

CORE ACADEMIC COURSE DESCRIPTIONS

MATHEMATICS

Algebra I

1st Year Students / Full Year / One (1) credit

This course will teach students practical applications of algebraic concepts to real-life problems. Students will learn to manipulate variable expressions, solve equations, inequalities, and systems of equations, model real life problems using algebraic equations, and solve problems by analyzing and interpreting graphs. The goals of this program are to prepare the student for future success by helping them develop their abilities to explore and solve mathematical problems, work cooperatively with others and communicate ideas clearly. Students are graded on regular class work and homework assignments and periodic quizzes and tests.

Geometry

2nd Year Students / Full Year / One (1) credit

Students will learn geometric concepts such as area, volume, angle relationships, and properties of triangles, congruence and proofs through exploration activities and problem solving. Students develop conjectures regarding the relationships between various geometric shapes, angles, and figures. Topics covered include:

- Area, Volume, and Surface Area
- Points, Lines, and Planes
- Measuring Segments and Angles
- Midpoint and Distance Formula
- Parallel and Perpendicular Lines
- Translations, Reflections and Symmetry
- Isosceles and Equilateral Triangles including theorems
- Triangle Congruence: SSS/SAS/ASA/AAS/HL
- Pythagorean Theorem
- Properties of Polygons
- Proofs
- Right Triangle Trigonometry
- Properties of Parallelograms

Students are graded on regular class work and homework assignments and periodic quizzes and tests.

Honors Geometry

1st and 2nd Year Students / Full Year / One (1) credit

Students will cover all of the material outlined above for Geometry with the addition of the following:

Trigonometric Modeling

- Circles and Their Connections to Coordinate Geometry, Trigonometry and Transformational Geometry

Students are graded on class participation, regular class work and homework assignments, and periodic quizzes and tests. Additionally, all students are required to submit an original year-end project as approved by the teacher.

Algebra II

2nd, 3rd and 4th Year Students / Full Year / One (1) credit - Prerequisites: Algebra I

This course builds upon the concepts learned in Algebra I and Geometry. Students will learn how to use Algebra to model and solve real-life problems using various functions and graphs. Students will continue the exploration and application of linear functions and be introduced to graphing quadratic and other higher power polynomial functions and solving related equations using various methods. Topics Covered include:

- Systems of equations and inequalities
- Absolute Value Functions
- Piecewise Functions
- Graphing Quadratic Functions
- Factoring Quadratic Expressions
- Solving Quadratic Equations using various methods
- Applications and Modeling Quadratic Functions
- Graphing higher power polynomial functions
- Solving Higher Power Polynomials using the Remainder Theorem and synthetic division

Honors Algebra II

3rd and 4th Year Students / Full Year / One (1) credit - Prerequisites: Algebra I

Students will cover all of the material outlined above for Algebra II with the addition of the following:

- 3-Variable Systems of Equations
- Solving Quadratics by “Completing the Square”
- Applications and Modeling of high power polynomials

Consumer Mathematics

3rd and 4th Year Students / Full Year / One (1) credit

This course focuses on real-life mathematics. Starting with basic mathematical skills of decimals, percents, fractions, measurement and statistics and building upon these to a firm understanding of Income, Banking, Credit, Transportation, Housing, Taxes, Insurance and Investments. The student will learn mathematical skills that are the basis for many practical applications in everyday life and be able to work cooperatively, critically analyze a problem and make an informed decision. Students are graded on class participation, regular class work and homework assignments, and periodic quizzes and tests.

Pre-Calculus

3rd and 4th Year Students / Full Year / One (1) credit - Prerequisites: Algebra I, II, & Geometry

This course is intended for students planning on taking Calculus in the following year - either at Sound School or college. Topics to be focused upon include: Linear, Quadratic, Polynomial and Rational Functions and Graphs; Exponential and Logarithmic Functions; Radians and Unit Circles; Right Triangle and Non-Right Triangle Trigonometry; Analytic Geometry; Solving Systems of Equations; Matrices; Sequences and Series, Limits and Differentiation. Use of the graphing calculator will be emphasized throughout the curriculum. Students are graded on regular class work, nightly homework assignments and periodic quizzes and tests.

