports Psychology, Cpr, Olympic Weightlifting, Cardiovascular Fitness, Muscular Fitness, High Adventure Climbing, Fitness Walking, Yoga & Stress Management, Basic Yoga Poses, Relaxation and Mindfulness, Swim Development & Aquatic Fitness, Water Safety Instructor, Lifeguard Certification

In addition, the ability to swim and engage in watersports is a lifetime skill highly regarded by Cambridge Public Schools.

Water related activities could pose a serious threat to those unable to swim and those uneducated in water safety. Because of the value and importance of knowing how to swim all students must pass a Swim Test in order to graduate. The swim test includes a 100 yard swim and a 5 minute tread. Swimming lessons and testing will take place in the Wellness 1 classes. If students do not pass the Wellness 1 swim test they will be required to take Swim Development and Aquatic Fitness to meet this graduation requirement. The department prides itself on assisting students who have either religious restrictions or fear of the water. Please speak to a Wellness staff member for special accommodations.

PE0020A | PE | LIFETIME FITNESS - BEFORE SCHOOL

This class will be offered before the school day (6:45-7:45). Recent research shows that cardiovascular exercise before the school day can improve a students' readiness for learning and academic success. This course will emphasize participation in a variety of aerobic activities so that students maximize gains in brain functioning. Lifetime Fitness will focus on developing personalized fitness and nutrition plans, and improving personal fitness levels through authentic lifetime fitness activities such as yoga, strength training, interval training and even training for a 5K. **Grades:** 10, 11, 12

PE0024 | PE | SWIM DEV / AQUATIC FITNESS

This course prepares students for lifelong fitness through a variety of activities focused on improving proficiency in basic aquatic skills and the six basic swim strokes. First semester only. **Grades:** 10, 11, 12

PE0024A | PE | WATER SAFETY INSTRUCTOR - BEFORE SCHOOL

This course prepares students for lifelong fitness through a variety of activities focused on improving proficiency in basic aquatic skills and the six basic swim strokes. First semester only. Offered before the school day (6:45-7:45AM) **Grades:** 10, 11, 12

PE0025 | PE | HEALTH EDUCATION FOR ENGLISH LANGUAGE LEARNERS

This class is for 11th and 12th graders who will learn about issues and decisions that they will face as young adults. Topics may include goal-setting and life planning; communication; sexuality and relationships; making decisions about substances; stress, depression and mental health. **Grades:** 11, 12

PE0028A | PE | LIFEGUARD CERTIFICATION - BEFORE SCHOOL

This class will be offered before the school day beginning at 6:45 am and ending at 7:45 am and is for students who are interested in employment as a professional lifeguard. Students will learn teamwork, rescue and surveillance skills, First Aid and CPR/AED and other skills you need to work as a professional lifeguard. Successful completion results in a 2-year certification in Lifeguarding that includes first aid, professional-level CPR and AED in one certificate. Second semester only. **Grades:** 10, 11, 12 **Pre-Reqs:** American Red Cross Swim Proficiency Test.

PE0029 | PE | ATHLETICS

This option is for sophomores, juniors and seniors who want to substitute a CRLS interscholastic sport for their Physical Education requirement (Non- CRLS Sports/Activities will be not be accepted). In order to receive credit, students must complete all required team functions for the sport season and submit a sport-specific activity log. Credit will be awarded on the current year's sport participation. **Grades:** 10, 11, 12 **Pre-Reqs:** One Sport Season

PE0035A | PE | YOGA AND STRESS MANAGEMENT - BEFORE SCHOOL

This class supports students in developing self-awareness, emotional resilience, healthy body image and compassion through yoga, breathing practices, stress management, mindfulness and community building.

