



Staten Island
Academy

CURIOSITY *Ambition* CHALLENGE

COURSE CATALOG



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The rich and varied college preparatory program of the Upper School, Grades 9 through 12, at Staten Island Academy builds upon the foundation that was laid by the Lower and Middle Schools.

Understanding the students possess high aspirations for the future, college placement and personalized counseling remain high priorities. Significant effort goes into ensuring that all students are fully prepared academically, socially, and emotionally to meet the admissions standards of America's most highly selective institutions. The entire Upper School program is designed to accomplish this goal.

Grade 9 lays the foundation for the unique Upper School experience. An integrated curriculum of history, English, music, and art provides an outstanding and unique experience for freshmen. A curriculum trip to England in the fall for Grade 9, which is included in tuition, incorporates all that students are learning about Renaissance and medieval history. As in all subjects at the Academy, however, learning is not just “about” a subject; learning is an in-depth, experiential engagement that helps mold each student into a sophisticated thinker.

All individual classroom activities and explorations, plus programs such as Model United Nations, drama productions, athletic competitions, leadership training, public speaking, global travel, Advanced Placement courses, the development of critical thinking skills, and training in research and writing help all Upper School students meet with success. Academy students often score at the top of Island-wide, city-wide, and national competitions in foreign languages, writing, the sciences, mathematics, and history, a testament to their level of

preparation and expertise. In addition, an emphasis on the arts ensures that all students gain an appreciation for and experience in both the visual and performing arts.

Other leadership opportunities abound. *The Quill*, the nation’s oldest continuously publishing student newspaper, attracts student writers and potential journalists. Literary magazines in several languages are managed by students, and clubs and activities are often initiated. Recently, an Asian Club, Environmental Club and Lower School Tutoring Initiative were founded by students, adding to the already rich array of student extracurricular activities.

The Upper School Arts program is recognized for its professionalism and inclusive nature.

Orchestras and recital opportunities provide significant exposure to the performing arts, as well as opportunities to participate at the ensemble level. Two annual student theater productions include a musical and a dramatic play. Actors, musicians and stage crew work together to present full scale productions. Recent productions have included *Into the Woods*, *Romeo & Juliet*, *RENT*, and *Mean Girls*.

The Academy offers 32 interscholastic teams, and the school regularly competes on Staten Island and in the wider metropolitan area. Students are given opportunities both as players and as coaching mentors for younger students. Additionally, students often work as lifeguards, counselors and sports leaders in the Academy’s summer day camp, an enormously successful



program that attracts hundreds of children every year.

Our advisory program in the Upper School provides each student with a dedicated faculty member who acts as their advisor in Grades 9-12. Overseeing the students’ academic program and monitoring their experience in the Upper School, the advisor is each student’s guide and mentor. The advisor is also a primary communication link to the student’s parents. In Grade 12, senior advisors take over to ensure that the

transition to the college application process is seamless. The Director of College Counseling coordinates the initiatives of the senior year, writes the school’s letters of recommendations for students to colleges, and interfaces with college admissions officers to ensure the very best fit and placement for our students. The student to college counselor ratio is the lowest on Staten Island.

Inspired teaching in the Upper School prepares students to take advantage of all that the best colleges in America have to offer. Upper School students are active participants in their own education. Through sophisticated

expectation and a demanding curriculum, students learn to think critically and creatively. Educated in the tradition of liberal arts, they graduate with a breadth knowledge and expertise. They conduct themselves as educated, cultured citizens who care for each other, their community, and their world. They have learned to think globally and apply that perspective with them for the rest of their lives.





To graduate, students must enroll in at least six courses in one or more of the six departments annually. Additionally, a student's schedule must have representation in at least four different departments every year, and they must meet departmental specific expectations (see below):

- **English**
4 years
- **History**
3 years, including United States History
- **Language**
3 consecutive years in Latin, Spanish or Mandarin
- **Mathematics**
3 years, including Geometry
- **Science**
3 years, including Biology
- **Art**
2 years, including Foundation of Art & Theater in Grade 9

In addition, students must fulfill these requirements:

- **Physical Education**
4 years
- **Public Speaking**
The successful completion of a speech in Morning Meeting
- **Research Paper**
Grade 10
- **Service Project**
Grade 12

Please note: adjustments may be made for students who enter Staten Island Academy in Grades 10 and 11.

REQUIRED COURSES

Foundations of Art

Grade 9 Requirement

Year | ½ credit

Through a series of assignments in drawing, painting, printmaking and a collage, students will examine how world trends influenced visual art and how visual art influenced world trends. Students will create works based on historical eras and keep sketchbooks for homework and class work preparation. A significant portion of the first semester is spent preparing for the annual Grade 9 trip to London.

Foundations of Theater: Shakespeare

Grade 9 Requirement

Year | ½ credit

In theater, beginning with the political and religious influences at the time of his birth, students use history as a lens through which to examine Shakespeare's life and work. Through numerous textual and video resources, scene work and text exploration, students discover Shakespeare's relevancy to a modern world. A significant portion of the first semester is spent preparing for the annual Grade 9 trip to London.

ELECTIVES

The SIA Orchestra/ SIA Wind Ensemble/ SIA String Ensemble

Year | ½ credit

The SIA Orchestra plays as a full ensemble as well as being broken up into a Wind Ensemble and a String Ensemble. The repertoire of all three ensembles is varied and selected on the basis of group ability. Classical pieces are rehearsed and performed at the Winter Concert; lighter, “pop” pieces rehearsed and performed at the Spring Concert. Shorter programs are also prepared for several other school events. NOTE: This group meets in early morning, before regular daily classes begin.

Concert Choir

Year | ½ credit

This course is intended for students in Grades 9 - 12 who enjoy singing. Voices are tested for vocal range and placed into soprano, alto, tenor or bass sections. After thorough rehearsal, the choir engages in a varied repertoire: sacred music for the Holiday Concert and secular music for the Spring Concert.

2-D Studio Art

Year | 1 credit

This year-long studio art course seeks to develop a deeper understanding of two-dimensional art making and the possibilities of expression through drawing, painting, printmaking and other 2-D art forms. Beginning with

drawing, students will work with a variety of traditional and non-conventional materials. Student painters will experiment with watercolor, acrylic and oils to develop both technique and artistic vision. In all media, students will explore scale from miniature to monumental.

Advanced 2-D Studio Art

Year | 1 credit

Prerequisite: 2-D Studio Art Artists continue to explore drawing, painting and printmaking in this advanced studio art course. Principals and techniques studied in the 2-D Studio Art course will be further practiced. Departmental approval is required.

3-D Studio Art

Year | 1 credit

This year-long studio art course seeks to develop a deeper understanding of three-dimensional art making. Students will visualize and then realize their artistic visions into three-dimensional forms, using a variety of traditional materials such as clay, wood, and wire, as well as non-traditional materials. Exploration will be a key factor in the 3-D studio. Students will design and fabricate sculptures for indoor and outdoor display, hanging pieces, mobiles, as well as individual and collaborative pieces. The primary guide to one’s creativity will be one’s imagination.

Advanced 3-D Studio Art

Year | 1 credit

Prerequisite: 3-D Studio Art Artists continue to explore three-dimensional art making in this advanced studio art course. Principals and techniques studied in the 3-D Studio Art course will be further practiced. Departmental approval is required.

Theater in Contemporary Society

May be taken for either Art or History credit

Year | 1 credit

Theater is traditionally the first medium to tackle difficult and controversial issues in a public forum. Framed by the international phenomenon of *Hamilton*, this year-long course explores the story of how major risk-taking on the part of writers, producers and audiences re-inserted theater into the national conversation and proved that Broadway is, and has always been, an emblem of hope in turbulent times. Using the new publication, “*Rise Up!*” by Chris Jones, students will chronologically examine theater’s artistic response to the AIDS crisis, the emotional turmoil of the post 9/11 recovery, the global recession, and racism. In addition to Jones’ book, students will read many plays, listen to the music of various contemporary theater composers, and watch filmed versions of productions. Some of the works to be studied include, *Angels in America*, *Twilight Los Angeles 1992*, *Rent*, *The Lion King*, *the August Wilson century cycle*, *Metamorphoses*, *Bloody*, *Bloody Andrew Jackson*, *The Goat* or *Who is Sylvia*, *American Idiot* and *Hamilton*.

