Contents

Lower School Course Descriptions – By Grade
Form C (Grade 4) ................................................................. 3
Form B (Grade 5) ................................................................. 4
Form A (Grade 6) ................................................................. 5
Form I (Grade 7) ................................................................. 6
Form II (Grade 8) ............................................................... 8

Upper School Course Descriptions – By Department
Art ......................................................................................... 10
Computer Science ............................................................. 11
English ................................................................................. 12
Foreign Language ............................................................... 15
History .................................................................................... 17
Mathematics .......................................................................... 19
Performing Arts: Music ..................................................... 20
Performing Arts: Theater ................................................... 21
Religion .................................................................................... 22
Science .................................................................................... 23
Lower School Course Descriptions – By Grade

**FORM C (GRADE 4)**

**Art**
Art education in Form C helps students cultivate their ability to create original art with an emphasis on process over product. Students learn about line, color, pattern, space, and form and use a variety of art materials and techniques to produce art works while developing artistic behaviors. Some of the materials used in the hands-on program are chalk and oil pastel, colored pencil, water-color, tempera paint, *papier-mâché*, and clay. All along the way the students are called on to observe the natural environment, explore imaginative ideas, and reflect on their personal experiences. Lessons structured around appreciation of the visual arts and crafts in a global setting support their studies in geography, science, math, music, and literature. Form C art meets twice weekly.

**English**
Using student writing, reading of fiction and nonfiction, and frequent discussions and oral presentations, the English program seeks to encourage each student to order his thoughts, express himself clearly, value and respond to others’ ideas, and follow written and oral instructions. Reading and writing are the core of the Form C program. Students write sentences, paragraphs, and compositions on a variety of assigned topics, pursue self-directed writing, and develop beginning research skills. Spelling, vocabulary, and grammar concepts and skills help students learn to express themselves with greater clarity and ease. Group discussions and oral presentations encourage students to speak and listen more effectively. To engage and extend their growing interpretive abilities, students read novels, short stories, and poems throughout the year.

**Library**
Form C students spend time weekly with our Lower School librarian. During this time the following library skills are emphasized: location and access, that is using databases as a primary research source, using graphic organizers, and note-taking templates and strategies; understanding information, which covers a range of topics from plagiarism to bibliographic citations; and love of reading, through participation in book talks, learning to use the catalog independently, and meeting visiting authors and guest presenters.

**Geography**
Geography class provides an overview of major world regions while offering interactive experiences with map and globe skills. Each continent study unit includes an in-depth focus on many facets of the continent, including but not limited to culture, physical geography, political geography, economy, history, and government. Activities encourage students to think globally and make connections using the recurring themes of location, place, human-environment interaction, movement, and regions as they explore the diverse places and peoples of our planet.

**Mathematics**
The math program seeks to develop students who not only have strong computation skills but also are able to apply an understanding of numbers to a variety of problem-solving situations. We stress operations including whole numbers, fractions, and decimals; pattern recognition; factors and multiples; and simple geometric formulas. The math program makes frequent use of manipulatives, word problems, and alternate problem-solving strategies in individual, full-group, and cooperative activities.

**Music**
Students learn the fundamentals of music through singing, movement, and playing Orff instruments. Students explore sounds and rhythms, mainly using the pentatonic scale. They begin to develop a knowledge of the language of music and musical notation while learning the music and dances of other cultures. The class meets twice a week throughout the year.

**Religion**
Students read and discuss the great stories of the Old Testament/hebrew Scriptures to learn about the formative events and individuals in the history of the Hebrew people. While the course pays attention to the entire canon of Holy Scripture with its depiction of the unfolding of the covenantal relationship between God and God’s people, we focus on the creation and salvation stories found in the books of Genesis and Exodus. Students learn through readings, discussions, quizzes, puzzles, skits, and artistic projects based on Biblical material. The class meets once a week and is the starting point for the Lower School social-emotional and life skills curriculum.

**Science**
The goal of the Form C science course is to introduce students to a variety of scientific concepts through hands-on experimentation and application of the scientific method. Topics include measurement, graphing, sound, light and color, and electricity and magnetism. Each student keeps a science binder with his lab observations and conclusions for each activity. Form C students attend science twice a week throughout the year. Science class is also complemented by a life-skills program. This multisession component—taught by various Lower School teachers—addresses responsible decision-making, healthful living, and the dangers of tobacco use.

**Spanish**
This course introduces Spanish phonetics, basic vocabulary, and many grammatical structures such as verb conjugation and the agreement of adjectives and nouns. Though emphasis is on oral and aural development, the course includes writing and reading components as well. Students learn and reinforce vocabulary through a variety of activities, including games, songs, skits, and videos. In addition, students study and acquire greater understanding of the cultures of the Spanish-speaking world.
Form B (Grade 5) | Lower School Courses by Grade

Art
Building on the skills learned in Form C art, Form B art advances in the use of tools and the ways in which the students learn to recognize the importance of art in a cultural context. Recent art explorations included experiences drawing with charcoal and pastels, painting with water-based media, weaving, crafts, and clay. Students gain an understanding of early art in the Americas, Africa, Asia, and Europe while engaging in the art-making process. Students’ individual expression is emphasized in their continuing development as they advance in their artistic attitudes. Form B art meets twice weekly.

English
The English program focuses on independent reading, literature, written and oral expression, grammar, vocabulary development, and spelling. Reading instruction is literature-based, with a focus on the elements of a story. Several novels and shorter works allow students to make connections across the various areas of study within the curriculum. In addition to exploring the elements of fiction, students respond to and interact with each text. In grammar, students study parts of speech, usage, diagramming, and punctuation and use these developing skills in varied writing activities. The English program stresses clear written and oral communication of information.

Library
Form B students spend time weekly with our Lower School librarian. During this time, students work on several library skills. In the library, they refine their understanding of databases, search engines, and use of bibliographic citations; identify techniques and develop skills to avoid plagiarism; and select literature from a wider range by introducing new authors and titles.

History
The history course surveys the origins of prehistoric people and their descendants as they developed the earliest civilizations in river valleys throughout the ancient world. Studies begin in the Middle East with Mesopotamian settlements and include samples of early Asian, African, and European communities. Students focus in depth on Greek and Roman contributions to the modern world. The history curriculum is paired closely with the literature selections. Threads of history, geography, mythology, and epic tales are incorporated into other curriculum areas. Periodic projects and field trips allow students to study these cultures in greater depth.

Mathematics
Math concentrates on comprehension of division in its several written forms including long- and short-division algorithms and expression of remainders, fractions, ratios, proportions, percents, and graphs. Students review addition, subtraction, and multiplication as these operations are required in solving a variety of problems. Students express problems in equation form to introduce elementary manipulation of mathematical expressions and sentences. The study of the characteristics of numbers and operations permits the visualization and comprehension of equations. The basic properties and characteristics of two- and three-dimensional geometric figures are reviewed and expanded upon.

Music
Form B students continue to develop their knowledge and experience of music by incorporating more complicated melodies and harmonies and expanding to the hexatonic scale. They learn songs and dances from time periods studied in their history class. Through the exploration of melody, rhythm, and speech patterns, students are led to compose original music to settings of poetry. The class meets twice a week throughout the year.

Religion
The Form B religion class focuses on the life, ministry, and teachings of Jesus as recorded in the Gospels of the New Testament. Students read and discuss assigned passages from the Four Gospels and Acts, focusing particularly on the Gospel of Luke. To gain a better picture of the roots and formation of the early Christian Church, the course gives students opportunities to examine the historical and political culture of first-century Palestine and the theological message Jesus brought to a people living in troubled times. The course meets twice out of every seven days and is considered an academic discipline in which the students will be assessed and grades earned.

Science
The Form B science course focuses on life science with students engaging in a variety of lab activities to present a broad view of life on Earth and the methods of biology. Students begin by studying the building block of life, the cell, and its components. They compare and contrast the similarities between plant and animal cells. Students look in depth at different types of plants and the energy-conversion process of photosynthesis. Students attend a field trip to the U.S. Botanical Garden as a capstone to their plant unit. Students begin their animal study by looking at simple organisms like sponges and sea stars. They progress to looking at more complex invertebrates like insects. Finally, they finish the year understanding various types of vertebrates. To understand better the similarities and differences between animal species, students dissect a variety of specimens ranging from the earthworm to the frog. Each student keeps a science binder with his lab observations and conclusions for each activity. In the spring, students work on science projects presented during the Lower School’s Science Week. Science meets three times in our seven-day cycle for the entire year. Science class is also complemented by a life-skills program. This multisession continuation of the Form C component—taught by various Lower School teachers—addresses responsible decision-making, healthful living, and the dangers of tobacco use.

Spanish
In this course, students review what they have learned while expanding their ability to express themselves through new thematic units that include varied vocabulary and grammatical concepts. Although the course emphasizes speaking and listening, students will also develop their reading and writing skills. The use of games, songs, skits, and videos encourages the acquisition of the language and fosters a greater understanding of the cultures of the Spanish-speaking world.
FORM A (GRADE 6)

Art
Applying the skills and concepts learned in the early years, Form A art lessons encourage students to realize the significance of art in their daily lives and to recognize the power of visual art in communicating messages integral to human culture. To achieve this goal, students explore the relationships between art and design and their academic studies of religion, history, science, math, and music. Part of the course focuses on the art and architecture of the Washington National Cathedral with art lessons inspired by the elegant examples viewed on site. With an emphasis on imagination and integration, students further develop their technical skills in a variety of hands-on drawing, painting, crafts, and sculpture lessons. Form A art meets twice weekly.

English
Form A English emphasizes literature, writing, grammar, vocabulary, and oral expression. The poems, short stories, and novels students read invite discussions of setting, character, conflict, point of view, and theme, not merely as literary terms but as issues with relevance to the readers’ own lives. The course explicitly introduces more abstract thought processes, first by asking students to infer characterization and then to analyze symbolism toward the end of the year. When writing about literature, students learn to use topic sentences and textual evidence to support their ideas. Regular compositions, including creative writing assignments, give students a chance to practice the various modes of writing: conferences with peers or the teacher, revisions, and sharing offer students opportunities to improve their writing. Since clear, precise writing is essential in most subjects, teachers encourage students to focus on sentence fluency, word choice, voice, as well as mechanics with the goal of articulating their ideas in a logical and concise manner. Finally, through oral settings and public speaking assignments, students gain confidence and skill in addressing a group. (Of note: library time in Form A is focused on honing the boys’ ability to conduct advanced research using a variety of online databases.)

Library
During library classes in Form A, students read and discuss works of literature including historical, fantasy, young adult, and dystopian novels, and novels written in verse. Author visits, whether streaming (Skype) or through in-house visits, augment the experiences. Students receive instruction on how to write summaries of reading materials; documentation of sources and an in-depth look at plagiarism and its related topics are also reviewed and analyzed. The Form A library course coordinates closely with reading and writing endeavors in English and history.

History
Students use a variety of techniques to explore the transition from the ancient world to the beginnings of the modern world by studying the fall of Rome to the age of European exploration. In the first half of the year, they hone their geography skills, review Ancient Rome, discuss the legacy of the Roman Empire, and study the structure of society in medieval Europe. In quarters three and four they explore the art, architecture, and ideas of the Renaissance, discover the innovation of the Scientific Revolution, discuss the role of the Church, and examine the causes and effects of the Age of Exploration. They read historical fiction, biographies, textbooks, and primary sources to learn about these time periods and how they are relevant to our lives today. Students complete a variety of projects that give them an opportunity to collaborate with their classmates and have fun. Students build upon their critical thinking and analytical skills and improve their reading comprehension, note-taking, and organizational skills. In class, students engage in independent reading activities, collaborative small group work, and in-depth class discussions where they gain experience taking constructive feedback from peers and adults.