Grades: 10, 11, 12

PH001 | PE | WELLNESS 1

This course will include units on Emotional and Social Health, Bullying, Abstinence, Personal and Sexual Health, STD, HIV and Pregnancy Prevention, Also included are units on Character and Communication, Invasion Games, Individual/dual activities, Fitness for Life and Swim Safety. **Grades:** 9

PH001A | PE | GRADE 9 HEALTH EDUCATION

This Course alternates with Dance 1 and meets for one day (black or silver) for one semester. The course will include units on Emotional and Social Health, Bullying, Abstinence, Personal and Sexual Health, STD, HIV and Pregnancy Prevention. **Grades:** 9 **Co-Requisites:** Dance 1

PH100 | PE | WELLNESS ELECTIVE 5 CREDITS

Students will have an opportunity to select 2 wellness quarter courses from those offered each period which may include: team sports: basketball, volleyball, flag football, soccer, badminton, tennis, pickleball, health, life skills: nutrition*, substance abuse issues*, self defense, financial health, sports psychology, cpr/lifetime fitness & wellness: olympic weightlifting, cardiovascular fitness, muscular fitness, high adventure climbing, yoga, stress management, fitness walking, relaxation, mindfulness/aquatics: swim development & aquatic fitness, water safety instructor, lifeguard certification **Grades:** 10, 11, 12

PH200 | PE | WELLNESS ELECTIVE 10 CREDITS

Students will have an opportunity to select 4 wellness quarter courses from those offered each period which may include: team sports: basketball, volleyball, flag football, soccer, badminton, tennis, pickleball/health & life skills: nutrition*, substance abuse issues*, self defense, financial health, sports psychology, cpr/lifetime fitness & wellness: olympic weightlifting, cardiovascular fitness, muscular fitness, high adventure climbing, fitness walking, yoga, stress management, basic yoga poses, relaxation, mindfulness/aquatics: swim development, aquatic fitness, water safety instructor, lifeguard certification **Grades:** 10, 11, 12



World Languages

Expectation: CRLS World Language students learn to communicate in their respective target languages and improve their linguistic skills in general.

One of the most important academic studies in the roster of CRLS courses is a foreign language. The study of another language gives an inside view of another culture, way of thinking, set of values, and lifestyle. Language study is the most natural vehicle for acquiring a multicultural outlook, and it enhances English vocabulary and knowledge of language structure and usage. Second language study is indispensable for the college-bound and an invaluable embellishment to the educational background of the non-college bound. There is a minimum language requirement at CRLS of two courses in the same language. Some colleges and universities require more courses for acceptance. Students will select the language that best satisfies their needs and interests. Every language offered at CRLS has its own unique contribution to make to a student's knowledge and development.

American Sign Language

American Sign Language is used by members of Deaf communities as well as their hearing family and friends in the United States and Canada. According to the *Modern Language Association published in 2015*, ASL is now the third most commonly taught language in United States colleges and universities after Spanish and French. Benefits of learning ASL, for both deaf and hearing people, include interacting with Deaf people in the community or one's workplace and gaining knowledge of Deaf Culture. ASL curriculum focuses on the basic skills of language: receptive & expressive. It is a visual/gestural language. There is no spoken language used in the classroom. Currently two different levels of ASL classes are offered.

Arabic

One of only a few similar programs in the United States, the Arabic Language Program has grown steadily in both student enrollment and offerings. The cultural diversity and academic depth of the school have provided a nurturing environment for this language which, in turn, is further enriching the school and the community. The program distinguishes itself by its approach to teaching Modern Standard Arabic (MSA) while also exposing the students to some of the language's colloquial varieties. Arab culture, history, music, and current affairs are always being explored, across all levels, through readings, special projects, and regular presentational segments researched, organized, and delivered by the students. The Arabic Program at CRLS is useful for students seeking exposure to the language and culture as well as those interested in pursuing further studies in the field. Starting to learn Arabic before college gives the interested student a significant advantage to succeed and become proficient at the university level. Many graduates of the program have been exempted from lower level college courses in Arabic and have gone on to further their studies in the language and/or travel and even work in Arab countries.

Chinese

Chinese is the world's most widely spoken language. The CRLS Chinese program is offered at five levels: Chinese 1 to 4 and Chinese AP. The courses are designed to develop and improve the students' language skills in listening, speaking, reading and writing. Students who enrolled in the program will be able to learn the language systematically by using the contemporary textbooks, modern technologies and a variety of supporting materials. The courses emphasize communication by applying interpersonal, interpretive, and presentational skills in real-life situations. Students will also have a maximum exposure to Chinese cultural elements that are integrated in the process of learning the language.