Guitar Workshop

Year | 1 credit

This course is designed for the student who has little to no previous experience with the guitar. Students will develop basic to intermediate guitar skills. By the end of the year, they will be able to play all the open chords with a variety of strumming patterns. Students will also learn how to read melodies from standard music notation and explore elementary music theory through their guitar playing. They will explore different genres of music and learn about prominent guitarists. Students will be required to provide their own instrument for this course.

Drums Throughout the World

Year | 1 credit

From tubla drums to djembe, drums are found in nearly every culture in the world and have existed since 6000 B.C. Drums have been used in healing ceremonies, dance rituals or in a solo in a jazz band. In this course, we will explore the use of drums and percussion in various cultures throughout history through the use of books, articles and videos.



Computer Science



REQUIRED COURSES

Computer Science Principles I

Grade 9 Requirement
Year | ½ credit

This course provides students with a content-rich experience covering the fundamentals of computing while strengthening problem solving and critical thinking abilities. Computational thinking skills, essential to 21st century learning, are developed as students design algorithms to solve a variety of problems. Topics include: graphic design using Adobe Photoshop; website development using HTML5, CSS, Javascript and Adobe Dreamweaver; coding in the context of the visual arts using the Processing language; building and programming circuits and robots using Arduino microcontrollers.

ELECTIVES

Advanced Placement Computer Science: (A Curriculum)

Departmental Approval Required
Year | 1 credit

Recommendations for enrollment are based on performance in the Grade 9 Computer Science Principles I course and math grades/level: • B+ or higher in advanced calculus courses and A- or

better in all other advanced mathematics courses • Non-advanced mathematics course grade must be A range with departmental approval. There are two advanced placement computer science offerings, and students can take either course in any order. The AP Computer Science Principles course (which will be offered in the 2023-2024 school year) complements AP Computer Science A as it aims to broaden participation in the study of computer science. The AP Computer Science Principles course is designed to be equivalent to an introductory college computing course that introduces students to the breadth of the field of computer science. The AP Computer Science A course provides instruction in program design and implementation using the Java programming language. No prior programming experience is required. The course is the equivalent of a Computer Science 1 college course. Topics covered include: problem specification, control structures and program flow including conditions, loops and recursion, input/output, standard data structures, testing and debugging programs. The course focuses on object-oriented programming and covers the use of classes, an understanding of the concepts of inheritance and information hiding, and the use of standard algorithms for sorting, searching and run-time analysis.

Students enrolled in this course are required to report for classes in late August.



REQUIRED COURSES

Coming of Age in Literature

Grade 9 Required
Year | 1 credit

Through various writing styles and literature, this course explores the inescapable complexity of coming of age. How does one balance becoming their best self while fitting into society? How do coming-of-age authors reflect on questions of identity, belonging, and acceptance? How do we begin to incorporate this into our writing and worldviews? These questions will be the foundation for students' intellectual development as readers and writers.

This course objectives are twofold; examining classic literary works and developing the art of writing academic essays. As first year students at SIA, the aim is to equip students with the essential skills for successful future coursework, including outside-the-box thinking, analysis, composition, and revision. The course literature and materials are selected not only to engage and challenge, but also to help master the craft of creating persuasive, complex, and creative expository writing. Students will achieve this by discussing the qualities of classic literature, analyzing exemplary prose, and practicing with shorter and longer writing assignments.

Literature will range from novels to short stories to poems, from the ironic

to the tragic to the humorous, and concentrating on the bildungsroman (bildung meaning "education, formation, and growth", and roman meaning "novel" — focusing on the psychological growth of a protagonist transforming from child to adult).

American Literature

Grade 10 Required
Year | 1 credit

A survey course moving from 17th Century to 21st Century American Literature, students read significant American poetry and prose fiction, non-fiction, and drama from the Colonial, Transcendental, Realistic, Modern, and Contemporary periods. We explore major themes regarding the American Dream and the American Identity through class discussion, close reading, and critically written arguments.

This course pays special attention to honing students' writing skills throughout the year. We especially spend time developing critical literary analysis skills and proper argument consistency and depth. Upon completion of the class, students will better understand the writing process, delve deeper into independent and group reading, and acquire a general understanding of how American Literature has evolved through the centuries.

Research and Writing Seminar

Graduation Requirement
Year | ½ credit

This course uses the Wendy J. Shadwell '59 Archive Collection to help students develop essential strategies and techniques for researching and crafting academic arguments. Unlike most reading-based courses, the research and writing seminar emphasizes skills in critical inquiry, argument, and research methods as they pertain to the writing process. As their final project, each student uses archival research from the school's historical resources to create a Staten Island Academy multi-modal narrative.

Public Speaking

Grade 10 Graduation Requirement
Year | 1 credit

This class gives students the experience and techniques necessary to speak in public situations. Various formats of expression are used throughout the year including extemporaneous speaking, debate, interview, personal, informative, persuasive, humorous and Power Point demonstration speeches. Student-created podcasts are another way of assessing student progress. All students will be required to deliver a two-minute commentary at an Upper School morning meeting. An important goal of this course is to build confidence and poise.

ELECTIVES

Murder, Mistrust, and Madness in Literature

Year | 1 credit

Readers have always been fascinated with stories of betrayal, revenge, and violence. This course will explore some of literature's greatest characters and the suspense and horror that have made their stories resonate with readers for generations. What drives an individual to madness or to revenge? How does mistrust or a distorted view of reality lead to betrayal and the drastic measures that many characters view as their only option? These will be two enduring questions as works ranging from *Hamlet*, *One Flew over the Cuckoo's Nest*, and *In Cold Blood* are explored.

Voices Unheard in Literature

Year | 1 credit

From the second half of the twentieth century to the present, what qualifies as "literature" has changed significantly. In this course, we will explore the broadening concept of the literary canon by including works of those whose voices may have previously been silenced. In addition, we will study and evaluate the significant stylistic innovations of contemporary literature. Readings may include *Home of the Brave*, *This Is Where It Ends*, *The Way I Used to Be*, and *You'd Be Home Now*.

Creative Non-Fiction (Writing)

Year | 1 credit

Start or continue your creative writing journey by exploring the world of creative non-fiction. Consider the techniques and tools that writers need to develop compelling personal narratives, journalistic essays, science writing for lay people, and historical fiction. We'll examine the works of famous essayists, review articles and essays in some of the world's top journalistic magazines, and discover what it takes to develop a writing voice that is truly your own. By the end of this course, you will have honed your skills across various genres, analyzed and interpreted non-fiction writing from a wide variety of sources, created a portfolio of captivating pieces, and learned to express yourself with confidence and style.