Mathematics
Boys continue their study of addition, subtraction, multiplication, division of whole numbers, decimals, fractions, comparing and ordering whole numbers, decimals, fractions, measurement, with an introduction to geometry by work with perimeter, area, and volume. Boys begin work with pre-algebra while they explore solving equations. Math covers a number of central topics—fractions, decimals, percents, negative integers, and ratios—but places them in the context of problem-solving and working with data. Hands-on projects hone skills and allow students to work with meaningful numbers that they have measured, discovered, or researched themselves. This approach alongside work with word problems further develops real world critical-thinking skills. The goal is an understanding of math and its uses as well as precision in computation.

Music
In the Form A music program, students continue to develop ear training, and proper vocal technique, with an emphasis on sight singing. This knowledge of pitch enforces accuracy in singing in two- to three-part harmony. Working from modes to the full diatonic scale, students learn to build simple chord accompaniments, identify key signatures, and transpose a simple melody. In addition, multicultural songs and dances as well as the lives of classical, jazz, and blues composers are studied. Students prepare for two concerts during the year. This class meets twice a week.

Science
The Form A science course focuses on engineering and technology with students discovering and understanding the application of basic/foundational/pure scientific principles to contemporary innovations and industries. Throughout the year, students engage with several projects, including LEGO NXT Mindstorm Robotics, introductory coding, three-dimensional printing and prototyping, SeaPerch Underwater ROVs, and StratoStar high-altitude weather balloons. LEGO Robotics is a program that enables individuals without formal training in engineering and computer programming to design, build, and program small-scale robots. The introduction to coding prepares students to take to the Accelerated Intro to Computer Science course offered at www.code.org. As a result of the course, students will master the core computer science and programming concepts such as computational thinking, algorithms, functions, and conditionals. Students gain an introduction to three-dimensional printing and prototyping and its various uses by creating their own objects using online CAD software and then printing them.
out on our Ultimaker 2 3D printer. They also design prototype fan blades and use their findings from the class to design the optimal fan blade in terms of energy output. The SeaPerch program gives students meaningful, hands-on experience in building and designing robots and applying that experience to the scientific field of underwater exploration. The building of the SeaPerch ROVs is the capstone project of the underwater explorer unit. For the StratoStar high-altitude weather balloon unit, students design experiments that are placed into capsules and flown into near space. Students go on a field trip to launch the balloons at Gettysburg College; a few students from each homeroom ride in chase cars to track and recover the balloons. Data from the launch is then analyzed back in the classroom. Each student keeps a weekly blog to track their learning and growth throughout the year. In the spring, science work on science projects presented during the Lower School’s Science Week.

Form A Science meets four times in our seven-day cycle for the entire year. Science class is also complemented by a life-skills program. This multi-session continuation of the Form C and B component—taught by various Lower School teachers—addresses responsible decision-making, healthful living, human sexuality, and the dangers of tobacco and alcohol use.

**Spanish**

Students build on two previous years of language study through meaningful, contextual review and usage. The four skills—reading, writing, listening, and speaking—are addressed as new vocabulary and more complex grammatical forms are studied. Students learn about Hispanic culture through videos, music, internet searches, special guests, games, and skits.

**Form I (Grade 7)**

**Art**

Form I students are introduced to a variety of art materials while learning basic drawing skills in portraiture and perspective. With practice, they gain confidence in applying the principles of art and design to their artwork. Classroom discussions of historical and contemporary art help to broaden their views as they respond to the challenges faced while engaged in the art-making process. The goal of this course is threefold: to build confidence in the ability to understand the importance of visual art in human culture, to improve their drawing skills, and to gain confidence in creative self-expression.

**Chinese**

Chinese IA is an introductory course to the language and culture of China. Students learn to communicate by speaking, reading, writing, and listening in the target language. Classroom activities are centered on basic dialogue and everyday situations that a student might encounter wherever the language is spoken. Students become acquainted with Chinese culture through photos, videos, films, and music. Course objectives are based on basic communication skills using acquired knowledge of fundamental forms of pronunciation, vocabularies, grammar, characters, and culture. In Chinese IA, we build foundations through six thematic units: the Pinyin system, basic knowledge of Chinese characters, greetings, family, school, ordering food, the weather, and shopping. We also include other cultural details. By the end of Chinese IA, students are able to write 240 characters, read 500 characters, and freely conduct daily conversations.

**Decisions**

The Decisions course presents basic information about sexuality and drugs and equips students to make reasoned decisions about these areas. The first half of the course uses case studies and class discussion to clarify students’ attitudes and to raise ethical questions about sexuality and drug use. The second half of the course deals with the physiological aspects of sexuality and drugs. Students learn about the changes that occur during puberty, the purposes of sex, the human reproductive system, childbearing, sexually transmitted diseases, and contraception. Students also study the effects of legal and illegal drugs and the potential for abuse. Decisions meets two times in our seven-day cycle for one semester.

**English**

The ability to express oneself forcefully, fairly, clearly, and with subtlety enhances a student’s self-confidence and allows him to make maximum use of his knowledge and talents. Form I English emphasizes literature, composition, grammar, and vocabulary. A study of grammar and vocabulary enables students to express themselves more clearly. The study of novels, short stories, and poems allows students to see how professional writers use various techniques to share with strength and beauty their views of the world around us. Student writing allows each student to explore his own feelings and his view of the world while providing a focus for the other skill areas of the course.

**Form I Theater**

In Form I Theater, students explore the process of creating theater from both performance and technical viewpoints. The class is divided into two teams—actors and designers. The actors memorize their lines and develop their characters. The designers are responsible for selecting and editing sound effects, establishing effective stage lighting, choosing appropriate costumes, and creating a setting with both physical scenery and projected images. At the end of the quarter, the students move from actor to designer or vice versa. This gives each student a complete production experience. This project-based, hands-on learning experience culminates with final performances of scenes and short plays. Students learn that it takes focus, dedication, and collaboration to bring any piece of theater to life on any stage. This class meets two times in our seven-day cycle for one semester.

**French**

In this introductory course, students begin to unwrap and explore the richness of the language and French culture. Students learn grammatical concepts, vocabulary, and different verb tenses, and gain exposure to the Francophone world. Classes feature a diverse mix of activities designed to promote conversation and functionality. Students work in groups, create stories and presentations, and build their skills in the language. We use the Espaces series textbook, which includes an audio and video program, and a workbook for additional practice exercises.

**History**

Form I students study American history beginning with pre-Columbian and European conditions through United States...
history at the turn of the 20th century. The central goal is to examine the political, economic, religious, and cultural forces that set the foundation for the country we live in today. Students examine particular events and the connections between them through developing critical thinking, reading, writing, research, speaking, and study skills. The course uses a variety of primary and secondary materials to foster a deeper connection to the past and help introduce a broad range of opinions and perspectives. Topics include First Americans, Christopher Columbus, Modern Europe and Colonization of the Americas, the American Revolution, the United States Constitution, the Early Republic, the United States Civil War, United States Imperialism, and emerging causes of World War I.

Honors Mathematics
The honors pre-algebra course covers all the topics of the regular course with the exception of percent and interest problems, but it moves at a much quicker pace and is focused mainly on theoretical mathematics. Algebra is studied from the perspective of set theory and group theory, and sets are then applied to the study of number theory, combinatorics, probability theory, Euclidean geometry, coordinate geometry, and functions. Other topics include polynomials and binomial expansions, higher roots and fractional exponents, trigonometry, quadratic functions, complex numbers, and the concept of infinity.

Latin
This is an introductory course to the Latin language and Roman culture based on the text *Ecce Romani*. Using both an inductive reading approach as well as deductively learning forms and grammar, the students become familiar with basic elements of Latin in the context of Roman daily life and culture. Latin IA aims to cover chapters 1 to 17 of *Ecce* Book I which includes three declensions of Latin nouns; first and second declension adjectives; basic case uses; verbs in the indicative present and imperfect tenses, the present infinitive and imperative for the regular four conjugations and six irregular verbs. Cultural items include the Roman family and social institutions, the geography of Italy, towns and important buildings, Roman gods and goddesses, the founding of Rome and the Seven Kings.

Mathematics
The pre-algebra course combines a review of arithmetic with a study of the properties of numbers and the use of algebraic expressions and equations. The review of arithmetic includes operations with whole numbers, fractions, decimals, percents, exponents, and the use of ratios and proportions. The order of operations, the axioms of algebra, factoring, negative numbers, and square roots highlight our study of the properties of numbers. With a solid foundation in these departments, students work extensively with algebraic expressions, equations and inequalities in one and two variables, using geometric and other formulas to solve problems. Interpreting word problems is an important part of the pre-algebra course. Other topics include an introduction to geometry, basic probability, simple and compound interest, data analysis, and the rudiments of trigonometry.

Middle School Chorus
Any boy in Form I or II may join this group, which focuses on proficient singing technique for boys in vocal transition and teaches two- to four-part ensemble singing. The Coed Chorus will meet two days of the seven-day rotation from 12:00 noon to 12:55 p.m.

Middle School Orchestra
The Middle School Orchestra now numbers over thirty players. All musicians must have prior instrumental experience, but a student may be able to reach proficiency in a short period of time and join even if the year is underway. The Coed Orchestra will meet two days of the seven-day rotation from 12:00 noon to 12:55 p.m.

Science
Students in this course discover the nature of matter by investigating its general physical and chemical properties and classifications. The course is designed to encourage teamwork and promote discovery, curiosity, and critical thinking; students are therefore encouraged to think independently but work together. Topics of study include density, atoms and chemical bonding, the periodic table, chemical reactions, Newtonian physics (force, motion, momentum, and acceleration), and renewable energies. Further, all students work on projects presented during the spring Lower School Science Week.

Spanish
Spanish IA is a continuation of students’ study of Spanish that covers phonetics, builds vocabulary, and introduces a variety of new grammatical structures, including reflexive verbs and the pretérito tense. The course emphasizes all four essential skills: reading, writing, listening, and speaking. Students learn and reinforce vocabulary and grammar through a variety of activities, including games, songs, skits, projects, and videos. In addition, students study and acquire greater understanding of the cultures of the Spanish-speaking world.

Spanish — Introductory
Form I Introductory Spanish is offered to students who arrive in Form I with little or no background in the Spanish language. This course seeks to prepare the students for the rigors of mainstream St. Albans Spanish classes in one year. The class exposes the students to a foundation in the four skills—reading, writing, listening, and speaking—as they move rapidly through the grammar and vocabulary studied in Forms C through I in the Lower School. Students learn and reinforce vocabulary and grammar through a variety of activities, including games, songs, skits, projects, and videos. In addition, students study and acquire greater understanding of the cultures of the Spanish-speaking world. Students are expected to master a prescribed list of grammar topics on their own during the summer before this course, as well as perhaps in the summer after the conclusion of the course, so that they are prepared for Form II Spanish at St. Albans.
FORM II (GRADE 8) | Lower School Courses by Grade

Algebra
The ability to manipulate abstractions and attack problems systematically is crucial to advanced education and provides the basis for an increasingly rich view of the world around us. Algebra I teaches students new skills and strategies for dealing with numerical problems. Topics include a review of positive and negative numbers, formulas, operations with polynomials including polynomial fractions, special products and factoring, coordinate graphing, equations and inequalities in one and two variables including systems of linear equations and fractional equations, radical expressions, and the quadratic formula. At each level, students learn strategies for applying their newly acquired skills to the solution of verbal problems of increasing sophistication.

Art
The Form II visual art course is a continuation of the Art and Design course in Form I with instruction that provides a deeper understanding of visual communication and in-depth studio experiments. An emphasis on visual narratives, storytelling, and humor provides a platform for practicing skills in drawing, painting, and three-dimensional art. Students examine historical and contemporary artists and prepare presentations in visual and written form. The goals are similar to Form I Art and Design: to deepen students’ understanding of the importance of visual art in our lives, to continue to practice skills in art-making, and to gain confidence in creative self-expression.

