These descriptions are intended to help students select courses for next year. Students are reminded that the school may withdraw any course described herein if the number of students signing up is insufficient, or if changes in personnel or scheduling difficulties preclude its being offered. If a course is oversubscribed, priority is given to the older students as much as is possible within the constraints of scheduling. Oversubscription in elective courses might also be resolved by a lottery if an additional section cannot be created. Every effort will be made, however, to meet the students’ needs and interests.

Portledge’s graduation requirements include the following during the Upper School years: 4 credits in English, 4 credits in Mathematics, 3 credits in Lab Sciences, 3 credits in History, 2 or 3 consecutive Upper School years of French or Spanish or Mandarin culminating in the successful completion of at least level three in the chosen language, 1 credit in the Arts including 1 course in Visual Arts and 1 course in Performing Arts (Music or Theater), plus required non-credit courses in Health and Senior Seminar. A student needs to earn at least 18 credits to qualify for graduation. Most Portledge graduates earn far in excess of that number in order to enhance college-acceptance prospects. Students are expected to take a minimum of 5 credits each year. Lighter course loads must be approved in writing by Mr. Grzelewski.

The 9th grade curriculum includes 5 required credits: English, Mathematics, History, Science, and World Languages, plus Art Foundations.

The 10th grade curriculum includes 5 required credits: English, Mathematics, History, Science, and World Languages, plus a non-credit required Health course.

Any student enrolled in an Advanced Placement (AP) course is required to take the AP exam.

IB Diploma candidates must take all core courses in IB. Non-diploma candidates can elect IB courses depending upon instructor approval and available space. Students enrolled in the IB Diploma are required to take all IB assessments.
A NON-CORE OFFERING
Non-Core courses are considered supplementary to the normal course load. The credits awarded for successful completion are not calculated as part of the minimum yearly course load, nor are they counted toward meeting the 18-credit minimum graduation requirement. Similarly, grades earned in Non-Core courses are not computed into the computation of quality credits or placement on the Honors List.

CHESS (9th, 10th, 11th, 12th - 1/3 cr/1 Trimester)
Offered fall, winter and spring trimesters. Pass/Fail. Can be taken multiple trimesters. This non-Core elective provides an in-depth study of the game of chess from a science, art, and game perspective. Using chess as the primary conduit, the class provides an effective means for intellectual development and logical thinking. Students learn its rules, notation, use of the chess clock and basic chess principles, as well as strategy, tactics, and endgame play. The class reinforces essential problem-solving techniques through lectures and discussion, followed by tournaments and match situations, and advanced game theory.

ADVANCED CHESS (9th, 10th, 11th, 12th – 1cr/yr)
Prerequisite: Chess or permission of Instructor
This full year course is designed for students who intend to become rated chess players. All aspects of chess will be covered in detail including opening systems, middle game themes and endgame theory. Students will be assessed on a regular basis with daily homework assignments. The use of chess clocks and score keeping will be required. Players will be encouraged to compete in local rated chess tournaments. Students will each obtain online accounts at chess.com where progress can be monitored. Students in this class will become members of the U.S. Chess Federation and obtain national ranking.
COMPUTER SCIENCE PRINCIPLES (9th, 10th, 11th, 12th - 1cr/yr)
Prerequisite: Algebra 1 or permission of department.
Computer Science Principles (CSP) introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. Rather than focusing the entire course on learning one particular software tool or a single programming language, the course is designed to focus on the conceptual ideas of computing and help students understand why certain tools or languages might be utilized to solve particular problems. The goal of CSP is to develop in students the computational practices of algorithm development, problem solving, and programming within the context of problems that are relevant to the lives of today’s students. Students will also be introduced to topics such as interface design, big data and privacy, limits of computers, and societal and ethical issues. Do you want to build fun apps while learning about computing and technology? This class is for you!

INTRODUCTION TO PROGRAMMING (9th, 10th, 11th, 12th - 1 cr/yr)
Prerequisite: Algebra 1 or permission of department.
Introduction to Programming will briefly introduce students to a general history of computing and programming languages. However, the main focus of this course is to help students gain a fundamental understanding of the Java programming language, including Java coding syntax, application testing, and debugging. This course will help students develop software skills associated with using Java and an integrated development environment. It will also build upon students’ creativity, logic, problem solving, project planning, and collaborative skills. Do you want to learn more about text-based coding? Come join this course!