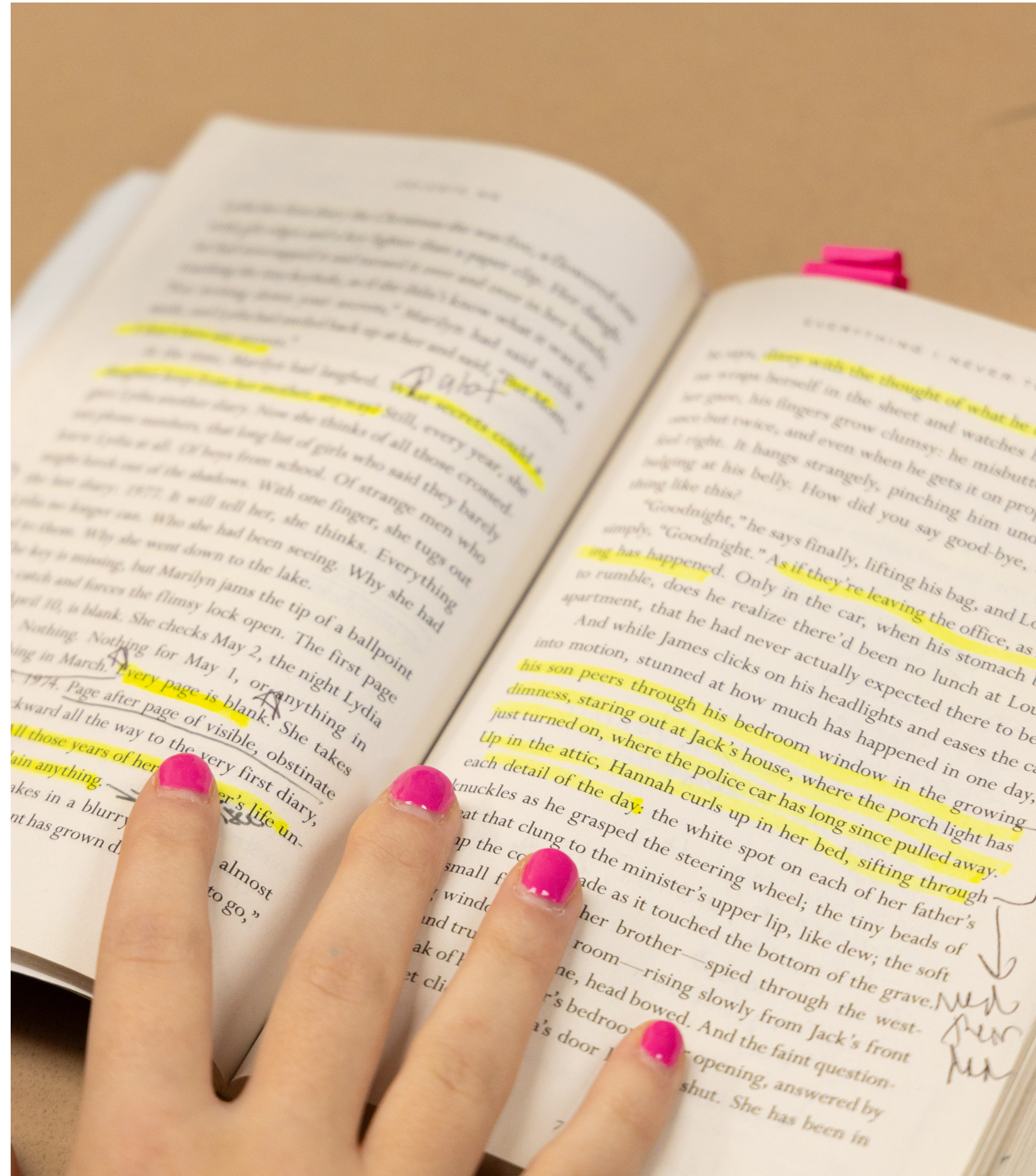
Advanced Placement English Language and Composition – Departmental Approval

Required Enrollment Criteria

Year | 1 credit

Cumulative average of B+ or higher in ALL English courses. AP English Language and Composition is a college-level writing and rhetoric course. Students will read, analyze, and write about a diverse assortment of Non-Fiction texts. In this course, students will evaluate, synthesize, and cite research to develop and revise evidence-based analytic and argumentative writing. The reading and writing students do in this course will deepen their understanding of how written language functions rhetorically: to communicate writers' intentions and compel readers' responses in particular situations. As this is an AP-level course, writing assignments will feature throughout with emphasis placed on Argumentative, Synthesis, and Rhetorical Analysis essays.

Students enrolled in this course are required to report for classes in late August.





REQUIRED COURSES

Modern World History

Grade 9 Requirement

Year | 1 credit

Grade 9 Modern World history is a survey course that gives students a broad overview of global history over the last half millennium: from the Columbian exchange in the 15th and 16th centuries, to Globalization in the 20th and 21st centuries; from the invention of the printing press to the invention of broadband internet; from the events of the French and Haitian revolutions to the events of Tiananmen Square and Arab Spring, this course examines major historical developments and events that have shaped the modern world. Students will also develop skills like analytical writing and geographic literacy, which they need to be engaged citizens in our contemporary age.

Modern World History, Honors

Grade 9 Requirement

Year | 1 credit

Grade 9 Modern World history, honors, is a survey course that gives students a broad overview of global history over the last half millennium: from the Columbian exchange in the 15th and 16th centuries, to Globalization in the 20th and 21st centuries; from the invention of the printing press to the invention of broadband internet; this course examines major historical developments and events that have shaped the modern world. The Honors Section of World History

gives sustained attention to developing important skills like close reading and analytical writing. In addition, there are higher expectations regarding the quality of student work.

United States History

Grade 10 Requirement

Year | 1 credit

This course reinforces skills and concepts presented in previous historical-based United States history courses. The first semester examines the American Revolution, The Confederation-Constitution Era, Jacksonian Democracy and the causes of the Civil War. The second Semester commences with the Civil War and Reconstruction, the Industrial Revolution and ends with the United States in the 20th and 21st century. Attention is paid to the current challenges America faces and how they relate to her history. In addition to textual readings and class discussions, this course utilizes slides, films, articles, artwork and primary sources to chronicle growth in ideals, economy, and social and political ideas.

History of the United States—Honors

Grade 10 Requirement

Year | 1 credit

Departmental Approval Required

This course reinforces skills and concepts presented in previous historical-based United States history courses. The first semester examines the American Revolution, The Confederation-Constitution Era, Jacksonian Democracy and the causes of the Civil War. The second Semester commences with

the Civil War and Reconstruction, the Industrial Revolution and ends with the United States in the 20th and 21st century. Attention is paid to the current challenges America faces and how they relate to her history.

Honors Classes move at an accelerated rate and include coverage of the colonial period and additional reading and research. Skill objectives include: developing a working familiarity with historical data and geo-political terminology, research skills, enhanced development of analytical skills, refinement of essay writing techniques, oral communication and problem solving.

Social Justice Through the Lens of Documentaries

Grade 10 Requirement

Year, ¼ credit

This course is designed to have students acquire a firm grasp of media literacy and become more civically engaged. Students explore what it means to be Just and what Social Justice really means in a number of different situations. Asking the big question, does everyone deserve equal economic, political and social rights and opportunities? Tackling social justice issues through viewing documentaries and the lens of New York City, engaging in group discussions, partaking in extensive research and writing persuasive responses is the primary objective for all students in this course.

ELECTIVES

Advanced Placement African American Studies

Year | 1 credit
Departmental Approval Required

Enrollment Criteria: Cumulative average of B+ or higher in ALL prior History courses (including first semester current course, if applicable).

AP African American Studies is an interdisciplinary course that examines the diversity of African American experiences through direct encounters with varied sources. Students explore key topics that extend from early African kingdoms to the ongoing challenges and achievements of the contemporary moment. Given the interdisciplinary character of African American Studies, students in the course will develop skills across multiple fields, with an emphasis on developing historical, literary, visual, and data analysis skills. This course foregrounds a study of the diversity of Black communities in the United States within the broader context of Africa and the African diaspora.

Students enrolled in this course are required to report for classes in late August.

Advanced Placement Art History

Year | 1 credit
Departmental Approval Required

Can be taken for either History or Arts credit

Enrollment Criteria: Cumulative average of B+ or higher in ALL prior History courses (including first semester current course, if applicable).

This course conforms to the AP Art History curriculum as set by the College Board and serves as an introductory college-level art history course. Through the close examination of the required 250 representative art objects, students cultivate their understanding of art history and appreciation of art. By analyzing individual works of art and placing them in their respective historical contexts, they explore concepts such as culture and cultural interactions, theories and interpretations of art, the impact of materials, processes, and techniques on art and art making, the form and function of art, and reception theory in art historical analysis. Engagement with these works comes in the form of readings, discussions, and written expression. Students are introduced to formal and contextual analyses and develop skills in comparing and contrasting forms of artistic expression from varying periods and cultures. This chronological survey begins with the period of global prehistory around 30,000 BCE and concludes with present-day artists.

Students enrolled in this course are required to report for classes in late August.

Advanced Placement European History

Year | 1 credit
Departmental Approval Required

Enrollment Criteria: Cumulative average of B+ or higher in ALL prior History courses (including first semester current course, if applicable).

The Advanced Placement course in Modern European History is the equivalent of a college survey course, and examines the major themes, figures

and events in European history between 1450 and 2000. During the first semester, students begin the year by discussing the art, literature and philosophy of the Renaissance and finish the term studying the French Revolution.