Chinese
In this course, students continue to deepen their knowledge of Chinese writing, culture, and history. The class explores several new topics, such as friends, home, shopping, campus life, environment, health, clothing, entertainment, media, and travel.

English
This course concentrates on literature, composition, grammar, and vocabulary. Short stories, novels, plays, and poetry offer models of effective use of structure, grammar, and vocabulary to communicate ideas, and teachers encourage similar techniques in students’ own work.

Analysis and interpretation of this same literature help students formulate new ideas, which they can express both in class discussions and in their own writing. We hope students will come away from the course with a sense of discipline for further study, a certain economy of language, and a critical eye with which they can analyze emerging genres of literature and other art forms and gain a deeper understanding of themselves and their world.

Form II Theater
In Form II Theater students continue the work and development started in Form I. With a basic understanding of the building blocks of theatrical production, students are given more challenging and exciting material to work with. The texts come from the genre of classical theater: Shakespeare, Molière, Greek Tragedy, and Roman Comedy. Students have the opportunity to explore nontraditional settings for these works as they are challenged by the more elevated dramatic language inherent in plays from this genre. This class meets two times in our seven-day cycle for one semester.

French
In second-year French, students build on the grammar, listening, reading, and writing skills learned in French. New vocabulary ranges from sports to delicious French treats, while new tenses range from the pluperfect to the past conditional. In addition, students continue to explore French culture and the Francophone world. In-class work stresses conversational and overall fluency, and activities include videos, songs, and newspaper articles from French websites. In the second semester, students read Antoine de Saint-Exupéry’s classic story Le Petit Prince.

Honors Algebra
This course covers all the topics listed for regular first-year algebra plus statistics, probability, inductive reasoning, and quadratic functions. The faster pace and more theoretical approach make it a challenging course designed for students above average in ability and persistence. Successful completion of this course usually leads into the honors math program in the Upper School.

Latin
In this course students continue progressively to learn and reinforce basic forms and grammar of Latin. The goal is to reach chapter 29 in Ecce Romani Book 2. Building on the foundation from Latin 1A, the students will learn the remaining tenses of Latin in the indicative active voice, all declensions of nouns, adjectives, and pronouns personal, demonstrative, and relative. Students will continue to expand and clarify their knowledge of Latin case and tense functions and how to use them to translate effectively from Latin to English. The study of Roman culture will continue with the broader geography of the Roman world, important myths and legends, aspects of early Roman history and cultural institutions.

Middle School Chorus
Any boy in Form I or II may join this group, which focuses on proficient singing technique for boys in vocal transition and teaches two- to four-part ensemble singing. The Coed Chorus will meet two days of the seven-day rotation from 12:00 noon to 12:55 p.m.

Middle School Orchestra
The Middle School Orchestra now numbers over thirty players. All musicians must have prior instrumental experience, but a student may be able to reach proficiency in a short period of time and join even if the year is underway. The Coed Orchestra will meet two days of the seven-day rotation from 12:00 noon to 12:55 p.m.

Omnibus
Library is the venue for reading verse, investigating current events, pursuing general interest stories, and exploring curricular emphases. The course will examine expansive, thought-provoking ideas, ones that are relevant to the world and to the boys. Students will reflect on these ideas and articulate their own thoughts in discussion, public speaking, and writing. The course aims to reinforce the boys’ prior learning and expand their content base and skills horizon. In myriad ways, students will explore ideas of leadership, community, perspective, and, perhaps, even service. Throughout boys will consider how they fit into the panoply of human beings, other terrestrial life, and the universe.
Science
This class introduces students to the complexity of the natural environment through the study and synthesis of many different disciplines, including ecology, earth science, chemistry, physics, and social sciences. Through lectures, labs, discussions, demonstrations, and fieldwork, students will acquire the foundation and skills to understand and address current environmental issues. Activities include the study of natural succession in the Olmsted Woods, the exploration of the biodiversity of the Cathedral Close, and debates on global environmental issues. In the spring, students take part in a multiday outdoor education program that promotes personal growth, group cooperation, and leadership skills through directed outdoor activities.

Spanish
Spanish IB is a continuation of the basic study of the Spanish language, specifically stressing the phonetics, verbal system, and basic syntax of the language. Skits and listening activities supplement written exercises and nightly homework. The language is further studied for the cultural values it reflects. In addition to watching two movies in class, El Norte and Bajo la misma luna, the students read their first book in the Easy Readers series, Marcelino pan y vino. The course gives equal attention to developing the four language skills of speaking, writing, reading, and aural comprehension.

Studio Art
The Form II visual art course is a continuation of the Art and Design course in Form I with instruction that provides a deeper understanding of visual communication and in-depth studio experiments. An emphasis on visual narratives, storytelling and humor provide a platform for practicing skills in drawing, painting and three-dimensional art. Students examine historical and contemporary artists and prepare presentations in visual and written form. The goals are similar to Form I Art and Design; to deepen their understanding of the importance of visual art in our lives, to continue to practice skills in art making, and to gain confidence in creative self-expression.

Study Hall
Structured study hall periods are provided for three hours per week in Forms I and II. During these periods students may work quietly and independently on school work, connect with course instructors, and have the opportunity to work in small groups. Study hall periods are held in the classrooms, typically include 15-18 students, and are proctored by faculty. Chromebooks are provided for anyone who needs one, and throughout the year in advisory periods, the boys spend time hearing from the faculty and administration about the ways to best utilize their time in study hall. The study hall period also offers the boys another opportunity to connect with their advisor, if needed.

Topics in Ethics
Topics in Ethics provides students with a situational ethics classroom experience guided by topics and situations prevalent in their culture and worldview. The course will cover such topics as technology and social media, athletics, the environment, politics, stereotypes in entertainment, and academia issues (plagiarism, honor and integrity, testing, religion and religious conversation, and the law). Class time will combine in-class guest speaker presentations (drawing on the Cathedral Close community) and online resources, as well as movie clips, local news stories, and guided small-group discussions. This class meets two times in our seven-day cycle for one semester.

Twentieth-Century United States
This course addresses the historical developments of the 20th century in a world context, with a focus on the United States and how it participated in global developments of the time. Our study begins with investigating the New Imperialism of the late 19th and early 20th centuries to understand the long-term causes of the First World War and extends to exploring the Cold War. Major thematic units may include the Bolshevik Revolution, World Wars I and II, the Holocaust, independence movements in Africa, the Communist World and the collapse of the Soviet Empire, and an emerging China. An important aim of this course is to expand beyond the Western- and United States-centered experiences of sixth and seventh grades toward a global perspective of the 20th century. Relevant primary and secondary sources will expose students to a variety of opinions and perspectives.
Advanced Studio Art
This course is designed for highly motivated students who are committed to the study and creation of visual art. Studio assignments will be less structured, allowing students to become more self-directed and independent in the development of their objectives and intent. Students will be expected to produce a high-quality body of work and consider the factors in presentation and display of their material. Optional portfolio development will be supported through ongoing assessment and peer-group critiques. Prerequisite: two semester-long courses in visual art or permission of the instructor. This course contributes one-half credit toward satisfaction of the Arts requirement.

Art & Design
This class explores creativity, innovation, imagination, and expression through application of the design process. Using both traditional and nontraditional media, the sculpture lab, and computer-aided tools, students will gain confidence as they develop technical skills in two and three dimensional composition and digital media. Students will practice identifying and defining design problems, generating and evaluating ideas, and prototyping solutions in visual and tactile forms, with a focus on the elements of art and principles of design. Art & Design provides a foundation for further study in art and cultivates an awareness of visual art and design in society and in history, expanding cultural horizons. This course contributes one-half credit toward satisfaction of the Arts requirement.

Ceramics & Design I
Ceramics is a fantastic medium for designing and making hand-crafted objects such as functional pottery, sculpture, or surfaces for painting and drawing. This course will introduce ceramics through its tactile materials and numerous building methods, glazing, and firing processes and will emphasize design and craftsmanship. Students investigate forms and translate concepts while utilizing the ceramic processes: wheel throwing, slab building, mold forming, and extruding. Students give visual form to their ideas while they investigate how artists think creatively, problem solve, and take risks. Open to all students.

Ceramics & Design II
Ceramics & Design II students will build upon form, surface design, and visual communication skills learned in Ceramics & Design I (formerly Intro Ceramics) and will develop greater mastery of materials and techniques. They will research, design, produce systems and multiples, and experience the role of the designer/maker. Digital pattern and photographic image transfer techniques will be incorporated using Adobe Photoshop and Illustrator to repeat surfaces with techniques such as screen printing. Each student is encouraged to design unique forms by layering elements and incorporating new techniques. Prerequisite: Ceramics & Design I or Intro Ceramics.

Ceramics: Portfolio
Ceramics Portfolio students will continue investigating trends in contemporary art while utilizing historic references to make unique works of art. Students will use these references to study form, function, and surface design. We will take a closer look at ceramic chemicals, glaze and slip formulation, firing temperatures, and kilns. In building a portfolio, students create more complex works with personal expression and take greater risks by experimenting with more materials and processes. Prerequisite: Ceramics & Design II or Intermediate Ceramics.

Drawing I
In Drawing I, students will begin by practicing traditional drawing methods using physical media such as graphite, charcoal, ink, and pastels building techniques and basic skills. Initial projects will focus on observational drawing, use of light and texture, and learning to draw perspective. The class will transition after mid-semester to digital drawing techniques by exploring Adobe Photoshop Sketch. Students will apply their experience with traditional materials to digital drawing tools with adjustable options, such as size, color, opacity, and blending while building upon the elements and principles of art and design that are universal in visual communication. Open to all students.

Drawing II
Drawing II will continue the artistic practice from Drawing I (formerly Intro Drawing) and further explore the whole spectrum of drawing and painting media. Students will start with traditional materials and end with drawing in Adobe Photoshop, taking the leap from traditional illustration to digital. They will turn their thinking into three-dimensional images by exploring and selecting a “big idea” or theme to work on throughout the semester. This is a tutorial environment class with each student working at their own speed based on their previous knowledge and experience in drawing. By the end of this course, students will have a basic understanding of Photoshop and can experiment using photographs as
Painting II
This course emphasizes the development and understanding of the principles, materials, and techniques of painting. Students are invited to express their ideas and feelings through lines, shapes, and color, always allowing their imagination to become three-dimensional. Beginning students typically work on projects that involve traditional subject matter and paint with acrylics, oils, and/or watercolors. Fundamentals of color theory, painting techniques, and compositional skills are integrated into each project. When students are at the intermediate or advanced level, they are encouraged to investigate more complex concepts and techniques with an emphasis on experimentation and personal expression. All students will work on individual projects, as well as a large-scale group project that will be exhibited at the end of the semester. Open to all students.

Photography: Portfolio
Students continue the development of their own style by focusing on the production of a body of work. Photography Portfolio students produce two short projects as well as one extended project of their own design. The culmination of the extended project is a portfolio of at least 10 presentation-ready photographs with an artist statement. Students work independently during class time, but often meet to critique the progress of their own work and the work of their peers. Throughout the course, Photography Portfolio students look at and discuss the work of historical and contemporary photographers. Prerequisite: Photography I or Intro to Photography.

Photography II
Building on the technical and artistic experience of the introductory course, students experiment with different photographic materials and techniques in the chemical darkroom and digital lab. Students complete three or four projects during the semester. Throughout the course, students look at and discuss their own photographs, as well as the work of historical and contemporary photographers. Prerequisite: Photography I or Intro to Photography.

Printmaking
The tools and techniques of printmaking evolved in parallel with major changes in culture and world history. From the time of the earliest handprints and stamps, people have had the impulse to make images to help convey ideas. Through hands-on experience with different ways of making prints, students in this class will investigate the changes in knowledge and understanding that were brought about through dissemination of prints. Students follow the developments in printmaking from relief through intaglio, planographic, stencil printing, and digital processes. Projects will necessitate the students’ creation of multiple fine art prints using printing media. This course gives students a historical view of the craft while relating it to their personal aesthetic exploration. Open to all students. This course contributes one-half credit toward satisfaction of the Arts requirement.