IB ITGS (Information and Technology in a Global Society) SL (11th, 12th- 1 cr/yr)
This one-year course considers the local and global issues associated with information technology systems. Students examine a series of real world scenarios including business, education, health care, the environment, politics and government where technology is used to organize and act on data. In each unit, students consider the existing technology with an eye for its real world applications and the social and ethical questions it raises. The major project of the year requires students to identify a person in their life who has a problem that can be solved with an Information Technology solution, and then create and implement the solution (e.g. a website, promotional video, application, program, database, etc.). Additionally, there is a formal IB external assessment at the end of the year. Do you like to discuss and debate? Are you interested in how technology impacts your daily life? This is a course for you! This course can be taken as part of the IB Diploma program or as a single course.
ENGLISH 9 AND 9A (9th – 1 cr/yr  Required course)
This course is designed to complement the freshman Ancient History Course while functioning independently to explore the theme of self-realization. The purpose of the course is to continue to build on close critical reading skills and effective writing skills. Emphasis is placed on literary analysis. Vocabulary will be examined within the context of the literary selections. Titles may include *The Curious Incident of the Dog in the Night-time*, *The Catcher in the Rye*, *Siddhartha*, *The Odyssey*, and *Julius Caesar*. Students will take the ERB test in reading comprehension and verbal reasoning as a diagnostic measure only. These test scores will have no impact on grades. There will be a cumulative exam in June.

ENGLISH 10 AND 10A (10th – 1 cr/yr  Required course)
This course is the first of a two-year sequence that focuses primarily on British and American writers who have been accepted into the traditional literary canon. The purpose of the course is to continue to build on close critical reading skills and effective writing skills. Emphasis is placed on literary analysis. Vocabulary will be examined within the context of the literary selections. Titles which will be studied may include *Night*, *Into Thin Air*, *The Adventures of Huckleberry Finn*, *Lord of the Flies*, and *Macbeth*. The advanced section will also read *Great Expectations*. Selections in short stories and poetry will also be studied. There will be a cumulative exam in June.

ENGLISH 11 (11th – 1 cr/yr)
English 11 will continue the broad survey of English and American literature begun in the tenth grade. Students will focus on developing effective language skills by reading and writing about such works as *The Great Gatsby*, *Othello*, and *The Things They Carried*. Students will experiment with various approaches to writing, including description, narration, comparison-contrast, and close-reading. They will study grammar and usage rules in conjunction with their writing. There will be a cumulative exam in June.
ENGLISH 11A (11th - 1 cr/yr)
Prerequisite: permission of Department
English 11A will offer students the opportunity to interact with and critically analyze a wide variety of texts representing different genres, themes, periods, styles, and cultural milieus. The reading may include the intensive study of *Pride and Prejudice*, *The Great Gatsby*, *Antigone*, *A Doll’s House*, and *The Sorrow of War*, as well as the poetry of Emily Dickinson and Walt Whitman.

ENGLISH 11 IB HL (11th - 1 cr/yr)
Prerequisite: permission of Department
English 11 IB will follow the first year International Baccalaureate Language A: Literature curriculum, which offers students the opportunity to interact with and critically analyze a wide variety of texts representing different genres, themes, periods, styles, and cultural milieus. The reading may include *Pride and Prejudice*, *The Great Gatsby*, *Antigone*, *A Doll’s House*, and *The Sorrow of War*, as well as the poetry of Emily Dickinson and Walt Whitman. Students who are pursuing the IB Certificate or the IB Diploma should sign up for this class.

CREATIVE WRITING (10th, 11th, 12th - 1cr/1 yr)
NOT OFFERED IN 2019-2020
This elective course offers students an opportunity to write stories, essays, plays and poems. Students are encouraged to experiment with a variety of styles. Students in this course will be responsible for the production of *Xanadu*, the literary/art magazine.

JOURNALISM (10th, 11th, 12th - 1cr/1yr)
NOT OFFERED IN 2019-2020
This elective course is an introduction to journalism. Basic skills of reporting from gathering of information to good journalistic writing will be emphasized. Students will read articles from Newsday and The New York Times and the reporting of current events will be discussed. Students will also be taught to edit, lay out and produce a paper. Some of the work done in the course will be published in the Portledge Press.
ENGLISH 12 – EACH SENIOR IS REQUIRED TO TAKE ONE OF THE FOLLOWING COURSES:
Seniors - List and number your First and Second Choices on the Course Selection Form.