Other topics include the Reformation, absolutism, the Scientific Revolution and the Enlightenment. The second half of the year investigates the rise of nationalism, liberalism, industrialism, World War I, fascism, the Russian Revolution, World War II and the Cold War.

Considerable attention is given to discussion and preparation for the AP exam itself. Students are schooled in a variety of techniques designed to help them with the exam's, multiple choice, free response and document-based questions. Throughout the year, students are required to make critical judgments about European history, and develop the skills necessary for historical analysis in order to prepare for the AP exam.

Students enrolled in this course are required to report for classes in late August.

Anthropology and the Human Condition

Year | 1 credit

Cultural Anthropology is the study of humans in both their cultural specificity and diversity. Traditionally, anthropologists have studied the representations, beliefs, and practices of people in "non-Western" societies, in order to provide empirical observations, comparative perspective, and analytical insights into (un)timely problems about human life. More recently, cultural anthropologists have turned their attention to increasingly complex "problems"—e.g. climate change, political violence, and the trafficking of

tissue and organs—exploring the ways that humans come to figure in these problems, and the ways these problems connect with other problems in a globalized world.

This course is organized around key topics—like language, kinship, exchange, myth, ritual, food, aesthetics, and disease and illness. While these topics are foundational to the discipline, we will also see how anthropologists have returned again and again to these same concepts and categories, using them in new ways, and showing how they are still relevant for understanding the world today. We will also consider different methodologies and styles of engagement—participant observation, ethnographic fieldwork, and applied anthropology—that anthropologists use today.

Native American History

Year | 1 credit

This course will provide an in-depth study of the indigenous pre-Columbian, colonial and contemporary cultures of the Western hemisphere with a particular focus on North America. Themes and topics will include the complexity and richness of Native American culture, the impact on traditions as a result of European colonization, the disintegration, survival and revitalization of native culture, and the overall contributions of Native American culture to the larger context of American society. The course will assess the historical representation of Native Americans in popular culture through readings, images and film. The course will also explore contemporary issues facing Native American communities today including land claims, poverty, economic development, education and cultural expression.





LATIN

Latin I

Year | 1 credit

Latin I introduces students to the Latin language and the culture that produced it. This course prepares students to read, understand, and communicate in Classical Latin at an elementary level. At the end of Latin I, students will be able to demonstrate knowledge of Classical pronunciation, essential vocabulary, basic inflectional systems, and elementary syntax. Specifically, students will learn the present system active indicative forms of all Latin verb conjugations, as well as commands. Additionally, they will investigate the declensional noun system, the first three declensions, and various common pronoun forms in order to understand the functions of nouns and pronouns in Latin sentences. Particular attention is paid to prepositional phrases and adjective use with a view to gaining a deeper understanding of the different parts of speech of language in general. Emphasis is placed on vocabulary acquisition and the application of grammar and syntax for not only the reading of practice sentences and adapted Classical texts, but also simple written and oral communication in Latin through compositions and recitations. Having learned these fundamental skills, students will also be able to engage in simple conversations in Latin. Elements of Roman history and culture provide a framework in which to study the language, and this course encourages

students to make connections and draw comparisons between the Latin language and Roman culture and their own primary language and culture.

Latin II

Year | 1 credit

Prerequisite: Successful completion of Latin I

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish Level I with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Latin II builds upon the basic skills mastered in Latin I and continues with advanced syntax involving longer and more complex constructions and sentence patterns. Particular attention is paid to the present system passive and perfect system forms of verbs. The students will further round out their knowledge of noun declensions by studying the remaining two declensions of nouns, third declension adjectives, and the varied uses of the ablative case. Students will continue to practice simple conversational Latin and work on greater proficiency in aural and oral skills through conversation and recitation. Students at this level will begin to read, translate, and analyze longer adapted passages from authors such as Vergil, Livy, Horace, Ovid, Seneca, Pliny the Younger, and Tacitus. Political developments around the end of the Roman Republic and the beginning of the Empire will also be studied in order

to contextualize these authors and their works. In addition, discussions of word etymology will deepen the students' understanding of the origins of the English language and help to augment and increase their English vocabulary.

Latin III

Year | 1 credit

Prerequisite: Successful completion of Latin II

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish Level II with a grade in the D range will be required to do

summer work, and to show progress on their mastery by the beginning of September.)

Latin III builds upon the foundations of the language learned in Latin I and II and provides a thorough review of the grammar and syntax of the previous two years. It continues to sharpen students' communicative skills through simple Latin composition assignments and conversation involving more complex sentence structures. A careful study of participles, the subjunctive, and other more complex constructions in conjunction with close readings of ancient prose and

poetry enables students to tackle more difficult syntax. While emphasis is still placed on applying grammar and syntax to composing and translating Latin, skills in stylistic and literary analysis are also introduced. Through the study of these texts, students not only will review topics in advance grammar, but will also learn key rhetorical terms and hone their literary critical skills in class discussions and written assignments. These analytical skills will also enhance and complement students' English writing skills.

Latin IV

Year | 1 credit

Prerequisite: Successful completion of Latin III

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish Level III with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Latin IV is an intensive upper-division grammar and reading course designed to both continue the study of advanced Latin grammar and syntax and introduce students to skills in literary analysis and features of Latin literature. It begins with a thorough review of Latin morphology, grammar, and syntax and then examines more complex constructions involving the subjunctive mood. The latter portion of the course is then dedicated to the reading and analysis of authors such as Cicero and Catullus. In addition to translating these works of literature and considering their grammatical, metrical, and stylistic features, students will begin to discuss the readings critically in class, study their historical and social contexts often through secondary literature, and

write analytical essays. Thus, emphasis is given to not just to understanding what is said, but how ideas are expressed, what specific choices are made by individual authors, and ultimately what meaning is conveyed, and what experience is created, by the combination of these literary devices and prosodic choices. Upon the completion of this course, students will be able to speak critically and confidently about major works of Latin literature and have developed skills that can be applied to other literature and writing courses.

Latin V

Year | 1 credit

Prerequisite: Successful completion of Latin IV

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish level IV with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Latin V is an advanced upper-division reading course designed to further deepen students' literary critical skills and provide broader appreciation of Roman literature. Each year this course focuses on different canonical authors such as Ovid, Vergil, Horace, and Livy. In addition to translating these works of literature and considering their grammatical, metrical, and stylistic features, students will discuss the readings critically in class, study their historical and social contexts often through secondary literature,

and write article précis and analytical essays. Attention will also be given to the reception of Latin literature in art and later cultures. Upon completion of this course, students will have an enriched sense of developments in Latin literary history and Roman history more broadly.

Latin VI

Year | 1 credit

Prerequisite: Successful completion of Latin V

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish level V with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Latin VI is an advanced upper-division reading course designed to further deepen students' literary critical skills and provide broader appreciation of Roman literature. Students will explore recurrent themes across Roman literature. In addition to canonical authors such as Ovid, Vergil, Horace, and Livy, students will have the chance to engage with less traditional authors such as Petronius, Lucretius, Apuleius, Juvenal, or Sulpicia. Students will continue to develop their competence in translating Latin, analyzing grammatical, metrical, and stylistic features, but they will also discuss the readings critically in class, study their historical and social contexts often through secondary literature, and write article précis and analytical essays. Attention will also be given to the reception of Latin literature in art and later cultures. Upon completion of this course, students will have an enriched sense of developments in Latin literary history and Roman history more broadly.

ENGLISH AS A SECOND LANGUAGE (ESL)

English as a Second Language (ESL)

Year | 1 credit

Enrollment Criteria: All new Grade 9 and Grade 10 International Students are required to take this course.

This course is designed to improve the academic English skills of English language learners (ELLs) as well as to help them adapt to the requirements of Western academic culture. This course is considered a high-level English language development course. Specifically, this course supports ELLs in: 1) Academic reading skills and strategies; 2) Academic writing skills and strategies; 3) Academic vocabulary knowledge; 4) Listening comprehension ability; 5) Academic talk and discussion skills and strategies; 6) Important grammar topics covered within the context of reading and writing; 7) Study skills that are essential to academic success.