Sculpture I
This course introduces the fundamentals of three-dimensional art and design through the processes of fabrication and its applications in the 21st century. Students will learn by making, experimenting with a variety of materials, and applying visual problem-solving methodologies to realize projects from concept to finished product. Traditional and expanded materials of sculpture will be explored through sections that include woodshop, mold-making, life-casting, origami, model-making and prototyping, building armatures for stop animation, design science, and integration of digital technologies with the fabrication of objects. Open to all students, this course contributes one-half credit towards satisfaction of the Arts requirement.

Studio Art
Students in this course will develop the fundamental skills for creating and understanding art. Through observational and conceptual exercises, students will use a wide range of media, processes, and techniques for expressing their ideas in drawing and painting; students will be encouraged to work with increasing independence and build confidence with perception and creative problem solving. Classroom discussions will integrate examples from art history and contemporary art and allow students to expand their ability to engage in visual analysis of artwork. Open to all students. This course contributes one-half credit toward satisfaction of the Arts requirement.

AP Computer Science A
This rigorous, full-year course is intended to prepare students to take the AP Computer Science A exam in the spring. Students are expected to have prior programming experience or to be prepared and motivated to match the
rigorous pace the material demands. Students learn the guiding principles of programming, including object-oriented software design. They will apply concepts such as abstraction, encapsulation, inheritance, and polymorphism to solve problems. Topics include algorithm design, writing classes, programming principles, recursion, analysis of algorithms, searching, sorting, advanced data structures, class hierarchy, inheritance, and interfaces. Students should have regular use of a computer at home. Prerequisite: Introduction to Programming Languages, permission of the instructor, or passing score on placement test. Offered at National Cathedral School.

Coding for Cybersecurity I
The ideal student for this course is curious about the technological vulnerabilities of modern computers and networks. Prior experience with C, C++, or Java is assumed, since topics will be explored with code written and modified for the class. Selected technical topics in cybersecurity include buffer overflow attacks, rainbow tables, DDoS attacks, hash-passing, ping of death, SQL injection, cross-site scripting, and other areas of interest to the students. Although specific hacking exploits will be studied in depth, the focus is on using such knowledge for the common good and thwarting attacks by would-be hackers. The semester capstone project couples a student-simulated attack with a corresponding defense strategy. Prerequisite: Introduction to Programming Languages or permission of the instructor.

Coding for Cybersecurity II
This course continues and builds upon the skills covered in Coding for Cybersecurity I. Students will use advanced penetration and penetration defense strategies and will mentor the students taking the Coding for Cybersecurity class. Emphasis will be on design and implementation of original development projects as well as annotated code review of other students’ projects. Prerequisite: Coding for Cybersecurity I.

Introduction to Programming Languages
This course introduces the Java programming language among others. It provides a gentle introduction to computer science using object-oriented programming concepts and skills and is designed to meet the needs of students who want to learn programming for general knowledge, as well as those who will continue their study of more advanced topics in subsequent semesters. Open to all students.

ENGLISH

African American Writers — 1970 On
With the end of Jim Crow laws and the legal victories of the civil rights movement, many African American writers began to remap the literature. They turned both inward and outward, reshaping the landscapes of community, history, myth, and identity. In this course, we will explore how and why African American writers from the late 20th century to the present have re-imagined the literature. In achieving these goals, each text under consideration will be placed in its historical and cultural contexts. The class will be primarily discussion-based, with students developing their analytical skills through both formal and informal writing assignments. Authors may include Toni Morrison, Henry Dumas, August Wilson, Audre Lorde, Ernest J. Gaines, Ntozake Shange, George C. Wolfe, Rita Dove, Terrance Hayes, Claudia Rankine, and Justine Phillip Reed, among others. Open to Form V and Form VI.

American Literary Tradition
With an emphasis on the mid-19th and early 20th centuries, this course examines American writers from the last stages of the American Renaissance through the periods of Realism, Regionalism, Naturalism, and the Jazz Age. Drawing upon the rich and varied literature of these periods, instructors will offer for study texts—novels, short stories, drama, and poetry—according to thematic design. Offered at St. Albans School and National Cathedral School.

Asian American Literature
In this course, students will examine the dynamic relationship between Asian American literature and the histories of the various Asian ethnicities in the United States. Literature by authors of Chinese, Korean, Japanese, Filipino, Vietnamese, Hmong, and Indian descent will provide fodder for unraveling both similarities and differences of experience among the various ethnicities. Furthermore, students in this course will examine the following sub-topics: the immigration experience, the formation of cultural and political identities, literary framing of social and systemic racism, stereotypes, generational challenges, and gender issues. The shifting function of Asian immigrants and Asian Americans in U.S. culture and economy will be a focal point as we explore how Asian American literary concerns and styles have evolved with that shifting function. Open to Form V and Form VI. Offered at National Cathedral School.

Coming of Age Novel
In this course, we will consider how the experience of “coming of age” is depicted in the 20th-century novels of British and postcolonial literature. We will discuss how questions of gender, sexuality, class, race, family, education, work, and religion contribute to an individual’s personal development in novels by authors such as Virginia Woolf, James Joyce, E. M. Forster, Jean Rhys, Arundhati Roy, and Kazuo Ishiguro. We will also read literary criticism about the bildungsroman, as well as articles on 20th-century theories of adolescent development. Students will reflect on how the form of the bildungsroman, or coming of the age novel, engages with important social and historical developments of the 20th century that protected adolescence as a stage of life, such as labor and education reform. The course will also focus on how historical developments in the British nation during this period, such as the creation of a welfare state and the process of decolonization, affect the ways in which these authors represent the experience of coming of age in the 20th century. Open to Form V and Form VI. Offered at National Cathedral School.

Comparative Literature I
Based on the assumption that literature reflects the scientific discoveries, historical events, and philosophical views of the period in which it was written, this course examines several works authored between 1600 and 1900 not only as major artistic achievements, but also as expressions of the Renaissance, Neo- Classical, and Romantic worlds. Authors studied will include Shakespeare, Racine, Voltaire, Goethe,
Blake, and Dostoevsky, among others. The reading material will be supplemented by relevant music and art samples. Open to Form V and Form VI.

**Creative Writing**

This course offers students the opportunity to develop their writing talents under the guidance of the school’s writer in residence. The focus of the course—poetry or prose or both—is left to the direction and interest of the instructor. Open to Form V and Form VI.

**Crossroads in American Identity**

Crossroads in American Identity focuses on the following questions: How do American writers of differing ethnic origins negotiate cultural difference? In short, is writing a quest for ethnic voice or a quest for unity? How do writers intersect? The term “crossroads” evokes important questions for contemporary writers: In what way do these writers contest the American identity, and to what extent can the term “double-consciousness” be extended to these writers? The selected texts have a broad interrelationship, and the course will explore the inter-dialogue between the “American” side of experience and the rich cultural roots from which each writer emerged. Some of the writers and works include *Lost in the City*, Edward P. Jones (African American); *Brown Girl, Brownstones*, Paule Marshall (Caribbean American); *Interpreter of Maladies*, Jhumpa Lahiri (East Indian American); and selected stories and poetry of Chinese American, Korean American, and Chicano authors. Open to Form V and Form VI.

**Creative Writing: Poetry and Prose**

In Creative Writing: Poetry and Prose students read and study published poetry and short fiction to inspire their own creative work. In the study of verse, students read Richard Hugo’s *The Triggering Town* and Mary Oliver’s *A Poetry Handbook* as they learn various poetic techniques, including using figurative language, rhyme, and meter, as well as how to write in different poetic forms. For fiction, students learn about characterization, point of view, dialogue, and dramatic conflict. Students workshop their creative pieces with their classmates and learn about the benefit of revision and being part of a community of writers. The course culminates with students completing creative writing portfolios, which consist of intensive self-evaluations and the creative work they have written, workshopped, and revised over the course of the semester. Open to Form V and Form VI. Offered at National Cathedral School.

**Dystopian Literature**

This course examines dystopian literature authored during the 20th century until the first decade of the 21st century. While the principal focus of the course will be the revolutionary concepts in dystopian societies, the class will begin with a historical examination of utopias to aid our study. Close attention will also be paid to the historical, societal, and political contexts of each literary work. Students will, eventually, construct their own utopias after comparing the varying dystopias in the course’s texts. Writers such as Aldous Huxley, George Orwell, Margaret Atwood, Philip K. Dick, and Octavia Butler will be studied. Open to Form V and Form VI.

**English I**

This course gives particular emphasis to the principles of clear and correct writing, to the study of various literary genres, to detailed analyses of literary texts, and to a study of vocabulary and spelling.

**English II**

This course gives special emphasis to the study of grammar and to the principles of clear and correct writing. Selected works of British literature will be studied, from the Anglo-Saxon to the Victorian period.

**Expository Writing**

This class emphasizes the skills needed to write clear, correct, and reasonably graceful English. The course format includes prose models, consultations with the instructor, and lectures. Students are expected to write weekly essays of no more than three pages. Course texts include *Writing Prose, The Practical Stylist, The Elements of Style*, and *The Harbrace College Handbook*, 15th edition. Open to Form V and Form VI.

**Gender in American Literature**

Students in this class will examine works of American literature from the early 20th century to the present in which gender is a prominent theme. Students will explore the historical context for each work to understand how authors often respond to prevailing cultural thought, debates, and new concepts that destabilize, challenge, or reify traditional conceptions of gender. Central to the study of the class is the notion of how gender intersects other identity categories, among them national identity, race, sexual orientation, and class. Our discussions and analyses of these works will help us understand how conceptions and constructions of gender are often historically specific and ideologically charged and, more largely, how the term circulates in our own culture. Books include *The Age of Innocence, Passing,* and *Giovanni’s Room* among others. Open to Form V and Form VI. Offered at National Cathedral School.

**Global Perspectives**

This course examines postcolonial literature by women authors through the lens of intersectional feminism. Students explore 20th and 21st century literature by women authors from a variety of national and cultural backgrounds, including African, Asian, European, Middle Eastern, and South and North American. Books include *Homegoing* and *The Handmaid’s Tale*, among others. Students discuss such themes as national identity, gender perception, class differences, political power, alienation, dislocation, and communication through their reading of novels, short stories, memoirs, poetry, and essays by acclaimed women writers. The cultural milieu in which the literature is set, the traditions from which it arises, and the ways in which the questions of these texts remain relevant for contemporary discussions of social inequality will be an important focus of study. Open to Form V and Form VI. Offered at National Cathedral School.

**Humor in Comic Literature**

By examining theorists of humor from Plato to Freud, and by looking at examples of comedy from Shakespeare to Jon Stewart, this class examines how humor works, especially in literature that predominantly uses humor as its mode of discourse. The class examines how comic literature works to make readers laugh and how comic literature works in society. Students read theories of humor as well as comic literature from several
genres. Literature from a variety of cultural contexts may include: *Twelfth Night* by Shakespeare, short fiction by Alexie Sherman, a satire by George Schuyler, and a novel by Evelyn Waugh. Open to Form V and Form VI. Offered at National Cathedral School.

**Independent Study: English**

**Literature & Spirituality**

This cross-cultural course will examine short stories, novels, and poetry situated in distinct religious contexts. Tayeb Salih, Gita Mehta, Leo Tolstoy, Salman Rushdie, Graham Greene, and Rumi, among other writers and poets, will provide windows into themes, symbolism, and techniques that evoke an awareness of the range and richness of human spirituality. Open to Form V and Form VI.