ENGLISH 12 AP (12th - 1 cr/yr)
Prerequisite: permission of the department
There are three primary purposes to the AP English Literature course: to prepare students to take the AP Literature test; to offer a broad overview of some thematic trends and writing styles in literature, with a focus (but not an exclusive one) on works from the United Kingdom and Ireland; and to prepare students to succeed in college-level literature and writing courses. This last is the major focus of our class, and we will concentrate on developing approaches to reading texts from a wide variety of writing styles across a span of nearly 1,000 years of literature in English and, in some instances, in translation. We will also attend to various analytical methods for the purpose of writing a number of different types of essays, including evaluative compositions. In addition to a considerable range of poetry, major texts may include Beowulf (translated by Seamus Heaney), Twelfth Night (Shakespeare), The Importance of Being Earnest (Wilde), Frankenstein (Shelley), A Streetcar Named Desire (Williams), The Turn of the Screw (James), and Heart of Darkness (Conrad).

ENGLISH 12 IB HL (12th - 1 cr/yr)
Prerequisite: permission of Department, English 11 IB HL
English 12 IB will follow the second year International Baccalaureate Language A: Literature curriculum. Building on the skills and concepts from English 11IB HL, students will interact with and critically analyze a wide variety of texts representing different genres, themes, periods, styles, and cultures. Major texts may include Twelfth Night, Narrative of the Life of Frederick Douglass, Things Fall Apart, Heart of Darkness, Frankenstein, and The Things They Carried, as well as the poetry of Seamus Heaney. Students who are pursuing the IB Certificate or the IB Diploma should sign up for this class.
ENGLISH 12: SHAKESPEARE (12th 1 cr/yr)
Not available to students who took English 11A
Readings include three Shakespearean plays which are linked thematically. Also included are articles describing Shakespeare's literary predecessors and sources, Elizabethan culture and theater, and literary criticism pertinent to the plays being studied. Additionally, in the third trimester each student chooses a Shakespearean play which was not studied in this class as well as pertinent critical material in order to produce a well-defined and well-supported independent research paper.

ENGLISH 12: MODERN WORLD LITERATURE (12th – 1 cr/yr)
The purpose of this course is to explore the non-Western World through the works of modern writers. This course differs from other English courses in that we will read many books relatively quickly. Selections may include *Like Water for Chocolate* (Mexico), *The Brief Wondrous Life of Oscar Wao* (Dominican Republic), *How the Garcia Girls Lost Their Accents* (Dominican Republic), *Eva Luna* (Chile), *Things Fall Apart* (Nigeria), *Persepolis* (Iran), *Reading Lolita in Tehran* (Iran), and *Interpreter of Maladies* (India). For each title, students will be given suggestions for further reading. Students are required to engage in further reading for at least one of the works studied in class. This additional reading will be the basis of an independent research paper.
The aims of the history courses are:

- To develop an understanding of, and continuing interest in, the past.
- To develop an awareness in the student that human attitudes and opinions are widely diverse and that a study of society requires an appreciation of such diversity.
- To develop an understanding of history as a discipline and to develop historical consciousness including a sense of chronology and context, and an understanding of different historical perspectives.
- Develop key historical skills, including engaging effectively with sources.

**HISTORY 9 - WESTERN CIVILIZATION 1 (9th – 1 cr/yr)**

This course emphasizes key events in the development of civilization from prehistoric times to the Middle Ages. Major attention is focused upon the settlement of the Fertile Crescent and the Nile River Valley; the cultures of Greece and Rome; and the barbarian migrations into Western Europe which created the need for political reorganization and stabilization as provided by the Germanic kingdoms, feudalism, the Roman Catholic Church and the emergence of monarchies.

**HISTORY 9A – WESTERN CIVILIZATION 1 (9th – 1 cr/yr)**

This course emphasizes the key events in the development of civilization from prehistoric times to the Middle Ages. Major attention is focused upon Mesopotamia, the Nile River Valley, the cultures of Greece and Rome, as well as the evolution of political reorganization influenced by Germanic kingdoms and the Roman Catholic Church. Students are expected to approach the work from the point of view of an historian, and they are taught critical thinking skills that are used to direct this process. The use of extensive primary and secondary sources enhances the content of this accelerated course.
HISTORY 10 – WESTERN CIVILIZATION 2 (10th – 1 cr/yr)
This course is a survey of major developments that shaped the growth of Europe from the Middle Ages to modern times. In order to understand the quest for self-government, students view the emergence of political doctrines against a changing backdrop of intellectual and scientific inquiry, of New World colonization, of the struggle between absolute and constitutional monarchs, and of reformation within the Church. Major emphasis is given to events after the French Revolution including the Napoleonic era, the new age of colonization and industrial growth, Bismarck and balance-of-power strategy, the two world wars, and the cold war. In the third trimester, students are required to complete a ten-page research paper under the guidance of the teachers and the librarian. They follow a structured research process and work almost entirely in school.