French

The CRLS French program is offered at six levels, 1 through AP French. The French text covers French 1-4. This series is complemented by a wealth of supporting materials: CDs, DVDs, workbooks, and videos. French 5 and AP French use readings from a variety of sources: classic novels, periodicals, cinema, plays, film, etc. An integral part of the upper level courses is exposure to the music, customs, art, and literature of French-speaking countries, as well as emphasis on writing and speaking to prepare students for the French AP examination.

Latin

Do you like to be challenged? Do you want to meet the greatest minds of the ancient and medieval world in their own language? We'll start by translating adapted Latin passages and, over the first three semesters of Latin, build up the skills needed to translate authentic Latin texts. At every step along the journey, we will decode the thoughts and debate the meanings of the passages that we read.

Do you know that studying Latin enhances memorization skills? Studying Latin also improves your understanding of English grammar. Do you love words? Do you want to improve your English vocabulary? Study Latin to learn the origin of approximately 60% of our English vocabulary. The Latin language and literature and ancient Roman culture have greatly influenced our own modern lives. If you are interested in mythology, gladiators, Roman art and architecture, cities buried by volcanic eruptions, politics, Roman emperors and struggles for power, and any other aspect of daily life in Ancient Rome and how each influenced later European and American culture, take Latin to find out more.

Spanish

Spanish continues to be a popular World Language at CRLS. The curriculum focuses on the four basic skills of language: speaking, listening, reading, and writing. The Spanish Program is offered at six levels: Spanish 1 through Advanced Placement. Two courses have also been developed for Heritage Speakers.

Lo01 | CP | ARABIC 1 (HN OPT)

Course Description: Arabic 1 introduces beginners to Modern Standard Arabic (MSA) and exposes them to colloquial varieties of the Arabic Language, especially the Levantine dialect. This course emphasizes the four basic language skills of listening, speaking, reading and writing, with a special focus on phonology and writing. As with all Arabic courses at CRLS, culture is an integral part of this course (see the program introduction above). As students learn the Arabic alphabet, they will begin not only to decipher the Arabic letters and symbols, but to put this knowledge into actual practice and use as they begin to write and read simple text in Arabic. The class relies on interactive tasks designed to help students build a vocabulary and develop communicative skills. No prior knowledge of Arabic is required but a commitment to preparation, attendance, and participation is essential. Exceptional performance in this course may result in the granting of Honors credit upon the recommendation of the teacher. Proficiency Level: Novice. **Grades:** 9, 10, 11, 12

Lo11 | CP | FRENCH 1 (HN OPT)

In French 1, Students will develop their French skills through the study of culture, vocabulary, and grammar. By discovering and reading about the experiences of typical French speaking people, students will become familiar with language as a tool for communication with their cultures. Students will work toward gaining proficiency in all areas of communication – reading, writing, speaking and listening all while learning new vocabulary and grammar structures. An honors option is available for students who excel and are interested in engaging with the curriculum on a deeper level through more in-depth options for projects and various additional classroom assignments. Proficiency Level: Novice. **Grades:** 9, 10, 11, 12

Lo21 | CP | SPANISH 1 (HN OPT)

In Spanish 1, students will develop their Spanish skills through the study of culture, vocabulary, and grammar. By discovering and reading about the experience of typical Spanish speaking people, students will become familiar with language as a tool for communication. Students will work toward gaining proficiency in all areas of communication – reading, writing, speaking and listening all while learning new vocabulary and grammar structures. An honors option is available for students who excel and are interested in engaging with the curriculum on a deeper level through more in-depth options for projects and various additional classroom assignments. This class is not intended for native speakers of the language; please refer to classes for Heritage Speakers. Proficiency level: Novice. **Grades:** 9, 10, 11, 12

Lo42 | HN | LATIN 1

Establish the foundations and acquire the tools to read carefully adapted excerpts of works in Latin written by some of the greatest ancient Roman and medieval authors. Study Latin vocabulary and examine the English words that derived from the roots of these vocabulary words, thus expanding your vocabulary in both Latin and English. Learn the fundamentals of Latin grammar and improve your mastery of English grammar. Finally, delve into the culture, art, history and geography of the Latin speakers and the modern cultural innovations they inspired. Proficiency Level: Novice **Grades:** 9, 10, 11, 12