**Modern American Drama**

American drama serves as a vital component of 20th-century American literature. This course addresses issues of race, gender, class, and sexuality within the literary landscape of our emerging nation, with particular attention to the elements shaping the genre. Special focus is given to the societal, political, and cultural influence of works considered, including those by Rachel Crothers, Tennessee Williams, Susan Glaspell, Arthur Miller, August Wilson, and Tony Kushner. Open to Form V and Form VI.

**Modernism & Race**

Why are the Harlem Renaissance and Modernism often taught as different movements? After all, the themes and trends we consider to be Modernist — a rejection of realism and embrace of abstraction, an attention to psychological interiority and fragmented perspectives, and a focus on urbanism and modern life — actually emerged in writings across the color line. This course will challenge the conventional racial boundaries of Modernism by uniting African American and Anglo-American literary traditions, thereby offering a complete perspective on the literature as well as the movement’s racial politics, which became central to the formation of and dynamics within Modernism. Some writers whose works will be included are: Jean Toomer, T. S. Eliot, Paul Laurence Dunbar, Gertrude Stein, W. E. B. Du Bois, Ezra Pound, Hilda “H. D.” Doolittle, Nella Larsen, and Claude McKay; as well as visual art by Georgia O’Keeffe, Jacob Lawrence, Alfred Stieglitz, and Elizabeth Catlett. Open to Form V and Form VI.

**Narrative Race & Freedom**

Drawing on the rich literary traditions from the Caribbean and the United States, this course illustrates how narratives of race and freedom are constructed and charted in the works of North American writers. Students will examine various themes that frame these hemispheric literary productions, including slavery, colonial and post-colonial identity, and culture, to name only a few. In locating these thematic concerns, each text under consideration will be placed in its historical and cultural contexts. Although there will be lectures, the class will be primarily discussion-based, with students developing their analytical skills through both informal and formal writing assignments. Authors may include Oloudah Equiano, Herman Melville, James Weldon Johnson, Claude McKay, Jean Rhys, V.S. Naipaul, Derek Walcott, and Jamaica Kincaid, among others. Open to Form V and Form VI.

**Protest in Literature**

What is the role of literature in advocating for change? How has resistance been instrumental in shaping history? How does literature interact with history? This course investigates the specific use of literature as a means of recording, understanding, and attempting to advance change in global affairs. Units will be organized regionally around specific uprisings and will use fiction, historical texts, and nonfiction prose to investigate the dynamics of social change. Students will explore such themes as national identity, discrimination, trauma, rejection of social systems, political power, alienation, dislocation, and communication in novels, essays, and poetry as well as primary historical texts. Selected readings investigate different perspectives of major uprisings in history and ask students to recognize both universal and disparate elements of protest. In addition, the course seeks to explore the specific cultural effects that various uprisings have had on the populations that have engaged in them. Open to Form V and Form VI. Offered at National Cathedral School.

**Shakespeare**

This course considers a representative selection of comedies, histories, tragedies, and problem plays. Students will read a minimum of seven plays, together with background material on the Elizabethan period. Class time will be devoted to both lectures and discussions, while writing in the course will focus on how Shakespeare both shaped and transcended the various dramatic genres in which he worked. The class will also make use of available performances, both theatrical and videotaped. Open to Form V and Form VI.

**Theater & the State**

Since the beginning of western drama, theater has been intimately concerned with the workings of the state and vice-versa. The democratic leaders of Athens established the City Dionysus in the fifth century BCE to promote civic virtues. Since then, playwrights from Sophocles to Susan-Lori Parks have used theater to examine state power and the relationship between individuals and their states. This course looks at some of the various theatrical forms used by playwrights to question and define the relationships between citizens and their state. The course will also examine some of the ways that politicians make use of theatrical techniques to enhance their power. The semester begins with a reading of Sophocles’s *Antigone*, followed by examinations of two Jacobean plays: Shakespeare’s *Measure for Measure*, and John Webster’s *The White Devil*. The next unit will look at modernist treatments of state power in plays by Wilde and Ibsen. Finally, the course concludes with postmodern plays by Sarah Ruhl and Susan Lori-Parks that open questions about the intersections of religion, race, gender, and the political power wielded by the state. Open to Form V and Form VI. Offered at National Cathedral School.

**Writing Politics**

This course helps students learn to write rationally and persuasively about their political beliefs. The course also places those beliefs in the context of the philosophical debates at the heart of the political and economic systems in the United States. Students write a series of essays modeled after newspaper op-ed pieces. In addition, students learn about philosophical arguments
that support and challenge the existence of the state, democracy, and the market economy by reading about the work of Emmanuel Kant, John Stuart Mill, John Rawls, Roger Scruton, and Robert Nozick, among others. Open to Form V and Form VI. Offered at National Cathedral School.

Writing Seminar
This one-semester course is designed to further the student's understanding, practice, and enjoyment of both analytical and creative modes of composition. The class format includes the study and discussion of assigned readings, writing-in-progress seminars, and student critique sessions. Students use model essays to guide their study of writing. The course provides the opportunity to practice an effective writing process and gain confidence in a clear, engaging writing style. Open to Form V and Form VI. Offered at National Cathedral School.

FOREIGN LANGUAGE

Advanced Classics Seminar
This one-semester course is intended for students who have completed their studies through the AP Latin course. The subjects to be studied will be arranged according to student and teacher interest. Past topics have included the Roman Empire, Classical Rhetoric, and Greek Democracy. The purpose is to expand the students' awareness of the classical world through more personal and in-depth study. The seminar format means that the students will take greater responsibility for the content through individual research, writing, class discussions, and presentations. The use of Latin (and Greek, if applicable) is an important aspect but not necessarily the major focus of the seminar.

Ancient Greek I
The primary objectives of this course, an introduction to the grammar and syntax of Ancient Greek, are the development of a student's ability to read the works of the classical authors and the broadening of his exposure to the classical world. The many parallels with the Latin language will reinforce and facilitate this study. Our text is Book I of the Athenaze series. Prerequisite: Latin II and permission of the instructor.

AP Chinese Language
This AP course is designed for students to develop further an advanced level of language proficiency. Students focus on deepening their reading, writing, oral, and aural skills. Readings encompass both modern literature and classical works. Students will also broaden their knowledge about the history and culture of China by reading and exploring authentic Chinese artifacts. Students strengthen their command of Chinese vocabulary and refine their use of grammatical structures by writing short narrative and argumentative essays. Oral and auditory skills are reinforced by analyzing the scripts of classic movies and television shows. Students will also write and perform in skits to combine their interpretive skills with their Chinese language knowledge. Students are expected to sit for the AP Chinese Language examination in May. Prerequisite: Chinese IV and permission of the instructor. Offered to Upper School students; coordinate with National Cathedral School.

AP French V
Students study advanced grammar and syntax and are trained in aural, oral, and written exercises according to the AP French Language and Culture program. In addition, students continue to develop literary analysis skills by reading works by a variety of authors, including Camus (L’Étranger) and Sartre (Huis Clos), as well as selected poetry. Prerequisite: French IV and permission of the instructor.

AP Latin: Caesar & Vergil
This course is designed to prepare students to take the AP Latin exam in May. The designated portions in Latin and English from Caesar's Commentarii de Bello Gallico and Vergil's Aeneid will be read and studied with close attention to inculcating AP standards for translation and composition of interpretive essays. While the majority of class time is devoted to translating the prescribed texts in Caesar and Vergil, sight readings from various Latin authors will be included to help students better prepare for the “unseen” portions on the AP Latin Examination.

AP Spanish V: Language
This course provides an intensive study of the literature, history, and film of the Hispanic world. Advanced grammar, particularly the subjunctive, the use of gerunds and infinitives, and the passive voice will be reviewed as the need arises. Classes will be conducted as seminars entirely in Spanish with the expectation that students participate actively in the discussion. Students will write frequently with a focus on literary analysis and expository writing. Full-length works by García Márquez, Neruda, Borges, and others will be covered in depth. Prerequisite: Spanish IV Honors and permission of the instructor.

AP Spanish VI: Literature
This course provides intensive study of literary movements and genres in Spanish. Students will learn Spanish poetic forms, reading poetry from the Middle Ages to the present. Three full-length plays, El burlador de Sevilla, La casa de Bernarda Alba, and Historia del hombre que se convirtió en perro; and numerous short stories will be read and analyzed. In addition, students will read widely from two Spanish classics, La vida de Lazarillo de Tormes and El ingenioso hidalgo don Quijote de la Mancha. Students will continue to refine their ability to analyze literature and to make connections between the works through writing and active participation in class discussion. Classes are conducted entirely in Spanish. Prerequisite: AP Spanish V and permission of the instructor.

Chinese I
This course introduces students to Chinese language and culture. The class covers the Romanization system of Chinese characters (Pinyin), vocabulary, basic phrases, and elementary conversation. Basic writing skills are also introduced. All assessments will include oral, listening, and writing components. By the end of Chinese I, students will be able to read and write 500 Chinese characters and conduct daily conversations in Chinese. Chinese culture and history are also a supplementary part of this course. This course combines in one year the material covered in Chinese IA and IB. Offered to Upper School students; coordinate with National Cathedral School.
Chinese II
This course builds on the skills mastered in Chinese I. Students focus on learning characters, speaking, listening, and reading. Emphasis is placed on conversation skills and reading comprehension. Writing skills are also taught. Chinese culture and history are introduced as a supplementary part of the course. **Prerequisite:** Chinese I. Offered to Upper School students; coordinate with National Cathedral School.

Chinese III
This first course of intermediate-level Chinese is taught primarily in Chinese. Students focus on developing more advanced language skills, including oral expression and written skills. More topics and grammar rules are introduced in depth. In-class practice emphasizes the development of communication skills. Course readings are drawn from materials created for Chinese speakers. Students who are interested in taking the SAT II Chinese Exam will start their preparation by the beginning of second semester. **Prerequisite:** Chinese II. Offered to Upper School students; coordinate with National Cathedral School.

Chinese IV
This intermediate-level course conducted in Chinese focuses primarily on the further development of reading, translating, and writing skills in Chinese. The reading component aims to enhance students’ analytical skills and understanding of the structure of the text. The translation component requires students to recompose a work in English, using precise grammar rules and vocabularies while maintaining the work’s original style. In the writing component, students strengthen their writing skills by composing more advanced essays. Materials are drawn from Chinese news, magazines, and modern literature. Some short stories and poems from classical Chinese literature will be introduced as supplementary readings. Oral expression and communication skills continue to be developed as well. **Prerequisite:** Chinese III. Offered to Upper School students; coordinate with National Cathedral School.

French I
The focus of this course is elementary French, with an emphasis on basic grammar and vocabulary, verb drills, and extensive oral work. Open to Form III, and to others by permission of the instructor.

French II
This course provides intensive study of all basic French grammar including idioms and subjunctive constructions, significant vocabulary building, and an introduction to the reading of French literature. Daily drills emphasize sentence writing. Weekly oral presentations are given in French. Classes will be conducted in English and French. **Prerequisite:** French I.

French III
The focus of the course is intermediate French, including more advanced grammar, intensive drills on idioms, and an emphasis on oral presentations. Course work will include in-class and outside reading of novels in French. Classes will be conducted in French. **Prerequisite:** French II.

French IV
This full-year course emphasizes the use of language for active communication and proper use of grammatical structures in composition. The course covers historical and current events and social and cultural topics from the Francophone world, such as education, immigration, language, and cultural identity. Relevant newspaper and magazine articles, films and videos, and related art forms are used. This advanced course serves as an introduction to AP French Language and Culture. **Prerequisite:** French III.

**Independent Study:** Foreign Language
Independent study is open to students who have completed study of a foreign language through the AP level prior to senior year. Working with a member of the faculty, the student would pick one or more topics of interest and identify supporting texts. Students are expected to spend from 10 to 12 hours per week on their work. Permission of the instructor is required.