HISTORY 10A – WESTERN CIVILIZATION 2 (10th – 1 cr/yr)
This course is a survey of major developments that shaped the growth of Europe from the Middle Ages to modern times. In order to understand the quest for self-government, students view the emergence of political doctrines against a changing backdrop of intellectual and scientific inquiry, of New World colonization, of the struggle between absolute and constitutional monarchs, and of reformation within the Church. Major emphasis is given to events after the French Revolution including the Napoleonic era, the new age of colonization and industrial growth, Bismarck and balance-of-power strategy, the two world wars, and the cold war. In the third trimester, students are required to complete a ten-page research paper under the guidance of the teachers and the librarian. They follow a structured research process. The advanced section of this course combines extensive primary and secondary works with the assigned texts at an accelerated pace.
Juniors are required to take United States History; the AP, Regular, and IB courses all fulfill this requirement. Sections will be finalized by department.

**HISTORY 11 UNITED STATES HISTORY (11th - 1 cr/yr)**

This course covers major political, economic, social and cultural events from the discovery of the United States. Emphasis is placed upon continuing to develop skill sets specifically in regard to analysis of primary and secondary documents, historical investigation, written communication as well as public speaking.

**AP UNITED STATES HISTORY (11th - 1 cr/yr)**

*Prerequisite: permission of Department*

This course is a rigorous study of the political, economic, social, and cultural topics and concepts from the discovery of the Americas through the modern era. It is designed to develop in each student a thorough understanding of the significance of the major events and individuals in American history. Preparation for the AP Exam is enhanced through regular practice with document based questions and free response essays. In addition to the various texts, reading is extensively from primary and secondary sources. A summer reading list must be completed in preparation for this course.

**HISTORY 11 IB HISTORY OF THE AMERICAS HL (11th - 1 cr/yr)**

*Prerequisite: permission of Department*

The first of a two-year course, the History of the Americas focuses on in depth investigation of varying, yet connecting topics. Throughout the year, students will study aspects of history, with a heavy focus on causation and critical analysis. Three in depth themes such as *Religion in the New World (1500-1800)*, *Independence Movements (1763-1830)*, *The United States Civil War: Causes and effects (1840-1877)*, and *The Great Depression* will be of focus throughout the year. The purpose of the course is to provide varying perspectives regarding events that shaped the world. By broadening the curriculum from the United States, to one that encompasses both North and South America, students will gain a deeper appreciation for multiple perspectives and how interconnected society truly is.

In addition to the course content, students should be aware that this course focuses heavily on document analysis, compare and contrast style essays and a historical investigation. **Summer work is expected.**

*After completing the History of the Americas, IB Diploma Candidates will then take IB World History in their senior year. Exams covering both years take place in May of their senior year.*
History IB WORLD HISTORY HL (12th - 1 cr/yr)

Prerequisite: Completion of IB History of the Americas (for IB Diploma candidates). Permission of department for elective candidates for both 11th and 12th grades. Throughout this course students will focus on specific case studies regarding the Causes, Practices and Effects of War, leading to in depth analysis. In addition to the case studies, the course will look specifically at two topics for greater understanding. Possible topics include: Societies in Transition (1400-1700), Independence Movements (1800-2000), Authoritarian States (20th Century), and The Cold War: Superpower tension and rivalries (20th Century). The concentration of the two topics will be somewhat driven by student interest and teacher expertise. In addition to the course content, students should be aware that this course focuses heavily on document analysis, compare and contrast style essays and historical investigation. Summer work is expected.

*After completing the History of the Americas, IB Diploma Candidates will then take IB World History in their senior year. Exams covering both years take place in May of their senior year.