Honors Pre-Calculus

3rd and 4th Year Students / Full Year / One (1) credit - Prerequisites: Algebra I, II, & Geometry,

This course backfills and covers in more depth select Algebra 2 topics, such as higher-degree polynomial functions, and introduces analytical geometry and trigonometric functions not typically covered in the standard Geometry curriculum,

including the Law of Sines and Law of Cosines. In addition, it introduces the concept of limits and lays the requisite foundation for a successful transition to Advanced Placement or College Calculus. The pacing for this course is rigorous and structured to spend a portion of the final marking period on differential calculus. Specific course topics include:

- Linear, Quadratic, Rational and Polynomial Functions and their Graphs
- Exponential and Logarithmic Functions
- Radians and the Unit Circle
- Right Triangle and Non-Right Triangle Trigonometric Functions
- Analytical Geometry
- Vectors and Dot Products
- Systems of Equations and Inequalities
- Matrices and Determinants
- Sequences and Series
- Limits and an Introduction to Calculus

Students are graded on regular class work and homework assignments, and periodic quizzes and tests. At least one long term project will be assigned. A personal graphing calculator is strongly recommended.

Statistics

4th Year Students / Full Year / One (1) credit

This course is intended to be an elective for seniors who are considering college. The course will cover topics such as data classification and collection, probability, probability distributions, and statistical inference using various testing techniques including confidence intervals and hypothesis testing. The course culminates with students designing and implementing their own statistical study. Students will collect, organize and summarize data, and make inferences based on the data collected. The course will model closely what a student would expect to see in an introductory college level statistics course. An Honors option is also available.

Calculus

4th Year Students / Full Year / One (1) credit - Prerequisites: Algebra I, II, Geometry, Pre-Calculus

This course prepares students for further study of Calculus in college. Topics covered in the course include (but are not limited to): Infinite Limits & Differentiation, Applications of Differentiation, Integration, Log/Exponential & Transcendental Functions, Differential Equations, Infinite Series and Advanced Integration Techniques. Use of the graphing calculator will be indispensable throughout the curriculum. Those students who would choose to take the AP Calculus AB exam will be given the requisite list of topics/skills to master by the test date, and allowed to take the test if they demonstrate sufficient knowledge of the material. Students are graded on nightly homework assignments, weekly problem sets, practice AP exams, periodic tests and graded problem presentations.

WORLD LANGUAGES

Italian I

Offered in Grades: 9, 10, 11, 12 / One (1) credit

Italian I is an introduction to Italian language and culture. It is designed for students with little or no previous background in the language and stresses the development of listening comprehension and speaking skills. By the end of the Level II year, students should be at or close to what we call "Novice High" proficiency in the language. This means that students will be able to request and provide information, meet basic needs, and express, ask about, or react to opinions or preferences using simple sentences or questions most of the time, by speaking or writing. They can identify the topic and some isolated facts by understanding some familiar simple sentences in authentic texts.

Themes of study include lifting up myself and others, New Haven and the world around us, making connections with family and friends, foods of the world, and travel.

Italian II

Offered in Grades: 9, 10, 11, 12 / One (1) credit - Prerequisites: Italian I

Italian II is an intermediate level course designed to help students further develop their speaking, reading and writing skills. By the end of the Level II year, students should be at or close to what we call “Novice High” proficiency in the language. This means that students will be able to request and provide information, meet basic needs, and express, ask about, or react to opinions or preferences using simple sentences or questions most of the time, by speaking or writing. They can identify the topic and some isolated facts by understanding some familiar simple sentences in authentic texts. Themes of study include summer experiences, childhood, immigration stories, careers, and film.

Italian III

Offered in Grades: 10, 11, 12 / One (1) credit - Prerequisites: Italian II

Italian III continues the development of listening, speaking, reading and writing skills, with added emphasis on the analysis of literature. In class, students are expected to communicate in Italian whenever possible, using language that describes events in the past, present and future. By the end of the Level III year, students should be at or close to what we call “Intermediate-Low” proficiency in the language. This means that students will be able to request and provide information, meet basic needs, and express, ask about, or react to opinions or preferences creating simple sentences and asking appropriate follow-up questions, in speaking or writing. They identify the main idea and related information by understanding simple sentences in authentic texts. They can converse with peers from the target culture in familiar situations at school, work, or play, and compare some basic cultural similarities and differences. Themes of study include iconic figures, health issues, shopping, fashion, and fine arts.

Italian IV

Offered in Grades: 11, 12 / One (1) credit - Prerequisites: Italian III

Italian IV is designed to help students expand vocabulary through topical readings and analysis of literature. Advanced grammatical structures are presented and reinforced through writing and oral presentations. Cultural Studies of Italy include poetry, drama, short stories, articles and novels. The class is conducted mostly in Italian. Themes include human rights, culture and diet, energy resources, and literature of Italy.