L091 | CP | CHINESE 1 (HN OPT)

Course Description: Chinese I introduce students to the Chinese language, Pinyin, and the culture of China. Using the skills of listening, reading, speaking, and writing, students will be exposed to vocabulary and basic grammar that will enable them to communicate in Mandarin in everyday situations. This level emphasizes the pronunciation and relevant vocabulary in the context of simple conversations, basic grammar structures, and level-appropriate readings. In addition, students will begin to develop an appreciation of Chinese culture that will better prepare them to interact in a global society. Proficiency Level: Novice. **Grades:** 9, 10, 11, 12

L101 | CP | ARABIC 2 (HN OPT)

Arabic 2 further develops all language-related skills, including listening, speaking, reading, writing, and cultural knowledge. As with all Arabic courses at CRLS, culture is an integral part of this course (see the program introduction above). The course incorporates the use of authentic materials for practice and presents narrative-based content through audio and video media to develop meaning-focused language processing skills. Arabic 2 expands the interactive, communicative tasks between the teacher and the students as well as among the students directly. The course also develops reading skills through the use of texts derived from the main narrative and other sources. It reinforces grammar and vocabulary through classroom and homework exercises and provides a constant review to help students retain and develop their skills. Exceptional performance in this course may result in the granting of Honors credit upon the recommendation of the teacher. Proficiency Level: Novice/Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Arabic 1 or Teacher Recommendation

L111 | CP | FRENCH 2

This course continues the study of the French language. Students will develop and expand their vocabulary and grammatical skills through simple basic readings, poems, dialogues and skits. There will be collaborative work on research projects and discussions after viewing of films. Proficiency Level: Novice/Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** French 1 or recommendation of eighth grade teacher

L112 | HN | FRENCH 2

This course is designed to teach the grammar of levels 2 and 3. Students will also read literary excerpts of major French writers, engage in writing and speaking activities, and do projects that will demonstrate student knowledge. Proficiency Level: Novice/Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** HN French 1 or recommendation of eighth grade teacher

L121 | CP | SPANISH 2

Spanish 2 is the continuation of studies in the Spanish language. Students will continue to develop and reinforce their basic Spanish language skills in this second level course. After a brief review of Spanish 1 and the present tense, students will be introduced to all verb forms of the preterit, imperfect, and future tenses. Projects will be completed as a way for students to demonstrate their knowledge of Spanish grammar, vocabulary, and culture. Culture will come alive as students view films and listen to Spanish music and podcasts. Technology is used in a variety of ways to enhance the curriculum. This class is not intended for native speakers of the language; please refer to classes for Heritage Speakers. Proficiency level: Novice/Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Spanish 1 or Teacher Recommendation

L122 | HN | SPANISH 2

This course covers the same grammatical structures and vocabulary found in Spanish 2 classes. Students, however, will read more short stories from elementary readers and show their knowledge of Spanish grammar and vocabulary through mandatory projects, dialogue writing, oral presentations, and additional readings on cultural topics of interest. Spanish is used as much as possible after thorough grammatical explanations in English. Grammatical structures include a comparison of imperfect and preterit tenses and the formation and use of the future and conditional tenses. Students will also use technology, cable video segments, and podcasts to enhance their study at this level. This class is not intended for native speakers of the language; please refer to classes for Heritage Spanish Speakers. Proficiency level: Novice/Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Grade of B or better in Spanish 1 or Teacher Recommendation

L142 | HN | LATIN 2

Continue to read adapted passages in Latin of increasing difficulty; finish the semester reading unadapted texts. Solidify your understanding and mastery of the more complex concepts in both Latin and English grammar and further expand your English vocabulary through the study of Latin roots. Connect the grammatical points to those found in modern writing and investigate Roman contributions to our society, especially in government and culture. Level: Novice/Intermediate **Grades:** 9, 10, 11, 12 **Pre-Reqs:** HN Latin 1 or Teacher Recommendation

L191 | CP | CHINESE 2 (HN OPT)