AP PSYCHOLOGY (11th, 12th schedule permitting – 1 cr/yr)

Prerequisite: permission of Department

The course will work to introduce students to the study of the behavior and mental processes of human beings and other animals. Students will learn about the ethics and methods psychologists use in their science and practice. Topics of study will include history of psychology, research methods, biological understanding of behavior, sensation/perception, consciousness, learning, cognition, motivation and emotion, developmental psychology, personality, testing and individual differences, abnormal behavior and its treatment, and social psychology (as delineated in the College Board AP Psychology Course Description).

UNITED STATES GOVERNMENT AND POLITICS (11th, 12th – 1 cr/yr)

AP option pending.

This course introduces students to key political ideas, institutions, policies, interactions, roles, and behaviors that characterize the political culture of the United States. The course examines politically significant concepts and themes, through which students learn to apply disciplinary reasoning, assess causes and consequences of political events, and interpret data to develop evidence-based arguments.
The Mathematics Department offers a diversity of mathematics courses to upper school students. Students must take mathematics each year. Seniors will have several choices for their fourth year of math. They are Calculus AB or BC, Pre-Calculus, AP Statistics, Calculus, IB Math or Applied Mathematics. Students should check with their math teacher or Ms. Short in order to select the appropriate sequential course.

**ALGEBRA 1 (9th - 1 cr/yr)**
This course deals with the fundamental operations of algebra. Some of the topics included are: algebraic operations, linear equations and inequalities, polynomials, word problems, factoring, systems of equations, graphing lines and inequalities, radicals and exponents, rational expressions, functions, and quadratic equations.

**GEOMETRY (9th, 10th - 1 cr/yr)**
*Prerequisite: Algebra I*
This course deals with the study of the properties of two and three dimensional shapes; the symmetry, congruence and similarity of these shapes, and uses logical argument in formulating deductive proofs.

**GEOMETRY A (9th - 1 cr/yr)**
*Prerequisite: Algebra IA (Grade of C or higher) or entrance exam with permission of department head*
This in-depth formal study of Euclidean geometry is supplemented by topics in analytic and transformation geometry, trigonometry and algebra. Emphasis is placed upon developing both appreciation of the axiomatic structure of mathematics and ability to think logically through the construction of formal proofs. Topics include lines and angles, parallel and perpendicular lines and planes, congruent and similar polygons, right triangles, circles, area and volume, constructions and loci and some coordinate geometry and transformations.
ALGEBRA 2 (10th, 11th - 1 cr/yr)
Prerequisite: Grade of at least C in Algebra 1
This course begins with a review of topics from Algebra 1 and then proceeds to include: complex numbers, quadratic equations, functions, relations, systems of equations and inequalities, and probability. Algebra 2 has a component which meets the trigonometry requirement. Students completing this course may take the SAT Subject Test in Mathematics, Level I.

ALGEBRA 2A (10th, 11th - 1 cr/yr)
Prerequisite: permission of Department Head
This course is an intensive study of advanced algebra and trigonometry designed to give students the necessary background for mastery of more advanced mathematics. The emphasis is on the structure of mathematical systems as well as on algebraic, computational, and problem-solving skills. Algebra 2A has a component which meets the trigonometry requirement. Students completing this course are prepared to take the SAT Subject Test in Mathematics, Level I.

IB MATH STUDIES (11th, 12th - 1 cr/yr)
Prerequisites: Algebra 1, Geometry, Algebra 2, Trigonometry, and departmental approval
This course is a comprehensive one-year course that explores important fields in global mathematics. The class will focus on topics such as financial algebra, sets, logic, probability, functions, geometry, trigonometry, statistics, and calculus. Students are required to take an external assessment that includes short response and extended response questions. They are also required to create an individual project involving the collection of information or the generation of measurements, and the analysis and evaluation of information or measurements.

**not offering after June 2019**
APPLIED MATHEMATICS (11th, 12th – 1 cr/yr)
Prerequisites: Geometry and Algebra 2
This course combines algebraic and graphical approaches with practical business and personal finance. The focus is on applications that connect mathematics to the real world. The material stresses how algebraic thinking patterns and functions connect to finance and business dealings. Topics will include the stock market, banking, business, consumer credit, automobile ownership, purchasing a home, budgeting and retirement planning.