Spanish I

1st, 2nd, 3rd, and 4th year students / One (1) year/One (1) credit

Spanish I provides an introduction to the Spanish language and the diverse culture of the Spanish-speaking world. It is designed for students with little or no previous knowledge of Spanish. By the end of the year, all students are expected to reach at least a Novice-Mid proficiency level in written and spoken communication. Those students will be able to request and provide information, express some basic needs or preferences using a mixture of words, phrases and simple sentences. They can determine the topics and identify some basic facts from authentic texts with strong contexts or visuals. They can identify some typical products and practices related to familiar everyday life using words and phrases. Additionally, some students may reach a Novice-High level, meaning that those students can request and provide information, meet basic needs, and express, ask about, or react to opinions or preferences using simple sentences or questions most of the time, by speaking or writing. They can identify the topic and some isolated facts by understanding some familiar simple sentences in authentic texts. During this course, students will learn to speak about themselves, their friends and family, and their school.

Spanish II (Honors option also available)

1st, 2nd, 3rd and 4th year students / One (1) credit -Prerequisites: Spanish I

Spanish II is an intermediate level course designed to help students further develop their speaking, reading and writing skills. Themes of study include Summer Experiences, Childhood, Immigration Stories, Careers, and Talking About the Movies. By the end of the Level II year, students should be at or close to what we call “Novice High” proficiency in the language. This means that students will be able to request and provide information, meet basic

needs, and express, ask about, or react to opinions or preferences using simple sentences or questions most of the time, by speaking or writing. They can identify the topic and some isolated facts by understanding some familiar simple sentences in authentic texts. They can use appropriate rehearsed behaviors and recognize some obviously inappropriate behaviors in familiar everyday situations.

Spanish III (Honors option also available)

2nd, 3rd, and 4th year students / One (1) credit - Prerequisites: Spanish II

Spanish III continues the development of listening, speaking, reading and writing skills in Spanish, with added emphasis on literature, composition and analytical skills. In class, students are expected to communicate in Spanish whenever possible, using language that indicates past, present and future. Themes of study include Heroes and Historical Figures, Health Issues, Advertising & Marketing, and Visual Arts. By the end of the Level III year, students should be at or close to what we call "Intermediate-Low" proficiency in the language. This means that students will be able to request and provide information, meet basic needs, and express, ask about, or react to opinions or preferences creating simple sentences and asking appropriate follow-up questions, in speaking or writing. They identify the main idea and related information by understanding simple sentences in authentic texts. They can converse with peers from the target culture in familiar situations at school, work, or play, and compare some basic cultural similarities and differences.

Spanish IV

3rd and 4th year students / One (1) credit - Prerequisites: Spanish III

Spanish IV is designed to help students expand vocabulary through topical readings and analysis of literature. Advanced grammatical structures are presented and reinforced through writing and oral presentations. Cultural Studies of the Spanish-speaking world include poetry, drama, short stories, articles and novels. The class is conducted mostly in Spanish. Themes include human rights, culture and diet, energy resources, and literature of Hispanic culture.

Spanish V

3rd and 4th year students / One (1) credit - AP Spanish Literature

Spanish V is a continuation of the study of advanced topics in literature, culture and language, building on the skills developed in the AP Spanish courses. Students will study modern literature in the Americas, film and media based on that literature, cultural movements, art and history, comparing and contrasting the myriad variations of Hispanic language and culture in the world today, as well as the exploring the place of Hispanic culture in the United States.

AP Spanish Language and Culture

3rd and 4th year students / One (1) credit - Prerequisites: Spanish IV

AP Spanish Language and Culture The AP Spanish Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP Spanish Language and Culture course strives not to overemphasize grammatical accuracy at the expense of communication. To best facilitate the study of language and culture, the course is taught almost exclusively in Spanish. The AP Spanish Language and Culture course engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions). Pivotal themes include families and communities, communities, beauty and esthetic, contemporary life, science and technology and global challenges. include Students must take the AP Exam in May.

Spanish V Honors: Literature and Culture

2nd and 3rd year students / One (1) credit - Prerequisites: AP Spanish Language and Culture

The Spanish IV: Literature and Culture course is intended to be the equivalent of a college second-year Introduction to Peninsular and Latin American literature and prepare students for AP Spanish Literature and Culture. This course introduces students to the study of important works of prose, poetry, and drama of literature from the Spanish speaking world. Students begin to acquire an understanding of the history, culture, literary devices and movements

essential to analysis of literature in Spanish. Since this course is presented almost entirely in Spanish, students have the opportunity to communicate and improve their language skills as well as learn new basic vocabulary of critical terms.