In Chinese 2, students continue to develop their skills in the Chinese speaking, Pinyin, and the culture of China. This course emphasizes the pronunciation and relevant vocabulary in the context of more complex conversations, grammar structures, level-appropriate readings, and character writing. Students will continue to develop an appreciation of Chinese culture and customs. Proficiency Level: Novice/Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Chinese I

L202 | HN | ARABIC 3

Continuing to develop the basic language skills, HN Arabic 3 relates abstract grammatical concepts to practical skills. This course reviews and presents new concepts using spiraling techniques and inference and encourages students to explore and “play” with the language as they discover its complex structure by means of analogy, problem solving, educated guessing, and sheer practice. As in other courses, vocabulary, MSA grammar, and colloquial communications are reinforced through classroom exercises that are mostly paired or done in small groups with the goal of keeping students challenged as they further develop their skills. As with all Arabic courses at CRLS, culture is an integral part of this course (see the program introduction). Proficiency Level: Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Arabic 2 or Teacher Recommendation

L211 | CP | FRENCH 3

This course is the continuation of studies from French 2 CP. Students will develop and expand their vocabulary and grammatical skills. In addition, they will memorize and perform short dialogues which highlight new vocabulary and idiomatic expressions. Students will acquire vocabulary, correct use of syntax, and dramatic expressions. This course is NOT sufficient preparation for French 4. This is the end of the College Prep French 1, 2, 3 series. Proficiency Level: Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** CP French 2

L212 | HN | FRENCH 3

This course is conducted primarily in French. Students will continue their work of French II Honors and will be exposed to all basic grammar structures of the French language. There will be extensive practice in the skills of reading and writing in French. Additionally, French 3 Honors will expose students to the geography of the Francophone world and the different regions of France. This course is good preparation for the SAT II French examination. Proficiency Level: Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** CP French 3, HN French 2, or Teacher Recommendation

L221 | CP | SPANISH 3

At this level students have acquired considerable skill in the basics and are ready to practice at a relatively advanced pace. There will be an in-depth comparison of the imperfect versus preterite, review of the future and conditional tenses, and the introduction and use of the present and past subjunctive in noun, adjective, and adverbial clauses. There will be an increased use of cable video segments and technology in the study of Spanish. There will also be an increased focus on the development of the writing skill in Spanish, as well as literacy, with readings from Hispanic newspapers, magazines, readers, and excerpts from the great Spanish authors. This class is not intended for native speakers of the language; please refer to classes for Heritage Spanish Speakers. Proficiency Level: Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Spanish 2 or Teacher Recommendation

L222 | HN | SPANISH 3

This course will continue the work of Spanish 2 Honors with emphasis on more complex grammatical structures. The use of the present and imperfect subjunctive tenses in speaking and writing will be taught. This is a rigorous course. Students must be responsible for balancing long-range projects and regular class work. Readings will come from literary excerpts, as well as magazines and authentic sources. Students will watch Spanish movies and will be required to discuss them in class, to write thematic essays, and to answer open-ended questions. This class is not intended for speakers of the language; please refer to classes for Heritage Spanish Speakers. Proficiency Level: Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Grade of B or better in CP Spanish 2, HN Spanish 2, or Teacher Recommendation

L242 | HN | LATIN 3

Read unadapted and historically-based Latin passages. Review and reinforce grammar concepts and complete your study of Latin grammar in this semester. Uncover the profound and deeply human thoughts expressed by Roman and medieval authors in poetry and prose. Engage in deeper consideration of Classical civilization and the Western Classical tradition and continue your study of Roman religious and philosophical beliefs, political systems, literature, art, and architecture and how they each influenced later European and American cultures. Proficiency Level: Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** HN Latin 1 and 2 or Teacher Recommendation

L291 | CP | CHINESE 3 (HN OPT)

Chinese 3 is a proficiency-based course which refines and expands linguistic skills in culturally authentic contexts. The course focuses on developing communicating skills with an increasing emphasis on reading and writing in ideographic characters and expanding vocabulary. Proficiency Level: Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Chinese 2