MANDARIN

Mandarin I

Year | 1 credit

This course is an introductory course of Mandarin Chinese. It introduces students to the Chinese language and the culture that produces it. Through this course, students gain basic listening, speaking, reading, writing, and typing skills in Mandarin. By the end of this course students will be able to use mostly memorized sentences and phrases to handle basic communicative situations such as greetings, introducing personal information, talking about school and family, and describing dates and locations. Topics covered in this course include greetings, name, age, nationalities, family, school, dates, locations, etc. In addition to learning the language, students are introduced to the most typical and important Chinese cultural products, practices, and perspectives. Students have opportunities to engage in authentic Chinese cultural experiences, such as celebrating traditional festivals, practicing Chinese calligraphy, tasting and/or making Chinese food, etc. Students will be able to gain a basic understanding of Chinese culture.

Mandarin II

Year | 1 credit

Prerequisite: Successful Completion of Mandarin I

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish Level I with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Students in Mandarin II continue to develop their skills in listening, speaking, reading, writing, and typing in Mandarin Chinese. More intermediate topics are introduced including fruits, food, Chinese dining etiquette, colors, clothing, body parts, sports, pets and animals, etc. Students learn to tackle more complicated communicative tasks such as describing one's physical attributes and clothing, discussing preferences and desires, expressing degree, producing temporal expressions, etc. Upon completion of this course students will be able to communicate in these situations using memorized language as well as starting to form their own sentences. At this level, instruction will be conducted mainly in the target language and will integrate more real-life contexts. In addition to learning this language, students will gain a more in-depth understanding of Chinese culture and increase their cultural sensitivity. Cultural activities at this level include calligraphy, songs, a trip to Chinatown, Chinese cinema, holiday celebrations, cultural discussions, etc.

Mandarin III

Year | 1 credit

Prerequisite: Successful Completion of Mandarin II/Grade 8, Mandarin,

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish Level II with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Students in Mandarin III continue to develop their skills in listening, speaking,

reading, writing and typing in Mandarin Chinese. Through extensive practice, students improve their pronunciation and fluency, enlarge their vocabulary, enhance their reading comprehension, and refine their grammatical skills and linguistic understanding. By the end of this course students will be able to carry on a longer conversation on these topics, comprehend longer texts, and produce well-structured and coherent compositions with more supporting details and more complex sentence structures. With better-developed language proficiency, students in this course also study various authentic Chinese cultural materials. Students will be able to have a more comprehensive understanding of Chinese culture and improve their cross-cultural awareness. Instruction will be conducted mainly in Mandarin.

Mandarin IV

Year | 1 credit

Prerequisite: Successful Completion of Mandarin III

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish Level III with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Students in Mandarin IV continue to enhance their reading, writing, speaking, listening and typing skills that are built in Mandarin I, II and III. Students will be introduced to a wider range of more advanced topics, such as cities and culture in China, academics and learning, professions and hobbies, school and community facilities, culture and festivals, movies and pop culture, etc. Many of

these topics will be introduced in the context of comparing and contrasting Chinese and Western culture, with the purpose of enhancing students' understanding of both the traditional and modern Chinese culture and to further build up their cross-cultural awareness and confidence. Through extensive practice and drills, students will expand their ability to carry out unrehearsed conversations and presentations, to extract and synthesize information from authentic reading texts that contain unfamiliar vocabulary and sentence structures, and to express their opinions through longer composition. Instruction will be conducted mainly in Mandarin.

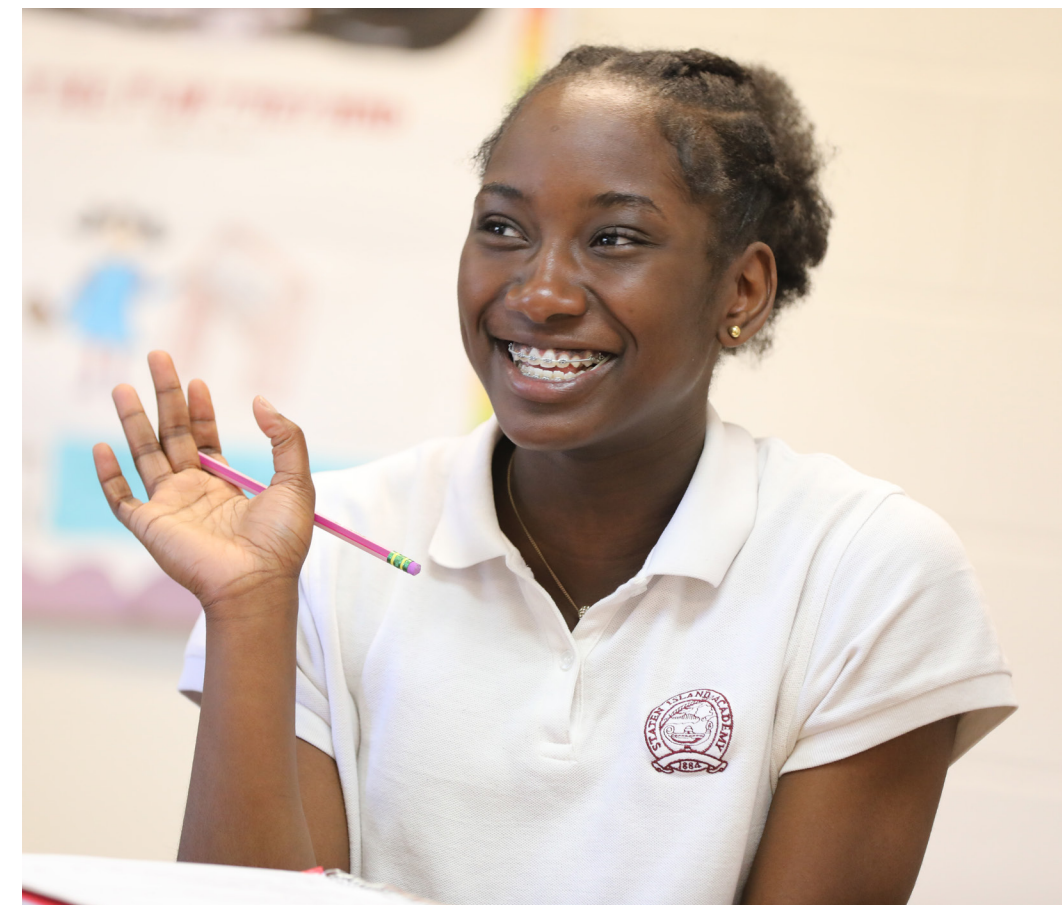
Mandarin V

Year | 1 credit

Prerequisite: Successful Completion of Mandarin IV

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish Level IV with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Students in Mandarin V continue to enhance their reading, writing, speaking, listening and typing skills that are built in Mandarin I, II, III and IV. Students will be exposed to immersion style of instruction and discussion concerning several overarching themes, including neighborhood and community, social activities and guest culture, science and technology, nature and environment, and health and diet. Authentic materials, including movies, news reports, documentaries, and various texts based on real-life situations, etc. will be incorporated in the curriculum.



Through extensive practice and drills, students will expand their ability to carry out unrehearsed conversations and presentations, to extract and synthesize information from authentic reading texts that contain unfamiliar vocabulary and sentence structures, and to express their opinions through longer composition.

AP Chinese Language and Culture

Year | 1 credit

Prerequisite: Departmental Approval Required

The AP Chinese Language and Culture course is designed to provide qualified high school students with the experience of taking an intermediate-level college course in Chinese. This course follows

the Advanced Placement curriculum set forth by the College Board. By signing up for this course, students are committed to acquiring advanced level of proficiency in the Mandarin Chinese language as well as developing deep understanding and appreciation of the Chinese culture. Students will be able to cultivate and enhance their language skills and cultural understanding by applying the interpersonal, interpretive, and presentational modes of communication in real-life situations as they explore concepts related to the following six themes: family and community, personal and public identity, beauty and aesthetics, science and technology, contemporary life, and global challenges.

Students enrolled in this course are required to report for classes in late August, and to take the AP Chinese Language and Culture examination in May.