Latin I
This is an upper school Latin course intended to cover in one year the material of Latin 1A and 1B. The purpose is to prepare students new to Latin for entry into Latin II, and moves at a more accelerated pace. The main focus is on the acquisition of foundational forms, grammar, and vocabulary of Latin, although important features of Roman culture and history will be included in the curriculum.

Latin II
Level II language study is grammar-intensive, intended both to consolidate previous constructions and to introduce students to more idiomatic features of Latin, including the passive voice, forms and usage of infinitives, participles, and the subjunctive. Close attention will also be given to strengthening translation abilities. The students will finish the *Ecce Romani* Book 2 text. Cultural study includes a survey of such important aspects from Roman history as the Punic and Roman Civil Wars, as well as features of Roman public entertainment (circuses, gladiatorial shows) and domestic life (coming-of-age, weddings, funerals).

Latin III
After a quick review of previous forms and grammar, students will progressively learn the remaining features of Latin grammar, including gerunds and gerundives, conditionals, further case functions, and more uses of the subjunctive mood. Reading will first be from adapted Latin texts to reinforce forms and grammatical constructions. Eventually, however, students will translate selections from such prose authors as Caesar, Cicero, and Pliny, considering their historical and cultural context. During the last quarter, students will be introduced to Latin poetry through readings from Ovid’s Metamorphoses. An important feature of Latin III is to survey Roman history and political institutions from the Monarchy to the early Empire (ca. 753 BC-120 AD).

Latin IV
This course continues to read Latin writers within their historical and cultural context. Grammar will be reviewed as necessary, but the focus will be a more on an in-depth study of texts as literary and cultural expressions. Authors will include both prose writers and poets, with some preference given to the latter. Refining translation skills is an important goal of the course as is writing interpretive essays on aspects of the texts we read. Students are encouraged to take the SAT II subject test in Latin in June.
Spanish I
This course provides a thorough introduction to the fundamentals of Spanish grammar, verb conjugations, and basic vocabulary. Students will master regular and irregular verbs in present and past tenses with particular emphasis on stem-changing verbs and verbs with orthographic changes. During the second semester, oral comprehension and progressive reading exercises will reinforce the rules of grammar learned during the first half of the year.

Spanish II
This course covers Spanish simple and compound tenses, including both the indicative and subjunctive moods. Through daily exercises and selected readings, the course also provides an extensive and practical vocabulary, including idioms and cognates. Students develop aural skills through regular listening comprehension exercises narrated by native speakers from Spain and Latin America. Representative literary and cultural readings and films complement related grammar and vocabulary studies. Prerequisite: Spanish I.

Spanish II Honors
This intensive Spanish course reinforces intermediate grammar and vocabulary covered in Spanish II together with extensive practice in speaking and writing. The first semester is dedicated to intensive language study, while the second semester requires students to integrate grammar and vocabulary with advanced readings, oral presentations, and formal writing assignments. Classes are conducted solely in Spanish. Prerequisite: Spanish I and permission of the instructor.

Spanish III
This intermediate Spanish class provides advanced grammar analysis, intensive drills with idioms, and expansion of vocabulary. Cultural topics will be studied in depth, with an emphasis on current events in Spain and Latin America. Classes are conducted in Spanish. Prerequisite: Spanish II.

Spanish III Honors
This intensive intermediate Spanish course includes the grammatical and cultural topics covered in Spanish III, along with cultural readings and intensive oral and aural work. Each semester, the student will present an extensive oral presentation to the class. The presentation topics for the first semester will address 20th-century politics in Latin America, while topics for the second semester will cover the great artists of Spain. Classes will be conducted in Spanish. Prerequisite: Spanish II Honors and permission of the instructor.

Spanish IV
This course provides a thorough review of Spanish grammar, vocabulary, and idioms. Particular emphasis is placed on the application of grammar rules to regular oral and written student presentations on a variety of subjects. A selection of films from Spain and Latin America will complement the course syllabus. Prerequisite: Spanish III and permission of the instructor.

Spanish IV Honors
This course, an introduction to the AP program in Spanish, offers a study of vocabulary in specialized fields, an introduction to literary analysis, and extensive cultural study through videos and films. Grammar topics will be reviewed as necessary. Classes will be conducted entirely in Spanish. Prerequisite: Spanish III Honors and permission of the instructor.

Spanish V: Latin America
This one-semester course considers issues of contemporary Latin American society with emphasis on its time-honored customs as well as more recent events in the region. In addition to viewing film clips on Argentine gauchos, Brasilia’s architecture, and the wonder of the aerial Nazca line drawings, we will discuss emigration and the Guatemalan diaspora in Miami; re-democratization efforts following dictatorships; narco-trafficking and the cucaracha effect; and the search for national identity in the face of globalization. To complement our discussion, we will watch video clips and films in Spanish, including portions of The Two Escobars, Miss Bala, and El ojo en la nuca. Guest speakers from the National Security Agency and the Washington Office on Latin America will round out the discussion. The course will be taught principally in Spanish. Prerequisite: Spanish IV or Spanish IV Honors.

AP European History
This course traces the development of Europe from the 14th century to the mid-20th century. The class will explore the major developments in power, politics, economics, and culture, stressing grand movements and major trends rather than detailed national histories or postmodern idiosyncrasies. This course will be taught at a university level and requires extensive reading and writing. Open to Form VI with permission of the Department Chair.

AP Human Geography
AP Human Geography presents fundamental concepts and methods of human geography and applies them to interpret real-world events and issues. Core topics include population, culture, politics, industrialization and economic development, agriculture and rural land use, and cities and urban land use. Geography is more a methodology than a discrete body of knowledge. Students practice research methods using both primary and secondary data, culminating in analysis that emphasizes independent observation and interpretation from a spatial perspective. Students are expected to sit for the AP Human Geography examination in May. Open to Form VI. Offered at National Cathedral School.

Asian History Seminar
This one semester elective offers students a slightly more advanced study of the history of modern East Asia. Developing themes established in earlier history courses, students examine the major political, cultural, and economic trends in east and southeast Asia that have shaped the region over the past hundred and fifty years or so, beginning with the ‘opening’ of Japan in the 1850s. Major topics covered include, but are not restricted to, the Meiji revolution, the Chinese Civil War, WWII in the Pacific, Mao and the Cultural Revolution, Divided Korea and the regime of Kim Jung Un, the wars over Vietnam, Laos, and Cambodia, post-1980 Japan and China, and contemporary Geostategic Concerns in the South China Sea. Open to Form IV, Form V, and Form VI. Prerequisite: Cities and Civilizations.
Cities & Civilizations
Through concentrated study of cities that were centers of civilization between 4000 and 400 B.C.E., this course will introduce students to the historian’s craft. The course examines the history of ancient civilizations and their cities from Mesopotamia to Sparta, using a variety of textual and visual sources designed to encourage the development of critical-thinking skills. Topics of study include politics and governance, culture, geography, religious life, war, and the arts. Required of Form III.

History Through Film
This course will explore the ways in which popular films construct versions of the historical past and the ways that such films can be used as historical documents themselves. Films are significant cultural texts, and this course will study them as artifacts of a powerful communications entertainment industry with visions of the past and with narratives and arguments about what constituted the legitimate (and illegitimate) social, political, economic order throughout the 20th and 21st centuries. We will consider films as historical documents; as industrial products; as visions of popularly understood history and national mythology; as evidence for studying how conflicts in the political, social and cultural arenas were understood and depicted; and as evidence of how popular understanding and interpretations of the past have been revised from earlier eras to the present. We will think about these narratives as ideologically laden tools of both cultural and political orthodoxy and revisionism. Open to Form V and Form VI. Prerequisite: United States History or concurrent enrollment in United States History. Offered at National Cathedral School.

Honors Art History
This interdisciplinary course emphasizes skills from both the visual arts and social sciences to explore major works of architecture, painting, drawing, and sculpture that highlight the breadth of artistic expression throughout time. Students will develop a foundational knowledge of diverse artistic traditions and learn skills to critically analyze the social and cultural lenses used to understand art within specific eras and themes. Students may tailor their academic experience within the course through assessments and independent research. This course does not contribute credit toward satisfaction of the Arts requirement. Prerequisite: at least one semester in visual arts or concurrent enrollment in a visual arts class. Open to Forms V and VI. Offered at National Cathedral School.

Honors Seminar — United States & the World: 1945 On
Students will study historical events in the U.S. and the world after 1945 through the modern day. The course addresses major themes of the post-World War II era, including the Cold War and its echoes, decolonization and neocolonialism, and the rise of globalization. Within that broad framework, the material of the course will be determined based on student interest, current events, and the expertise of the instructor. Potential courses of study: the rise of non-state actors, from terrorist groups to multi-national corporations; rights revolutions related to identity, including race, gender, and sexual orientation; cultural and artistic movements in visual art, music, literature, and film; and the natural world and its resources. The honors designation indicates that students will engage in advanced skills of the social sciences discipline, including study of historiography, reading of in-depth scholarly articles, student-led discussions in a “seminar” setting, introduction to different modes of writing, and historical analysis based on research of both primary and secondary sources. Open to Form VI. Offered at National Cathedral School.

Law, Justice & Society
This interdisciplinary course will explore some of the most fundamental questions in constitutional law, political philosophy, and public policy — questions about justice, rights, fairness, equality, and how our understanding of these concepts inform many of the most important issues in our society. We will read Supreme Court cases and a variety of other practical and philosophical writings, all in the context of discussing current debates in law, ethics, politics, and economics. Open to Form V and Form VI.

Macroeconomics
This course provides an introduction to the American economy as a whole, based primarily on the macroeconomic sections of W.J. Baumol and A.S. Blinder’s Economics: Principles and Policy. Students in this class will be prepared to take the Macroeconomics AP examination, if they wish. Open to Forms V and VI. Offered at National Cathedral School.

Microeconomics
The primary goal of this course is to teach students the simple math-based logic underlying business and economic policies and as a corollary to encourage students to see the familiar in a more analytical way. Topics include comparative advantage, markets and their failures, market structures, models of consumer behavior, cost minimization, and externalities. Open to Forms V and VI. Offered at National Cathedral School.

Modern World History
Modern World History serves as an introduction to the major ideas, institutions, and events that have shaped the modern world. During the fall semester, study focuses on the key intellectual, political, economic, and social developments of Europe from the onset of the Renaissance through the 19th century. In the spring semester, students examine the roots of World War I and use that conflict and the resulting Paris Peace settlements to explore the 20th-century world in more depth, paying particular attention to the Middle East, Africa, and Asia. Required for Form IV.

Politics in America
This one-semester course is designed for students interested in modern political issues. The course looks at political events currently in the news and tries to analyze and interpret the motivation of people. Students conduct moot court hearings on current judicial cases and try to understand the arguments on both sides of the issue. In addition, students examine the Constitution and debate possible amendments to it, and they read analyses of modern political issues and debate their solutions. Open to Forms IV, V, and VI. Offered at National Cathedral School.

Social Psychology
This course is designed to help students further their understanding of how people think, feel, and behave when interacting with others. The class will
provide a general overview of the field of psychology across various domains and will further students’ understanding of how we are influenced by those around us. We will study classic and contemporary works of social psychology and explore the ways theories and research play out in real-life interactions (e.g., classroom dynamics, current events). Topics will include general psychology, group dynamics and conformity, attitude formation, interpersonal attraction, and aggression. Open to Form V and Form VI.

The Modern World
This senior history course serves as an introduction to the major ideas, institutions, and events that have shaped the modern world since 1500 and introduces students to the major themes and debates of modernization and globalization. During the fall semester, study focuses primarily on the seminal intellectual, political, and social developments of Europe from the onset of the Renaissance to the era of the French Revolution. In the spring semester, students examine the historical processes of the 19th and 20th centuries, focusing particularly on the intersection of peoples and cultures in Asia, Africa, and the Middle East. Students will be asked to consider the big picture developments—political, social, and intellectual—during this era, and assess their impact on a global scale.