AP Spanish Literature and Culture

3rd and 4th year students / One (1) credit - Prerequisites: AP Spanish Language and Culture

The AP Spanish Literature course is intended to be the equivalent of a college third-year Introduction to Peninsular and Latin American literature. This course prepares students to analyze critically representative works of prose, poetry, and drama of Peninsular and Latin American literature of different historical periods from Medieval to the

most recent trends. Students acquire a sense of literary expression as part of the human experience and understand the characteristics of major literary movements and the forces that shaped them. This allows for a profound analysis and understanding of the works presented without neglecting the enjoyment of literature as an art and reflection of themselves. Since this course is presented almost entirely in Spanish, students have the opportunity to communicate and improve their language skills as well as learn new basic vocabulary of critical terms. The course covers six centuries and myriad themes and literary devices. Students must take the AP Exam in May.

HISTORY

Modern World History

1st Year Students - One (1) year / One (1) credit

The Modern World History Course of Studies is a one credit, year-long requirement in which students will develop a deeper understanding of how geography along with cultural institutions and beliefs shape the evolution of human societies. This course utilizes Connecticut's Social Studies Framework themes and inquiry-based approach and is taught thematically. The course addresses the following themes: change over time, contributions of many types of people, economic transformations/globalization; revolutions, war, and diplomacy and the changing role of government. The awareness and understanding of other societies past and present will enable the students to acquire numerous skills, such as source analysis, contextualization, and corroboration, which will provide them the ability to become productive members in their own society.

United States History

2nd or 3rd year students - One (1) year / One (1) credit

US History is a full year course, generally taken in the sophomore year, which will fulfill one of the three required credits in history. It is a thematic course that begins in the 19th century with the effects of American westward settlement on Native American societies and their removal to reservations, the influx of Irish and Chinese immigration, the effects of Reconstruction culminating with the Great Migration during the early 1900s. From there we will progress to the Industrial Revolution and its rapid influence on science and technology, the resulting accumulation of enormous wealth with a corresponding rise of those living in poverty, the Populist and Progressive movements, the rise of the United States as a world power and, finally, the issue of social justice in the most powerful and wealthy nation on earth.

Civics

2nd, 3rd, or 4th year students - One half (1/2) year / One half (1/2) credit

Civics is a half year, half credit required course. Democracy depends upon the participation of an educated public. Understanding the institutions of government and its role in our everyday lives is the primary focus of this course. Using a thematic approach, students will explore the growth of democracy, federalism, and the importance of civic participation. Emphasis will be placed on strengthening study skills, critical thinking, and writing through individual study, participation in class discussion, and involvement in the group activities. Students will complete essays and presentations throughout the semester.

Maritime History and Culture

2nd, 3rd, or 4th year students One half (1/2) year / One half (1/2) credit- (Elective) (can be paired with the half year of Civics)

Maritime History is a course which explores various aspects of the human relationship with the sea from the Age of Exploration (15th-16th Centuries) to the close of the Age of Sail in the mid to late 19th Century. The course focuses primarily (but not exclusively) on the maritime history of New England with the aim of developing an understanding for this region's distinctive connection to the sea. This course will explore the technological, economic, and social factors that came to determine this connection and how it ultimately came to have a profound impact on the region in which we live. Connections between the maritime experience and the major developments in U.S. history are also

explored. Students will draw from their learning in U.S. History to provide the context necessary to understand the true significance of developments in maritime history.

United States History Through Film

2nd, 3rd, or 4th year students One half (1/2) year / One half (1/2) credit- (Elective) (can be paired with the half year of Civics)

Within US History Through Film we will dive deeper into the happenings of America and the events, people, and actions that made our nation what it is today. The main medium that we will be using to do this will be film. Historical movies, both of the historical fiction and non-fiction genres, have defined the film industry for decades. These films are valuable resources and give us a more visual and artistic perspective on how America became America. In this class, we will use film, as well as a handful of other types of sources and activities, to learn about United States history. We will begin our studies within the Colonial time period of American history, and end with a study on the Vietnam War and Counterculture in the United States.

Constitutional Law

2nd, 3rd, or 4th year students One half (1/2) year / One half (1/2) credit- (Elective) (can be paired with the half year of Civics)

An extension of the Civics curriculum into a focused look at the Judicial Branch of the Federal Government. This course will examine in depth the workings of the Supreme Court and the cases it has decided over the years. A focus will be placed on the understanding of Landmark decisions and their long-term effects on our society. Students will create research papers and presentations to enhance and demonstrate their learning in this course.