AP STATISTICS (12th – 1 cr/yr)
Prerequisite: Algebra 2 or permission from department
AP Statistics will introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes:
1. Exploring Data: Describing patterns and departures from patterns
2. Sampling and Experimentation: Planning and conducting a study
3. Anticipating Patterns: Exploring random phenomena using probability and simulation
4. Statistical Inference: Estimating population parameters and testing hypotheses

PRECALCULUS (11th, 12th – 1 cr/yr)
Prerequisite: Algebra 2.
This 1 year, 1 credit course provides students with a clear understanding of functions as a solid foundation for subsequent mathematics courses. Students will explore new topics such as logarithmic functions, exponential functions, trigonometry, probability theory and matrices and extend material covered in previous mathematics courses.
Mathematics

PRECALCULUS AB and BC ADVANCED (11th, 12th – 1 cr/yr)
Prerequisites: Algebra 2 or 2A and permission of department
For the student who will study calculus and/or who has a strong aptitude or an interest in mathematics, this course integrates the algebraic, geometric and trigonometric skills necessary for calculus. The course assumes knowledge of trigonometry and introduces differential calculus. Students completing this course may take the SAT Subject Test in Mathematics, Level II. Pre-calculus AB leads to the AB Calculus AP exam; Pre-calculus BC leads to the BC Calculus AP exam. The Department determines the sectioning for these courses.

IB MATH HL YEAR 2 (11th - 1 cr/yr)
Prerequisites: Algebra 1, Geometry, Algebra 2, Pre-calculus, Permission from the department
The IB DP higher level mathematics course focuses on applying mathematical knowledge to solve problems in a variety of meaningful contexts. Topics include Algebra, Functions, Trigonometry, Vectors, Stats, Calculus, Sets, and Discrete Math. Students are required to take an external assessment that includes short response and extended response questions. They are also required to create an individual project involving the collection of information or the generation of measurements, and the analysis and evaluation of information or measurements. This course will not be offered after June 2020.

CALCULUS (11th, 12th – 1 cr/yr)
Prerequisite: Pre-calculus
This course uses a graphical approach to introduce differential and integral calculus. The course presents the rules for derivatives and integrals with a focus on using them in applications.
AP AB CALCULUS (12th – 1 cr/yr)
Prerequisite: Pre-calculus A and permission of department
This course is an introduction to differential and integral calculus. Topics studied include functions; limits; analytic geometry; differentiation, applications of differentiation; integration, applications of integration; and transcendental functions. This course prepares students to take the Advanced Placement Calculus AB examination.

AP BC CALCULUS (12th – 1 cr/yr)
Prerequisite: Pre-Calculus A and permission of department
This course includes all of AB Calculus topics as well as parametric, polar and vector functions, and series (the concept of series, series of constraints, Taylor series). This course prepares students for the BC Calculus AP exam.

IB MATH APPLICATIONS AND INTERPRETATION SL/HL (11/12 2 yrs – 1 cr/yr)
Prerequisite: Algebra 1, Algebra 2, Geometry
Applications and interpretation with an emphasis on statistics, modeling and use of technology – appropriate for those with an interest in the applications of mathematics and how technology can support this – SL will be appropriate for students who would previously have taken Mathematical studies SL – current HL mathematics statistics and discrete option content will form part of the HL course. This subject is aimed at students who will go on to study subjects such as social sciences, natural sciences, statistics, business, some economics courses, psychology, and design.

IB MATH ANALYSIS AND APPROACHES (SL/HL) (11/12 2 yrs- 1 cr/yr)
Prerequisite: Algebra 1, Algebra 2, Geometry (preferably all advanced and permission of department)
Analytic methods with an emphasis on calculus – appropriate for pure mathematicians, engineers, scientists, economists, those with an interest in analytic methods – current HL mathematics calculus option content will form part of the HL course. This subject is aimed at students who will go on to study subjects with substantial mathematics content such as mathematics itself, engineering, physical sciences, or some economics courses.
All Upper School students are required to take Arts Foundations (or its department approved equivalent if a student transfers to Portledge after the 9th grade) and one course in the Performing Arts (Music or Theatre). These two required courses must total a minimum of one credit. The Performing Arts portion of the requirement may be met by taking one of the Music courses outlined below during the Upper School years.

PORTLEDGE CHORUS (9th, 10th, 11th, 12th - 1cr/yr)
All students with a love of music and an interest in singing are encouraged to participate in Upper School Chorus. The Portledge Chorus will perform in two major concerts per year, and will present several other performances in and outside of school. In addition to learning a repertoire of choral literature, students will study good singing technique, sight singing, and will learn choral rehearsal procedures. Special select groups may be formed within the chorus as interest and ability warrant. Students are encouraged to reenroll in chorus in subsequent years, as different literature will be studied each year.