L302 | HN | ARABIC 4

This Honors course continues to develop the basic language skills through refined grammatical concepts, practical skills, and a more personalized approach. Activation of new vocabulary is more prominent in this course along with advanced reading, writing, and conversational practices. The acquisition of many grammatical concepts is consummated in this course while others are further developed by means of analogy, reasoning, and educated guessing. Advanced grammar, vocabulary, and formal and informal communication are reinforced through extensive classroom exercises and homework. Creativity with the language is encouraged through active class participation and more independent work. As with all Arabic courses at CRLS, culture is an integral part of this course (see the program introduction). Proficiency Level: Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Arabic 3 or Teacher Recommendation

L342 | HN | LATIN 4

In this advanced course, read the Caesar portion of the AP Latin syllabus. Develop your ability to translate from Caesar's De Bello Gallico into English as literally as possible and learn about the context of the written passages (including the political, historical, literary and cultural background of the text). Learn the reasons behind Caesar's style of writing and analyze Latin passages to understand how and why Caesar uses the language in a particular way and the effects he is hoping to produce. Finally, translate sight passages from a variety of Classical authors to further prepare you for the AP Latin exam. Proficiency Level: Intermediate/Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** HN Latin 3 or Teacher Recommendation

L391 | HN | CHINESE 4

Chinese 4 is a continuing proficiency-based course which further refines and expands linguistic skills in culturally authentic contexts. There will be extensive practice in listening and speaking with more emphasis on developing reading and writing skills. The course will also expose the students to the different regions of China, which will reinforce the understanding of Chinese culture as well as language. Proficiency Level: Intermediate/Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Chinese 3

L412 | HN | FRENCH 4

This course will be conducted entirely in French, and students will be expected to speak French during class. There will be a systematic review of all the basic grammar structures of French covered in French 3 Honors, and, in addition, students will begin to develop a writing style through the preparation of short, weekly essays and journals. Students will also be exposed to French literature which will reinforce the grammar structures they have studied in class. This course is excellent preparation for the SAT II French examination and the AP course. Proficiency Level: Intermediate/Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** French 3 Honors or Teacher Recommendation

L417 | CP | HISTORY OF LATIN AMERICA (SPANISH/ENGLISH) (HN OPT)

With the historic changes in the U.S. policy towards Cuba coupled with the immigration issues facing this country, Latin American again takes center stage in world events. Who are our neighbors to the South? This course explores the history and culture of Latin America, a region that includes Mexico, Central America, South America and the Caribbean. Students will analyze the impact of European colonization on the indigenous peoples, independence movements of the 19th century and major political events of the 20th and 21st centuries. Students may opt for either honors Spanish or History credit as follows: Spanish language credit includes advanced readings in Spanish throughout the course followed by an academic (term) paper in the Spanish language. History includes readings in English followed by an academic paper in English. Classroom discussion is in English to give all students the opportunity to participate. For credit in Spanish, students should be proficient and able to read and write independently in the language, with strong skills in reading and writing. **Grades:** 11, 12 **Pre-Reqs:** World History 2, U.S. History 1 and 2, Spanish 5 or Teacher recommendation

L421 | CP | SPANISH 4

The Spanish 4 CP course is the last CP offered in the Spanish roster of courses. There will be an intensive review/study of all forms of the preterit, imperfect, future, conditional, and subjunctive tenses, including irregular and stem-changing verbs. Students will also expand their vocabulary knowledge to be able to speak and write with more facility. They will also be exposed to cultural and literary readings in Spanish and will be expected to complete projects that will demonstrate their knowledge of the vocabulary and complex grammar structures which they are studying. Proficiency Level: Intermediate/Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** CP Spanish 3 or Spanish Heritage Language Speakers

L422 | HN | SPANISH 4

Honors Spanish IV is designed for students who want to become functional and more proficient in the language. They will refine their skills in all areas of listening, speaking, reading, and writing. Students will engage in class discussions, learn about the process of writing in anticipation of the AP class, read selections from literature and the printed media, and will review grammar principles that will enable them to articulate their ideas (speaking and writing) in a way that is convincing and clear. Emphasis of this course is on conversation and composition with a focus on the needs of students who want to expand not only their skills in Spanish, but in writing and speaking across all disciplines. Spanish is the operational language for this course, but English may be used to explain complex, grammatical structures and to ensure clarity in course expectations. Proficiency Level: Intermediate/Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** HN Spanish 3, Grade of B or better in CP Spanish 3, or Teacher Recommendation