Totalitarianism
Ideology can lead to ruin. Americans tend to interpret the post-1945 era, the so-called Cold War, as a monumental struggle between two competing world views embodied by the United States and the Soviet Union, i.e. as a showdown between the Capitalist-Democratic West and the Socialist-Authoritarian East. Yet that monumental ideological struggle was preceded by one even more bitter and costly, a fight between competing Utopian political visions espoused by Communism and Fascism, two competing yet strangely similar totalitarian systems, each with global aspirations and each dedicated to annihilating the other. The Fascist Party was founded in 1915. The Bolshevik Revolution took place in 1917. Between 1915 and 1945 over one hundred million persons died as a direct result of their political ideologies. (Mao Zedong added another thirty million to the tally in the 1950s and 60s.) This course will trace the development of both Fascism and Communism and then investigate, in some depth, the cataclysmic fight to the death that took place in and between Germany and the USSR between 1933 and 1945. The special place of the Holocaust in the history of this era will be included in this study. Open to Form IV, Form V, and Form VI.

United States History
This course surveys United States history from European exploration and colonization through the Cold War. Using a generally chronological approach, the class will examine the major political, economic, and social developments that have shaped the United States and its people. Students will be encouraged to develop the skills of critical analysis of historical documents, reasoning based on evidence, and research methods. Each student will be required to write a major research paper on a topic of his choice during the second semester. Students will have the option of taking the AP examination in May.

Advanced Seminar in Mathematics
The topics of study in this highly advanced course are determined by the teacher and students at the outset of the semester. Recommendation required for enrollment.

Algebra I
This elementary algebra course emphasizes developing a student’s facility in working with algebraic expressions. Topics will include properties of the real number system, linear equations and inequalities in one and two variables, verbal problems, graphing factoring, operations on polynomials and rational expressions, quadratics, operations on radicals, and an introduction to trigonometry. Required of some transfer students, as determined by departmental examination.

Algebra II
This course provides a review and extension of topics from elementary algebra, including inequalities, absolute value, exponents and radicals, systems of linear equations in two and three variables, functions and their graphs, quadratic and higher polynomial functions, logarithms, sequences, series, complex numbers, quadratic systems, trigonometry, permutations, combinations, and elementary probability. Graphing calculators will be used in the course.

AP Calculus AB
This course provides a close study of the calculus of the elementary functions of a single variable. Class topics will include limits and continuity, differentiation and integration of algebraic and transcendental functions and applications and interpretations, the Fundamental Theorem of Calculus, numerical approximations, and elementary differential equations. Qualified students will be expected to take the AB Calculus AP examination in May. Prerequisite: final course average of 85 percent or better in Precalculus.

AP Statistics
Statistics teaches students the concepts of and tools for collecting, analyzing, and drawing conclusions from data. Class topics will follow the four major statistical themes: exploratory analysis of data patterns, planning studies, probabilistic models, and statistical inference. Graphing calculators and computers will be used extensively. Qualified students will be encouraged to take the AP examination in May. Prerequisite: Precalculus and permission of the Department Chair.

Calculus I
This course reviews the fundamental concepts and techniques of differential and integral calculus, with an emphasis on problem solving and applications. Graphing calculators will be used throughout the course. Prerequisite: Precalculus.

Differential Equations
This course covers first order differential equations with applications, linear differential equations of higher order and their applications, second order differential equations, differential equations with variable coefficients, and Laplace transforms. Other topics include systems of first order linear equations, numerical methods for solving nonlinear differential equations, discrete dynamical systems and
stability, and partial differential equations. Topics are explored through projects which use mathematical modeling. Offered at National Cathedral School. \textit{Prerequisite:} AP Calculus AB or Honors AP Calculus BC.

### Functions & Statistics

This course will provide students an in-depth study of modeling and applying functions. Students will translate among graphic, algebraic, numeric, and verbal representations of relations and use logic and deductive reasoning to draw conclusions and solve problems. This course will also expose students to the essential ideas of an introductory statistics course. Students will explore data analysis, design of studies, probability, and inferential statistics, focusing on methods rather than theory. \textit{Prerequisite:} Algebra II and permission of the Department Chair.

### Geometry

This course emphasizes deductive Euclidean geometry in two and three dimensions. Course topics will include logical systems, the nature of formal proof, distance and betweenness, lines and planes, angles and triangles, congruence, parallelism and perpendicularity, geometric inequalities, similarity, area, circles and spheres, coordinates, constructions using computers, solids, and volumes. \textit{Prerequisite:} department credit for a course in elementary algebra.

### Honors AP Calculus BC

This course reviews topics in the calculus syllabus, as well as parametric functions and vector functions. Class topics will include improper integrals, more differential equations, sequences, series, and Taylor expansions. Students will be expected to take the BC Calculus AP examination in May. \textit{Prerequisite:} Honors Precalculus or Precalculus and permission of the Department Chair.

### Honors Linear Algebra & Vector Calculus

The first half of this course provides an introduction to linear algebra, including the geometry of Euclidean space, abstract vector spaces, linear transformations and matrices, determinants, eigenvectors, and inner product spaces. The second half emphasizes the study of the calculus of functions of several variables, including vector functions, limits and continuity, the differential, partial derivatives, the chain rule, and maxima and minima. \textit{Prerequisite:} Honors AP Calculus BC.

### Honors Algebra II

This course covers the content of Algebra II and these additional topics: graphs of cotangent, cosecant, and secant, the Law of Sines and Cosines, vectors, matrices, arithmetic sequences and series, geometric sequences and series, and the Binomial Theorem. The honors course puts greater emphasis on applying concepts, and graphing calculators are used throughout the course. \textit{Prerequisite:} Honors Geometry, or Geometry and permission of the Department Chair.

### Honors Geometry

Like the regular sequence course, this honors course covers deductive Euclidean geometry, but with greater emphasis on its development from basic postulates. More advanced aspects of proof are considered, including geometric inequalities, auxiliary sets, existence, and uniqueness. Additional topics in the second semester include graphing in three dimensions, power theorems, radian measure, and vectors. \textit{Prerequisite:} Permission of the Department Chair.

### Honors Precalculus

This course covers the content of Precalculus with greater emphasis on proofs, derivations, and complex applications. Additional topics run in the second semester include an introduction to calculus focusing on limits and derivatives. \textit{Prerequisite:} Honors Geometry. From the standard sequence, Geometry or Algebra II and permission of the Department Chair.

### Mathematics of Digital Data

Modern electronics—digital cell phones, computers, the Internet, DVDs, HDTV, MP3 players, and so on—would not be possible without the mathematics taught in this elective course. Students begin by learning the basics of digital logic, radix notation, Boolean algebra, digital circuit design, and “bits, bytes, hex, and Hertz.” The course emphasizes mathematics more than computer science in such topics as information theory, one-way functions, binary-coded decimal, digital cryptography, error-correcting codes, and data compression. Connections are made between the abstractions discussed and real-world implementations. Students will explore one area of their choice in greater depth and make a short presentation to the class. Visit \url{www.tinyurl.com/modinfo} for more information. \textit{Prerequisite:} Geometry or Honors Geometry.

### Multivariable Calculus

This course is an extension of calculus to more than one variable. Topics covered include vectors in Euclidean space, vector analysis, analytic geometry of three dimensions, curves in space, partial derivatives, optimization techniques, multiple integrals, differentiation with multiple variables, and vector fields. Mathematical ideas numerically, symbolically, graphically, and verbally. Offered at National Cathedral School. \textit{Prerequisite:} Honors AP Calculus BC.

### Number Theory

This course covers the basic topics in number theory, including induction, divisibility, prime numbers, factorization, congruences, and continued fractions. Students will learn about real-world applications such as check digits, the perpetual calendar, and cryptography. \textit{Prerequisite:} Algebra II or permission of the Department Chair.

### Precalculus

This class offers a detailed study of the elementary functions of a single variable, including polynomial, rational, exponential, logarithmic, and trigonometric functions; also reviewed are statistics, vectors, matrices, and applications. Graphing calculators will be used throughout the course. \textit{Prerequisite:} Algebra II.

### Chorale

Upper School Chorale, the oldest coordinate organization on the Close, is a choral ensemble of more than 170 voices. The Chorale rehearses three times per rotation and performs several times throughout the year in Washington National Cathedral, including the fall and spring concerts, the annual Festival of Lessons and Carols, and the Independent School Choral Festival. Members of the Chorale perform for
special services and major events at NCS and STA, including commencement. Singers can also choose to participate in the annual spring Chorale and Orchestra tour. This un-auditioned ensemble is an ideal setting for students from all levels of musical skill and experience to find their voices through development of healthy vocal technique and exploration of a wide variety of repertoire. Open to all students, Chorale is coordinate with NCS. This activity serves in satisfaction of the Arts requirement.

Music Theory
This course in musicianship encompasses harmonic and formal analysis, ear training, counterpoint, and orchestration. Students may elect to take the AP Music Theory examination, should they wish. Permission of the instructor required. Offered at National Cathedral School. This course contributes one-half credit toward satisfaction of the Arts requirement.

Orchestra
Members of the Orchestra develop musical skills through the preparation of a wide range of repertoire for performances held throughout the year, often in conjunction with the Chorale and other choral ensembles. There are three full rehearsals per rotation. Members should have considerable skill on an instrument and some previous ensemble experience. Parents and faculty are also welcome. Students should also concurrently be taking private instrumental lessons, either through the school or independently. Open to all students. Offered at National Cathedral School. This activity serves in satisfaction of the Arts requirement.

PERFORMING ARTS: THEATER

Acting I: Foundations
This course explores the definition and process of realistic acting through exercises, readings, discussion, and performance of scenes and monologues. The goal of the course is to give each student a better knowledge of his or her own instrument—physically, emotionally, and intellectually—and explore the process by which the actor uses that instrument to act on behalf of a given character. Open to all students. This course contributes one-half credit toward satisfaction of the Arts requirement.

Acting II
For the advanced student of acting, Acting II continues the work begun in Acting I. Students will be exposed to a variety of acting methodologies that will broaden their understanding of the craft and work. They will explore theatrical texts that are more challenging, including elevated style with such playwrights as Shakespeare, Molière, and the Greek Tragedians. Students will bring these multi-dimensional characters and timeless stories to life on the stage in a way that engages an audience. As in Acting I, students will work with a combination of text reading, class exercises, structured scene work and performances. Prerequisite: Acting I or permission of the instructor. This course contributes one-half credit toward satisfaction of the Arts requirement.

Advanced Theater Design
In this class, students who have completed Design for Theater will have the opportunity to take their work from the theoretical realm to the practical, working on a Theater Department production as a member of the design team. While working on the production, students will be responsible for all appropriate research, drawing, and documentation as assigned. Students will have regularly scheduled class time as well as laboratory time working on the production. Prerequisite: Design for Theater and permission of the instructor. This course contributes one-half credit toward satisfaction of the Arts requirement.

Design for Theater
Design for Theater offers students the opportunity to further investigate the technical production process from the designer’s viewpoint. Designing for the theater offers many unique opportunities and challenges. The course will illuminate this process in the areas of scene, light, costume, and sound design. Theatrical design is a collaborative process, and students will be exposed to the methods employed in this process. The work in this class focuses on design projects of a theoretical nature. Starting with close reading of a script, students will develop their design ideas from preliminary research, through the development of design choices, to completed presentation and documentation of finalized plans. Prerequisite: Stagecraft or Costume Technology. This course contributes one-half credit toward satisfaction of the Arts requirement.