SPANISH

Spanish I

Year | 1 credit

Spanish I introduces students to the Spanish language and to the different cultures that speak it. In this course, students develop basic listening, speaking, reading, and writing skills in Spanish. Upon completion of this course, students will be able to negotiate basic communicative situations such as introducing and describing oneself and others, speaking about school and family, discussing likes and dislikes,

and pastimes and hobbies. To achieve these communicative goals, students learn vocabulary, grammar, and syntax, as well as pronunciation and intonation patterns. By studying these topics, students will also begin to strengthen their understanding of language in general and will make comparisons between Spanish and English (or other native languages), thus reinforcing their communicative skills in both languages. In addition, students will gain a basic understanding of the different cultures that speak Spanish, by learning some common cultural products, practices, and perspectives across the Spanish-speaking

world. Students will be able to make comparisons between those cultural aspects and similar ones in their own cultures.

Spanish II

Year | 1 credit

Prerequisite: Successful completion of Spanish I

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish Level I with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Spanish II builds on the foundations of the language learned in Spanish I. Students in this course will further develop their listening, speaking, reading and writing skills in Spanish. By the end of this course, students will be able to negotiate the type of communicative situations one can expect to encounter in daily life while visiting or living in a Spanish-speaking country (ie, making travel arrangements and reservations, talking about future plans, going shopping and negotiating a price, asking for and giving directions, ordering food at a restaurant, making plans and discussing past events). To achieve these goals, students will continue building their vocabulary and their understanding of grammar and syntax, while honing their pronunciation and developing their fluency. Students will continue making comparisons between Spanish and English (or other native languages), reinforcing their communicative skills in both languages. Students in this course will delve more deeply into cultural products, practices, and perspectives across the contemporary and historical Spanish-speaking world. Students will continue to

explore the commonalities and differences between those cultures and their own, which will enable them to develop understanding and empathy, and prepare them to become global citizens.

Spanish III

Year | 1 credit

Prerequisite: Successful completion of Spanish II

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish Level II with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Spanish III builds on the foundations of the language from levels I and II, reviewing and expanding on what students learned in these previous years. Students in this course will further develop their listening, speaking, reading, and writing skills in Spanish. By the end of this course, students will be able to negotiate more complex communicative situations, such as giving and receiving advice, as well as arguing and defending an opinion, about a variety of topics (ie, nature and the environment, science and technology, health, well-being and nutrition, domestic life and life in the city, etc). To achieve these goals, students will continue building their vocabulary and their understanding of advanced grammar and syntax, while further developing their fluency. Students will continue making comparisons between Spanish and English (or other native languages),

reinforcing their communicative skills in both languages. Students in this course will continue to delve deeply into cultural products, practices, and perspectives across the contemporary and historical Spanish-speaking world. Students will continue to explore the commonalities and differences between those cultures and their own, in the context of the topics of discussion, which will further enable them to develop understanding and empathy and prepare them to become global citizens.

Spanish IV

Year | 1 credit

Prerequisite: Successful completion of Spanish III

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish Level III with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Spanish IV builds on the foundations of the language from previous years of study, reviewing extensively and expanding on what students learned in these previous years. Students in this course will further develop their listening, speaking, reading, and writing skills in Spanish. By the end of this course, students will be able to negotiate more complex communicative situations, such as relationships, travel and entertainment, daily life, health and well-being, and the environment. Students will continue to compare and contrast cultural products, practices, and perspectives across the contemporary and historical Spanish-speaking world with those of their own cultures in order to further develop their understanding of the world as global citizens.

Spanish V

Year | 1 credit

Prerequisite: Successful completion of Spanish IV

(Please note: as per the Staten Island Academy Parent/Student Handbook, students who finish Level IV with a grade in the D range will be required to do summer work, and to show progress on their mastery by the beginning of September.)

Spanish V builds on the foundations of the language from previous years of study, reviewing and expanding on what students learned in these previous years. Specific communicative goals at this level are tailored to students' particular areas of interest and proficiency level. Topics will include a combination of literature, history, an exploration of media (TV, cinema, music), all around culturally relevant topics and historical figures. New grammar, vocabulary and syntax are learned in context. By the end of this course, students are able to communicate with increased confidence about the topics that they chose to study. Students research a variety of topics, and explore different mediums to share their findings, such as writing essays, giving presentations, and having debates. Students compare and contrast cultural products, practices, and perspectives across the contemporary and historical Spanish-speaking world with those of their own cultures, in order to further develop their understanding as global citizens.





REQUIRED COURSES

Algebra I

Prerequisite for Algebra II
Year | 1 credit

This course covers all the basic topics of a standard Algebra I curriculum. The establishment of a strong foundation in mathematics with an emphasis on fundamental algebraic concepts is stressed. These include solving equations and inequalities, graphing functions (including linear and quadratic functions,) solving systems of equations, working with polynomials, factoring, radicals, right triangle trigonometry, and solving equations using the quadratic formula. Problem solving is emphasized. The text helps the student to explore many practical applications of the material being studied. Students in this course will be required to purchase a TI83 or TI84 graphing calculator.

Geometry

Prerequisite for Algebra II
Year | 1 credit

This course covers all the fundamental topics of plane geometry. Even though the importance of a Euclidean proof is maintained, it is done so with less emphasis on detail and more emphasis on those types of proofs that students can be successful at. This approach continues to facilitate the critical skill of logical thinking. Topics from solid geometry as well as constructions are studied. The relationship between Geometry and Algebra is stressed. Students in this course will be required to purchase a TI83 or TI84 graphing calculator.

Advanced Geometry

Prerequisite for Algebra II
Year | 1 credit

Departmental Approval Required

Like its Algebra counterpart, this course is designed to be comprehensive and challenging, with emphasis on detailed proof and on the student's ability to reason logically. The inter-relationship between Algebra and Geometry is stressed, creating many practical applications for students to examine. All of the familiar topics of Plane Euclidean Geometry are explored, including a thorough study of triangles, polygons, circles and coordinate geometry. Additional topics include solid geometry (area and volume,) transformations and constructions. Students in this course will be required to purchase a TI83 or TI84 graphing calculator.

Algebra II

Year | 1 credit

This course is designed to cover all the topics for a standard Algebra II course. It begins with a study of equations, linear relations, systems of equations, inequalities and functions. Much focus is given to the study of quadratic and polynomial equations. Rational expressions, as well as the ideas of exponents and logarithms, are explored. Students who have struggled in previous math courses, specifically in Algebra I and Geometry, are ideal candidates for this section.

One of the main objectives of this course is to generate interest and confidence in the student's own ability in mathematics so that he or she might feel

motivated to continue their study with Precalculus the following year. Students in this course will be required to purchase a TI83 or TI84 graphing calculator.

Algebra II w/Trigonometry

Year | 1 credit

This course is also designed to cover all the topics for a standard Algebra II course, which are described in the Algebra II course description above. However, students in this class will also study Trigonometry, using both circle and triangle definitions.

This section is ideal for students who have had success in previous mathematics courses, but who do not feel they are ready for the challenges of the advanced section. Students in this course will be required to purchase a TI83 or TI84 graphing calculator.

Advanced Algebra II w/ Precalculus

Year | 1 credit

This is an intense course that basically prepares students to go on to the study of Calculus. It is intended for students who are highly motivated to learn mathematics at an advanced level. Topics from Algebra II with an emphasis on function theory are presented during the first third of the year. These include coordinate geometry of points and lines, inequalities, complex numbers and absolute value. Higher ordered polynomial functions, exponential functions and logarithmic functions are all explored in depth in the second third of the year. Conic sections, trigonometry, rational functions and polar coordinates

are examined during the latter third of the year.

Additional topics include advanced techniques of equation-solving, as well as sequences and series. There is a heavy emphasis on the use of the graphing calculator in this course, as the graphical and numerical representation of a function can be very enlightening. Students in this course are required to purchase a TI83 or TI84 graphing calculator.

ELECTIVES

Mathematical Economics

Year | 1 credit
Departmental Approval Required

Prerequisite: Successful completion of an Algebra II Course

Introduction to Finance offers students a beginner level learning into institutions and markets, investments, and financial management. The course also incorporates recent economic and financial events, gaining an integrated perspective of learning how individuals, businesses, and governments can influence or be influenced by the economy and markets. No prerequisite knowledge of financial studies is required. A graphing calculator is required for this course. The TI83 Plus or TI84 Plus are recommended.