L423 | HN | SPANISH 5

Spanish 5 will continue to develop students' knowledge of grammar as well as improve reading and listening comprehension in addition to speaking and writing. These skills are taught within a thematic, interdisciplinary course, including literary and other prose readings, art, movies and short films and music which are used as elements for an in-depth study of the many cultures of Spain and Spanish-speaking countries around the world. It provides students with many opportunities to apply Spanish to comprehend and communicate in writing and speech. This course permits students to develop and use 21st century technology skills, including digital citizenship and the Internet. It is strongly recommended that students complete this course before taking AP Spanish, as it is meant to aid in preparing students for the revised (2014) AP Spanish Language and Culture course and is a prerequisite. This course is taught entirely in Spanish. Proficiency level: Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Spanish 4 or Teacher Recommendation

L425 | AP | SPANISH LITERATURE AND CULTURE

The course uses a thematic approach to introduce students to representative texts (short stories, novels, poetry, and essays) from Peninsular Spanish, Latin American, and United States Hispanic literature. Students develop proficiencies across the full range of communication modes (interpersonal, presentational, and interpretive), thereby honing their critical reading and analytical writing skills. Literature is examined within the context of its time and place, as students reflect on the many voices and cultures present in the required readings. The course also includes a strong focus on cultural connections and comparisons, including exploration of various media (e.g., art, film, articles, literary criticism). Proficiency Level: Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** HN Spanish 5 or Teacher Recommendation

L442 | AP | LATIN

AP Latin is designed to provide advanced Latin students with a rich and rigorous semester-long Latin course, approximately equivalent to an upper/intermediate (typically fourth or fifth semester) college or university Latin course. The course prepares students for the AP Latin exam given in May. Even more important than the exam preparation is the sheer exhilaration of reading substantial portions of Vergil's Aeneid, one of the most awe-inspiring pieces of epic poetry ever written in the original language. The AP Latin syllabus juxtaposes the lyric poetry of Vergil with the pure straightforward prose and historical interest of Caesar's Gallic Wars. The readings from the two diverse texts present students with an in-depth study of Roman concepts of war, peace, empire and leadership. The Latin works and the English translations, when appropriate, are studied with attention to precise and literal translation, analysis of the works as literature, and proficiency in writing critical essays on the works. Emphasis will also be placed on reading Latin passages at sight. Proficiency Level: Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** HN Latin 4 or Teacher Recommendation

L491 | AP | CHINESE

Course Description: This course is designed for students to further develop their language proficiency as well as to promote their awareness and appreciation of cultural products (e.g. tools, books, music, laws, conventions, institutions), practices and perspectives by engaging them in an exploration of the culture in both contemporary and historical contexts. The course will be conducted in Chinese. Students will concentrate on learning updated Chinese language texts, journal articles, short stories, audio and video materials, and classical poetry and prose. This course also prepares students for the Advanced Placement examination given in May by the College Board. Proficiency Level: Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** HN Chinese 4

L512 | HN | FRENCH 5

This course is designed for students who have successfully completed the French 4 Honors course. Students will be required to read literary texts in their original versions (short stories, plays, novels, etc.). Students will have an extensive grammar review at an advanced level. These skills will be required as students have to write essays, compositions, reactions or critiques in reference to literary works and/or current events, especially those from Francophone countries. Students in this class are expected to demonstrate proficiency with regard to speaking skills through dialogue presentations, debates, and oral presentations. This course is an excellent segue to the AP French course because it will help prepare students for the rigor of Advanced Placement study. Proficiency Level: Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** HN French 4 or Teacher Recommendation

L521 | AP | SPANISH LANGUAGE AND CULTURE

The AP Spanish Language course prepares students to take the AP Spanish Language test in May. It is equivalent to an intermediate university level Spanish language course and is intended for students who have a strong desire to immerse themselves in Spanish language and culture. Students will review grammar as needed and will read, speak, and write about what they encounter in both the written and spoken genres. Students will read excerpts from major literary figures and learn to recognize the cultural and linguistic nuances of the diverse Spanish-speaking world. It is expected that after completion of the course, the students will sit for the AP examination in May. Course conducted entirely in Spanish. Proficiency Level: Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** HN Spanish 5 or Teacher Recommendation