Directing
Directing teaches the advanced theater student script analysis and the development of the dramatic concept for a production. The student learns the process of communicating with actors, designers, and support staff in the development of a play as part of the Festival of Student-Directed One-Act Plays. Students read plays, select an appropriate script, develop the production concept, audition the actors, collaborate with student scene, lighting, sound and costume designers, and coordinate and lead all rehearsals with their actors. This work culminates in two public performances of their play. This unique and exciting responsibility is greatly rewarding and offers invaluable insights into the production process. Prerequisite: Acting I or permission of the instructor. This course contributes one-half credit toward satisfaction of the Arts requirement.

Public Speaking
This course addresses the ideas of speech construction, analysis, creation, and delivery using projects based on contemporary forms of public speaking. Students develop and demonstrate their skills through the presentation of informative, demonstrative, persuasive, and entertaining speeches. The class culminates with the writing and presentation of a self-selected topic that follows the guidelines of a “Ted Talk” about an “idea worth spreading.” Students will hone their analytical, vocal, observational, and oratory skills as they develop a deeper understanding of format and techniques, increasing their effectiveness as communicators. Open to all students. This course contributes one-half credit toward satisfaction of the Arts requirement. Offered at National Cathedral School or St. Albans School.

Stagecraft
Stagecraft introduces students to the key technical elements of theatrical production, including scene construction, scene painting, stage lighting, and sound for the theater. The course will also explore technology used in the production process, including digital lighting control and sound reproduction and
manipulation. Students will gain practical experience planning, executing, and troubleshooting daily projects while working toward the goal of putting on a school production. With thorough instruction, students will become comfortable with the safe operation of the equipment used in the production process including ladders and scaffolding. Students will be encouraged to develop spatial awareness as well as a proactive attitude and will be able to look at the final, fully realized set and feel a true sense of ownership and accomplishment. Open to all students. This course contributes one-half credit toward satisfaction of the Arts requirement.

Global Ethics
We live in a globalized world - a world of intense interdependence. Individual and national choices made on one side of the world have significant impacts on people and groups on the other side, as well as on the world as a whole. This class will contemplate current global issues through an ethical lens. Using literary texts and articles from under-represented voices from every continent, students will hear first-hand accounts of people's experiences outside North America. These accounts will provide the material in which to present an overview of the dynamics of globalization and the ethical issues imbedded in these relationships. Open to Form IV. Offered at National Cathedral School.

Good & Evil
This course explores a constellation of themes surrounding one of the most central issues of human existence—suffering—and the concepts of good and evil that accompany it. We embark on a multidimensional (philosophical, artistic, historical, sociological, psychological) exploration of good and evil, with an emphasis on the worldview in which these concepts are embedded. This is followed by research into the causes of individual and group violence, asking questions such as, “What is the relationship among victim, perpetrator, and bystander?” and “What is the role of free will, society, and social structures?” Finally, we address the question, “How should we respond?” by looking in-depth at direct nonviolent methods and how they might be effective on both personal and global scales. Open to Form V and Form VI. Offered at National Cathedral School.

Living World Religions
Created in response to the wonders and problems of human existence, religions have permeated every human culture. This course promotes cultural intelligence and religious literacy by introducing students to some of the rituals, stories, beliefs, ethics, social structures, art, and experiences of five of the world's wisdom traditions. Alongside traditional academic study, students engage in experiential activities designed to give them glimpses into the spirit of each religion, and they do fieldwork that enables them to enter other worlds through visiting local religious communities. Together, these three approaches provide starting points for the understanding of other cultures while also encouraging students to discern and claim their own beliefs and practices. This work can help students with the development of their own worldview, consciousness, and sense of personhood. It is our hope that this course will be both an exploration of one's self through a study of the world's religions and an exploration of the world's religions through a study of one's self. Open to Form V and Form VI. Offered at National Cathedral School.

Philosophy East & West
This course explores the ideas of the philosophers and sages of classical Greece and China. Their influence goes well beyond the continuing relevance of their ideas, as their thinking has also determined the very questions we ask and even the very types of truth toward which we strive. Students will read works by Plato and Confucius, paying attention both to the cultural contexts in which they were written and to the far-reaching influence they continue to have on our world. These thinkers viewed philosophy as both a noun (theory) and a verb (practice), so ultimately students will be encouraged to pursue these ideas as part of their own personal journeys of self-discovery and meaning. Writings of more contemporary philosophers will be considered as time permits. Open to Form V and Form VI. Offered at National Cathedral School.

The Bible
A survey of both the Hebrew Scriptures and the New Testament, this course explores the contents of the Bible as a sacred text with both historical and literary contributions, by studying major figures and events of the Biblical record. Students read and discuss stories to become more familiar with Biblical content and to see themselves as part of the human experience with the sacred. Genesis, Exodus, Joshua, Judges, 1 and 2 Samuel, and Micah are the primary books covered to help highlight the relationship between Judaism and Christianity. Additionally, first-century Jerusalem and the significance of Jesus’ life, death, and resurrection become a central focus through reading the Four Gospels, as well as portions of Acts, Paul’s Epistles, and the Book of Revelation. Required of Form III.
**SCIENCE**

**Advanced Biology Research Seminar**
The Advanced Biology Research Seminar is seeking highly motivated science students! This course engages students in the process of scientific research. In the first quarter, students will participate in two collaborative projects. First, the Wolbachia Project, a collaboration with Vanderbilt University that involves collecting arthropod species and determining whether the Wolbachia bacteria are present in these species. In these experiments, students will learn biotechnology techniques, such as, pipetting, PCR, and gel electrophoresis. The class will also participate in Planting Science, where plant scientists provide online mentorship to the students as the design inquiry based plant research projects. Alongside these projects, the class will learn how to read primary scientific literature. The second quarter is dedicated to authentic research investigations of the students’ choice after the teacher’s approval of a formal research proposal. Students will work in groups to design experiments and analyze data. The teacher will provide guidance but students are given significant independence in the laboratory. As a final project, students will write a professional scientific report to summarize their research. Open to Form VI. **Prerequisite:** Prior or concurrent enrollment in a level II Honors science class and permission of the instructor.

**Anatomy & Physiology**
Students study the form and function of most bodily systems in detail. The emphasis is on macroscopic studies such as muscular mechanics and histological studies such as microscopic tissue examination. Through discussion and laboratory activities, students explore how the human body works. Animal dissection is an important feature of the course. Open to Form V and Form VI. Offered at National Cathedral School.

**AP Biology**
This course provides an intensive examination of biochemistry, cytology, energetics, taxonomy, classical and molecular genetics, embryology and development, physiology, anatomy, evolution, and ecology. Students will be expected to take the AP examination in May. **Prerequisite:** high grades in Biology and Honors Chemistry or distinguished performance in Chemistry and permission of the Department Chair.

**AP Chemistry**
This course is designed to be the equivalent of a college general chemistry course. Topics covered in depth include atomic theory and structure, stoichiometry, chemical bonding, states of matter, kinetics, equilibrium, acid-base chemistry, thermodynamics, and electrochemistry. The laboratory component of the course will ensure that students become familiar with standard laboratory equipment and procedures. Laboratory work will include gravimetric analysis, calorimetry, titrations, molar mass determinations, and qualitative and quantitative analyses. Students will be expected to take the AP examination in May. **Prerequisite:** B or better in Honors Chemistry or distinguished performance in Chemistry or Biology and permission of the Department Chair.

**AP Environmental Science**
This course is an introduction to the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, focusing on both natural processes and humankind’s impact on the environment. Objectives of the course are to identify and analyze environmental issues, both natural and anthropogenic; to evaluate the environmental and human-health risks associated with these issues; and to examine and assess options for their resolution. Environmental science embraces a wide variety of topics from different areas of study, including chemistry, biology, geology, and social and cultural issues. The emphasis of the course is on science as a process, the interdependence of Earth’s systems, and the alteration and remediation of ecosystems by humankind. Laboratory activities focus on the application of classroom concepts and include investigations of ecological principles (diversity, competition, and habitats), population growth and dynamics, resource conservation issues, energy cycles and consumption, and sustainability. Students will be expected to sit for the AP examination in May. **Prerequisite:** Biology and Chemistry or Honors Chemistry. Open to Form V and Form VI.

**AP Calculus AB**
This course provides an intensive examination of biochemistry, cytology, energetics, taxonomy, classical and molecular genetics, embryology and development, physiology, anatomy, evolution, and ecology. Students will be expected to take the AP examination in May. **Prerequisite:** high grades in Biology and Honors Chemistry or distinguished performance in Chemistry and permission of the Department Chair.

**AP Chemistry**
This course is designed to be the equivalent of a college general chemistry course. Topics covered in depth include atomic theory and structure, stoichiometry, chemical bonding, states of matter, kinetics, equilibrium, acid-base chemistry, thermodynamics, and electrochemistry. The laboratory component of the course will ensure that students become familiar with standard laboratory equipment and procedures. Laboratory work will include gravimetric analysis, calorimetry, titrations, molar mass determinations, and qualitative and quantitative analyses. Students will be expected to take the AP examination in May. **Prerequisite:** B or better in Honors Chemistry or distinguished performance in Chemistry or Biology and permission of the Department Chair.

**AP Physics C**
The culminating course of the St. Albans physics curriculum, this class uses the calculus in a mathematically sophisticated treatment of classical mechanics and classical electromagnetism, with an emphasis on problem solving and laboratory work. The viewpoint of modern physics will be qualitatively superimposed on the classical structure to provide students with a feel for current topics in physics. This course may be taken as either a first- or second-year class in physics. Students will be expected to sit for the AP Physics C examination in May. **Prerequisite:** B+ or better in Physics, AP Physics 1, or Honors Physics; B+ or better in AP Calculus AB or Honors AP
Calculus BC (highly qualified students may take a calculus course concurrently, with permission); and permission of the Department Chair.

**Biology**

This introductory biology course incorporates both lectures and laboratory work, and covers the topics of biochemistry, cytology, genetics, taxonomy, plant and animal anatomy, physiology, evolution, and ecology. Open to Form III and Form IV.

**Biotechnology**

Biotechnology is a laboratory-based course designed to introduce and immerse students in the world of biotechnology. The course will start with a review of the structure and function of DNA, RNA, and protein. From there, students will explore the major techniques used to study these molecules. This exploration will include extraction of DNA and protein from animal and plant cells, amplification of DNA using polymerase chain reaction (PCR), electrophoresis of both DNA and protein, and a field trip to the J. Craig Venter Institute in Rockville, Md. In addition, students will discuss more sophisticated techniques such as DNA sequencing, real-time PCR, microarrays, and single nucleotide polymorphism (SNP) detection. Throughout the course, students will become familiar with how biotechnology is used in the study of specific diseases (including cancer, AIDS, and addiction) and in forensics. Open to Forms IV, V, and VI. **Prerequisite:** Bio II (at least concurrently) and permission of the Department Chair.

**Introduction to Chemistry & Mechanical Engineering**

This course will cover some of the analytical skills seen in introductory mechanical and chemical engineering courses at the college level. Two- and three-dimensional force analysis including unit vectors, 2-D truss analysis, and degrees of freedom are some of the concepts that will be covered in the mechanical section. Two build projects will be completed that apply knowledge and skills gained during lecture. Chemical engineering will focus on material and energy balances, where students will apply concepts of limiting reactant, percent conversion and yield to determine necessary quantities of reactants to ensure quantities of a desired product. Factors taken into consideration when designing a chemical plant will also be discussed. Open to Form IV, Form V, and Form VI. Offered at National Cathedral School. **Prerequisites:** completion of or concurrent enrollment in Chemistry; completion of Geometry.

**Physics**

This introductory class offers a broad survey of the fundamental laws on which all nature is based, including kinematics, Newton’s laws, astronomy, energy, momentum, electrostatics, circuits, waves, optics, and, time permitting, Einstein’s theory of special relativity. The study of the conceptual understanding of these topics will be emphasized using laboratory inquiry (including many computer-based experiments), mathematical analysis, and group problem-solving. **Prerequisite:** Second-Year Algebra.