Statistics

Year | 1 credit
Prerequisite: Successful completion of an Algebra II course

This course is designed for students who plan to major in science, engineering or math in college. It will also benefit those students who plan to major in the social sciences, health sciences and business, as a college statistics course is required for most or all of the majors in these fields of study. In this course, students will cover a number of general ideas including how to explore, collect, and understand data, how to find relationships between variables, how to gather data through surveys, experiments, and observational studies, how to understand the role of probability in statistical studies, how the idea of a random variable allows us to study sampling distribution models, and finally how to form confidence intervals and to test hypothesis. Students will look at a wide range of examples of how statistics is used in society, and will learn how to make accurate predictions within small margins of error.

A graphing calculator is required for this course. The TI83 Plus or TI84 Plus are recommended.

Precalculus

Year | 1 credit
This course emphasizes the study of function theory through the use of the graphing calculator. Students will thoroughly investigate the trigonometric functions, logarithmic and exponential functions, polynomial functions and rational functions. Other topics covered are polar coordinates, complex numbers, conic sections, and sequences and series. This course is designed for students who are coming out of Algebra II with

Trigonometry who are interested in pursuing mathematics to the next step. Students in this course are required to purchase a TI83 or TI84 graphing calculator.

Calculus

Year | 1 credit
Prerequisites: Precalculus or Algebra II w/ PreCalculus

This year-long course will cover the fundamentals of Calculus at a moderate pace and depth. Attention will be paid to the classic topics of limits, derivatives, integrals and the Fundamental Theorem of Calculus, with special focus on real-world problems and applications. A TI83 or TI84 graphing calculator will be required, and the course will make use of other technological resources. Successful students will be well-positioned to take Advanced Calculus I or to pursue math in college. This course is intended for students who have completed Precalculus or Algebra II with PreCalculus, but who do not feel they are ready for the rigors of Advanced Calculus I.

Discrete Mathematics

Year | 1 credit
Departmental Approval Required
Prerequisite: Successful completion of a Precalculus Course

This course is designed for STEM students who are interested in pursuing mathematics topics outside the realm of Calculus. Discrete Mathematics deals with topics that are not continuous, unlike Calculus. The topics include set theory, logic, proof writing, induction, and elements of graph theory. These

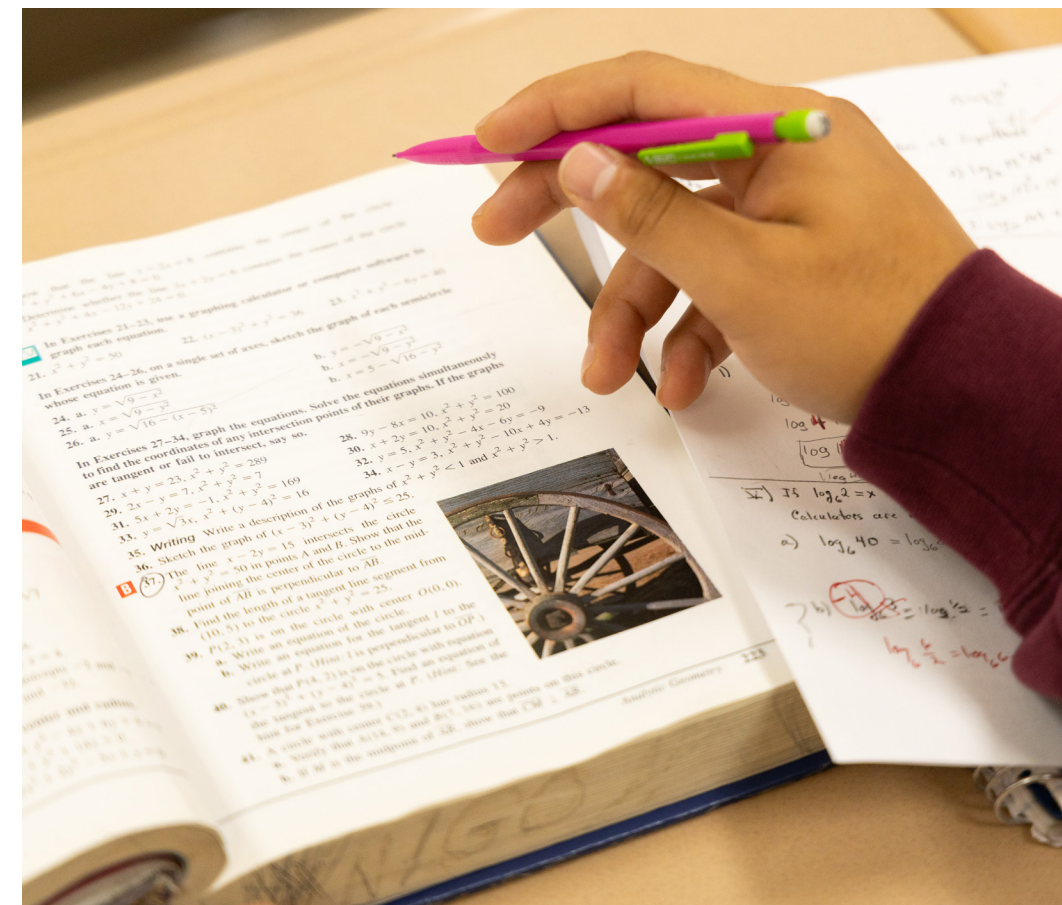
concepts support the ideas of abstract thinking fundamental to the study of computer science and higher-level mathematics. Additionally, this course will provide students with the opportunity to apply these concepts through a variety of projects and hands-on applications. The study of these topics builds a strong foundation for students seeking to pursue careers in engineering or in computer science.

Advanced Calculus I

Year | 1 credit
Departmental Approval Required

Prerequisites: Successful completion of Precalculus, Calculus or Algebra II w/ PreCalculus

This course is designed for students who have successfully completed Algebra II with PreCalculus and who are motivated to study Calculus at a higher level. We will begin by exploring the idea of a limit, and connecting it to the idea of instantaneous rate of change, commonly known as the derivative. After mastering the derivative, we will utilize it in applications like rectilinear motion and optimization. After mastering these techniques, we will explore how to find the area under a curve by defining the definite integral. After mastering the basic techniques of integration, we will utilize them in applications like net change, volume and arc length. We will then move on to advanced integration techniques such as integration by parts, partial fractions and trigonometric manipulations and substitutions. All major aspects of both differential and integral calculus of a single variable will be studied in the class, and then some. A TI83 or TI84 graphing calculator will be required for all students enrolled in this course.



While not designed for the AB Calculus exam, the course will provide a solid foundation for those wishing to take the test and thus motivated students may – with supplementary work supported by SIA faculty – sit for the AP AB Calculus exam in early May, if they so choose. However, all students in the course must take the course final exam. Students enrolled in this course are required to report for classes in late August.

Advanced Calculus II

Year | 1 credit
Departmental Approval Required

Prerequisite: Successful completion of Advanced Calculus I

This year-long course, a rigorously-paced continuation of the AP AB Calculus course, will begin by covering advanced integration techniques. Series, Taylor Polynomials and Taylor Series, Differential Equations and Polar and Parametric Equations will all be treated in depth, and

then the course will proceed to introduce Multivariable Calculus. A TI83 or TI84 graphing calculator will be required for all students enrolled in this course.

While not designed for the BC Calculus exam, the course will provide a solid foundation for those wishing to take the test and thus motivated students may – with supplementary work supported by SIA faculty – sit for the AP BC Calculus exam, if they so choose. However, all students in the course must take the course final exam.

This course is designed in such a way that students can learn well beyond what the normal AP BC Calculus course requires. By expanding the curriculum, we feel that can better serve the overall needs of our advanced mathematics students. Students enrolled in this course are required to report for classes in late August.

Physical Education



Physical Education

The Upper School Physical Education courses is comprised of the following four choices.