L612 | AP | FRENCH

The AP course emphasizes the use of language for active communication. Its objectives include the ability to understand spoken French in various contexts, development of French vocabulary sufficient to read newspapers and magazine articles, literary texts, and other non-technical writings, and the ability to express oneself in French both in speech and in writing. To enhance reading comprehension, students will engage in reading and interpretation of various literary selections such as poems, plays, short stories and novels in their original versions. There will be a complete grammatical review of all verbs tenses and modes. This course is conducted entirely in French. Proficiency Level: Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** HN French 5 or Teacher Recommendation

L621 | CP | INTRO SPAN-SPEAKING CULTURE AND IDENTITY

Course Description: This world language course is designed to develop each student's ability in the areas of speaking, reading, writing and listening comprehension. Students will acquire the necessary skills to analyze, interpret and make connections in order to deepen their understanding of oneself and the Spanish-Speaking world through the study of literature, art and music. In addition, students will develop and strengthen their academic skills so that they can advance to higher level Spanish courses and enhance their career opportunities beyond the high school. The course is designed for students whose home language is Spanish and/or for students who have spent extended time in an immersion program and demonstrate fluency in the language. Upon completion of this course, students will be prepared to advance to The Spanish Speaking Scholar (honors) course or may choose to enroll in an upper level Spanish language course (IV, V, AP) either honors or college preparatory. **OUTCOME:** Prepare students to continue on to The Spanish-speaking Scholar course, or to upper level Spanish language courses (IV, V AP) either honors or college preparatory. Proficiency Level: Advanced. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Teacher Recommendation

L622 | HN | THE SPANISH-SPEAKING SCHOLAR: EXPLORING IDENTITY AND CULTURE THROUGH LITERATURE

Spanish Heritage students and/or bilingual immersion students will develop strategic Spanish reading skills, while investigating the literary genres of expository essay, myths, fables, legends, poetry, short stories and novels. Extended reading and literary selections will be taken from adopted texts and recommended reading. Students will produce writing in various formats and genres including well-developed paragraphs, literary response items, expository essays, short stories (narrative), historical and technical documents, while continuing to develop skills in the formal use of grammar, spelling, punctuation, and capitalization. This course will also explore and develop the necessary skills on how to address different audiences using appropriate registers of formal and informal language in a variety of settings and situations in the Spanish-speaking world. Prepares students for success in AP Language or AP Literature courses. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Teacher Recommendation

L625 | CP | AMERICAN SIGN LANGUAGE 1

This is the introductory course in the study of American Sign Language. The content includes the basic receptive and expressive sign skills and sign vocabulary required to be able to communicate at a beginner's level in American Sign Language. Basic fingerspelling skills will also be stressed. Included in the class content are beginning linguistic and grammatical principles; appropriate facial markers and body movement; the manual alphabet and signed numbers; information on the effect of deafness on the individual; the history of the development of ASL and other sign systems; the education of deaf children; ASL stories, songs and poetry; and information about the deaf culture and community. Proficiency Level: Novice/Intermediate. **Grades:** 9, 10, 11, 12

L626 | CP | AMERICAN SIGN LANGUAGE 2

This course focuses on further development of visual-spatial orientation and manipulations skills, sign vocabulary, and complex sentence structures. Students continue learning strategies for opening, sustaining, and closing general conversations on a range of topics. The course concentrates on developing the abilities to question, narrate, and give increasingly detailed descriptions of activities, interactions, plans, and directions. Students learn how to communicate clearly and express themselves in a culturally appropriate way. Total language immersion is used to enhance the learning process. All classes will be conducted in the target language (ASL) to further develop receptive and expressive skills - there will be no use of spoken language in the classroom. Proficiency Level: Intermediate. **Grades:** 9, 10, 11, 12 **Pre-Reqs:** Successful completion of ASL 1