African American/Black and Puerto Rican/Latino History

3rd and 4th Year Students One (1) year / One (1) credit

The African American/Black and Puerto Rican/Latino Course of Studies is a one credit, year-long elective in which students will consider the scope of African American/Black and Puerto Rican/ Latino contributions to U.S. history, society, economy, and culture. It utilizes Connecticut's Social Studies Framework themes and inquiry-based approach already familiar to social studies teachers to deliver a content rich and personalized learning experience.

The course is an opportunity for students to explore accomplishments, struggles, intersections, perspectives, and collaborations of African American/Black and Puerto Rican/Latino people in the U.S. Students will examine how historical movements, legislation, and wars affected the citizenship rights of these groups and how they, both separately and together, worked to build U.S. cultural and economic wealth and create more just societies in local, national, and international contexts.

Coursework will provide students with tools to identify historic and contemporary tensions around race and difference; map economic and racial disparities over time; strengthen their own identity development; and address bias in their communities. This course will contribute to the critical consciousness and civic-mindedness competencies of a twenty-first century graduate, and ultimately facilitate students' interest in pursuing further ethnic, anthropology, or human rights studies in the future.

ENGLISH

English I

1st year students / One (1) year / One (1) credit

English I is the study of the individual and society. The course introduces a variety of genres from different literary periods, writing for an increasingly digital world, and foundational instruction in literacy skills and reading comprehension. Literary skills range from the review of plot structure to identifying themes and analyzing figurative language. The focus of literature texts is on classics as well as contemporary literature that have helped to define and shape our society. Students will develop their writing craft through studying the writing process and through practice

in writing a variety of genres. This course uses a student centered, multicultural, progressive approach to teaching literature and writing.

English II

2nd year students One (1) year / One (1) credit - Prerequisite: English I

English II is the study of the individual and society, same as above, and reflection on philosophy, psychology, morals, values, and equity as explored through literature. Through the use of various texts and electronic media, students discover and analyze human behavior. The goal of this course is to help students increase their cognitive and interpretive skills; to prepare them for the SAT; to improve their understanding of literature; and to cultivate their ability to be self-guided, life-long learners. Students will develop their writing craft through studying the writing process and through practice in writing a variety of genres. This course uses a student-centered, multicultural, progressive approach to teaching literature and writing.

English III

3rd year students One (1) year / One (1) credit - Prerequisite: English II

Junior English explores a variety of readings and sources, including novels, poetry, film, short stories, essays, and speeches. Emphasis is placed on exposing students to a broad range of works that represent and explore the diverse perspectives on being American. The goal of the course is to help students increase their critical thinking skills by analyzing and interpreting literature and nonfiction and to increase both written and oral communication skills. Students will develop their writing craft through studying the writing process and through practicing writing in the argumentative, informational, and narrative modes. This course uses a multidisciplinary, multicultural, progressive approach to teaching literature. Emphasis is placed on assisting students in the college preparation process and vocational planning.

English IV

4th year students One (1) year / One (1) credit - Prerequisite: English III or Maritime Literature

Senior English is the study of communication through literature, media, and art, emphasizing their influence on and reflection of human history, values, and behavior in society and in individuals. The goal of this course is to help students increase their communication skills through the study of literature. Reading and interpreting classical as well as contemporary writing will help students reach their highest potential in the reading of the craft of writing. Students will develop their writing skills through weekly writing, as well as extended writing and research assignments.

Advanced Placement English Language and Composition

3rd year students One (1) year / One (1) credit - Prerequisites: English II, writing test, Permission of instructor (Replaces English III)

The AP English Language and Composition course focuses on the development and revision of evidence-based analytic and argumentative writing, the rhetorical analysis of nonfiction texts, and the decisions writers make as they compose and revise. Students evaluate, synthesize, and cite research to support their arguments. Additionally, they read and analyze rhetorical elements and their effects in nonfiction texts—including images as forms of text—from a range of disciplines and historical periods.

Advanced Placement English Literature and Composition

4th year students One (1) year / One (1) credit - Prerequisites: English III, writing test, Permission of instructor (Replaces English IV)

AP English Lit is a rigorous year of reading, writing, thinking, and discussing. Students will read actively since the works taught require careful, deliberate reading. The approach to analyzing and interpreting texts involves learning how to make careful observations of textual detail, establishing connections among observations, and drawing from those connections a series of inferences leading to an interpretive conclusion about the work's meaning and value. Students will write analytical and creative pieces with an emphasis on explaining clearly, cogently, even elegantly, what is understood about literary works and students' interpretations. To that end, writing instruction will include

attention to developing and organizing ideas in clear, coherent, and persuasive language, applying their study of the elements of style.