Team Sport/Recreation Games

This course is designed to motivate and teach students about health-related fitness, teamwork and fair play. Team Sports reinforces the concept of incorporating physical activity into a lifestyle of improved fitness and health. This course offering utilizes physical movement as the primary educational medium. Students will benefit from comprehensive team activities and cardio-respiratory activities in addition, students develop knowledge of rules, terminology, proper technique, and safety issues specific to each particular activity which include, but is not limited to, badminton, bocce, cornhole, tag-games, ultimate frisbee, pickleball, tennis, soccer, volleyball, basketball, and other sports.

Mat Pilates

In this class, students will learn the basic components of Pilates exercises, core exercises, functional movements. This course approaches the Pilates method and basic Pilates Principles of Concentration, Center, Control, Fluidity, Precision and Breath actively with exercises that promote global body awareness.

Yoga

In this class, students will focus on various asanas (poses) together sequentially to create strength, balance, and flexibility in mind and body. Students will learn basic yoga asana with attention to the

breath and form. The kinesthetics of each pose will also be taught, along with how to modify poses correctly for optimum personal performance.

Cardio/Fitness

This course emphasizes cardiorespiratory (CR) fitness through running, biking, stepping, and rowing, while using a heart rate monitor to track and evaluate performance. Each student will evaluate their own CR fitness level and based on this, the student will participate in an individualized program to improve or maintain that level. Throughout the class, discussions will focus on the benefits of cardiovascular health, physical activity recommendations, and positive health outcomes associated with lifelong participation in physical activity. Students will be encouraged to build endurance in order to improve cardiovascular health and physical well-being. Upon completion, students will understand and appreciate the lifelong benefits derived from heart rate training.

Strength Training

This course is designed to teach students the proper techniques and principles of strength training to improve overall physical fitness and athletic performance. Students will learn exercises for all major muscle groups, proper form and technique, how to create and follow a workout plan, and the benefits of strength training for overall health and wellness. Overall, this course aims to educate students on the benefits of strength training, provide them with the knowledge and skills to safely and

effectively incorporate strength training into their fitness routine, and empower them to lead a healthy and active lifestyle.

Aerobics

This aerobics class is designed to help students improve their cardiovascular fitness, strength, flexibility, and coordination through a variety of aerobic exercises and dance routines. Students will learn proper warm-up and cool-down techniques, as well as proper form and technique for various aerobic exercises such as jumping jacks, high knees, grapevines, and more. In addition to improving physical fitness, students will also learn about the benefits of regular exercise, healthy lifestyle choices, and setting fitness goals.

This aerobics class incorporates elements of dance and Zumba to not only improve cardiovascular fitness but also to add a fun and exciting twist to the workout. Students will learn choreographed dance routines set to upbeat music, incorporating dance styles such as hip-hop, Latin dance, and more. Zumba-inspired workouts will also be included, incorporating dance moves with fitness exercises to create a high-energy and calorie-burning workout.



REQUIRED COURSES

Physics

Grade 9 Requirement
Year | 1 credit

Students in this course will be actively engaged in understanding their physical world by constructing and using scientific models to describe, explain, predict and control physical phenomena. The course will focus on the study of mechanics with an emphasis on concepts. Over the course of the year, students will develop mathematical, visual, and graphical models to describe and predict motion with constant velocity, balanced forces, constant acceleration, unbalanced forces, and projectile motion; additionally, they will study the role of momentum and energy transfer in motion.

Chemistry

Grade 10 Requirement
Year | 1 credit

This course introduces core chemical concepts to students including basic mathematical relationships and theoretical explanations. Topics covered include atomic structure, states of matter, introductory thermodynamics, introductory quantum theory, the localized electron model of chemical bonding, chemical reactions, stoichiometry,

solutions, strong acids and bases, gas laws and the kinetic molecular theory, and the behavior of liquids and solids. The laboratory component provides experience with a variety of fundamental laboratory techniques while reinforcing the theoretical content.

Biology

Graduation Requirement
Year | 1 credit

Biology is an introduction to the scientific study of life on Earth. The course is a survey of topics such as the structure and function of biological macromolecules, molecular and Mendelian genetics, cellular energetics, protein synthesis and function, evolution, ecology, and animal behavior among others. The lab component of the course is designed to enhance understanding of each topic and to develop skills essential for biological research including using visual models, managing variables, and interpreting data. Note: AP Biology may be taken to fulfill this requirement with departmental approval. The Biology course may be delayed until Grade 12.

ELECTIVES

Advanced Placement Biology

Departmental Approval Required

Year | 1 credit

Enrollment Criteria: Cumulative GPA of A- in Honors Science or A in non-Honors Science

AP Biology is a two-semester, college-level introduction to the scientific study of life on Earth. The course emphasizes making connections across the various levels of biology, applying knowledge to novel situations, developing critical thinking skills, and cultivating an understanding of the process of scientific discovery. We will survey topics such as the structure and function of biological macromolecules, molecular and Mendelian genetics, cellular energetics, protein synthesis and function, evolution, ecology, and animal behavior, among others. The course is organized around the four "Big Ideas" emphasized by the College Board: evolution, energy dynamics, information storage and transfer, and interactions between cells, systems and organisms. The course culminates in the College Board Advanced Placement Examination, which all students are expected to take. This course may be taken to fulfill the Biology.

Students enrolled in this course are required to report for classes in late August.

Advanced Placement Chemistry

Departmental Approval Required

Year | 1 credit

Enrollment Criteria: Cumulative GPA of A- in science (A- in SCI 10H or A in SCI 10), mathematics, and overall; successful completion of Honors Geometry, and

concurrent enrollment in Algebra II with Trigonometry Honors or higher-level math course, teacher recommendations. This is a survey course in chemistry commensurate with a college level course for science majors.

The course is based upon the recommended College Board syllabus. It delves into the topics covered in the basic chemistry course, but covers them in much greater depth and uses applied mathematics to a much greater extent. Emphasis is placed developing a deep understanding of the thermodynamics, kinetics and equilibria involved in all chemical reactions. Laboratory work is an integral part of the course to allow students to hypothesize, observe and experiment with concepts covered. The course culminates in the College Board Advanced Placement Examination, which all students are expected to take. Students enrolled in this course are required to report for classes in late August.

Advanced Placement Psychology

Departmental Approval Required

Year | 1 credit

Enrollment Criteria: Cumulative GPA of B+ in science This course is based upon the recommended syllabus for the AP Examination, which all students are expected to take.

The material covered will include the knowledge and skills required at the first year of college study. Selected topics include: the nature and history of psychology, the influence of genetics and evolution, basic structures of the neuron and nervous system, sensation, perception, consciousness, learning, memory, cognitive, behavioral, abnormal and social psychology. Theories of Freud,

Rogers, Maslow, Gilligan and other psychologists are presented. Students enrolled in this course are required to report for classes in late August.

Wildlife Science

Year | 1 credit

This course will explore the wonders of wild animals, plants, and ecosystems, with an emphasis on New York State's rich biodiversity. Through immersive field experiences, classroom discussions, and data-driven inquiry, students will gain insights into the application of ecological knowledge to find a balance between meeting the needs of people and wildlife. As we delve into the diverse array of species found in our forested, marine, and urban ecosystems, we will explore topics related to ecology, evolutionary biology, indigenous wisdom, and environmental law and policy. In doing so, students will deepen their appreciation for nature while gaining the skills and understanding necessary to contribute to the preservation of the planet's cherished resources.

Sound, Light and Modern Physics for the Non-Science Major

Prerequisite: completion of Algebra 2 or higher

Year | 1 credit

The first semester of this course will dive deep into the world of mechanical waves, electromagnetic waves and geometric optics (mirrors and lenses); we will focus on the mathematical representation of these waves and an understanding of their behavior. The second semester will focus on Modern Physics, examining special relativity, early quantum theory, quantum mechanics, nuclear physics and elementary particles and astrophysics.





GRADE 12 STUDENTS ONLY

The Senior Signature Project

The Senior Signature provides Grade 12 students with the opportunity to replace one of the required six courses with an approved research project, in-depth study or artistic endeavor that delves deeply into a topic of interest. Interested students must be a rising senior, complete and submit a proposal when they register for courses. The Senior Signature project requires students to work closely with a project advisor, to begin work in the spring of their junior year, to meet deadlines over the summer and to make a public presentation in the spring of their senior year. Participating students will be graded quarterly and will be expected to complete the project in April of their senior year.