SELECT CHORUS (10th, 11th, 12th)
Co-requisite: Must also be enrolled in US Chorus. By audition only in spring 2017.
The ensemble will study a broad range of musical choral literature including, but not limited to: 20th Century music, jazz, and American folk. Students will work to build 4-part harmonies and complex chords. The chorus will generally perform unaccompanied. Members of the group will strengthen their reading and listening skills with a heavy emphasis on sight-singing. The accompanying exercises will enhance each student’s ability by providing an opportunity to understand the sound and feel of each interval. The Select Chorus will perform at the winter and spring US concerts with the possibility of also performing at other events throughout the year.
CONCERT BAND or STRING ORCHESTRA (9th, 10th, 11th, 12th - 1 cr/yr)
Wind, percussion and string instrumentalists are offered the opportunity to advance their technical proficiency and to develop the skills necessary for ensemble playing. Rehearsals will be supplemented by in-school group lessons. A variety of compositions, from classical arrangements to contemporary works and film scores, will be learned and polished for performances during the school year, including winter and spring concerts. Small select ensembles may be formed for interested, able musicians. Students are encouraged to start in 9th grade and continue throughout Upper School.

SOLO AND CHAMBER MUSIC PERFORMANCE - Availability dependent upon staffing and enrollment. (10th, 11th, 12th - ½ cr/yr)
Co-requisite: enrollment in the Band, Orchestra, or Chorus (or department approval) Prerequisite: NYSSMA level 5 (or department approval through audition)
Musicians interested in solo and small chamber music will have access to practice rooms during free periods to work on solo or chamber music in a collaborative way. Students will practice their own music both as a soloist as well as with other musicians. There will be culminating performances throughout the year, as well as opportunities for performance both on and off campus.

DIGITAL MUSIC AND RECORDING - Availability dependent on staffing and enrollment (10th, 11th, 12th - 1 cr/yr)
Students will learn about various aspects of music production and composition, audio engineering, and studio recording. Recording studio techniques and music production will be covered through programs such as ProTools, Logic, and Garageband. Concepts of microphone selection, microphone placement, effects, and mixing will be covered. Live audio set-up and production will occur for various events on-campus such as concerts, recitals, or musicals, as well as off-campus occasions. Interested students must be available to document and record two (winter/spring) live evening performances each year.
MUSIC SURVEY: MUSIC IN OUR LIVES - Availability dependent upon staffing and enrollment. (10th, 11th, 12th- 1/3 cr)

Fall trimester.

This course is open to all students with an interest in music, and will examine the role and importance of music in our lives. Topics covered will include classical, jazz, popular, and theater music, music of other cultures, form in music, and music theory. The course will make use of the Portledge Media lab, and will include an introduction to music technology: students will learn the operation of the synthesizer, music sequencing, recording, and other skills involving music technology. This is an academic course with regular reading assignments, quizzes, and tests. Students will complete a paper on a topic in which they have a special interest. Limited to 12 students. Offered during Fall trimester.

MUSIC THEORY 1 - Availability dependent upon staffing and enrollment. (10th, 11th, 12th- 1/3 cr)

Winter trimester.

This prerequisite course for IB Music (not offered this year) is an introduction to music theory. It is open to all interested students, and would be of special value to instrumentalists and singers wishing to gain a deeper understanding of the language of music. Through work in the Portledge Media lab, students will learn the basics of music theory, including key signatures, scales, intervals, chords, rhythm, and meter. Students will use interactive ear training and music theory software. The course will also serve as an introduction to music technology, and students will learn the operation of the synthesizer, music sequencing, recording, and other skills involving music technology. Limited to 12 students.
Music IB SL or HL Year 1. (11th, 12th 1 cr/yr) Availability dependent upon staffing and enrollment. Co-requisite: enrollment in the Band, Orchestra, or Chorus (or department approval) 
Prerequisite: Music Theory 1 or AP Music Theory, or permission of the department

In the first year of this two year course, students analyze, create, and perform music. Students learn a variety of vocabulary related to music theory which they use to analyze and write about musical compositions in three categories (Western Art Music, Jazz/Pop, World). Students prepare to write a "Musical Links" investigation, where they identify two pieces of music from distinct culture backgrounds and write a paper that analyzes and compares the pieces in terms of form and execution. The course will involve listening to compositions and then analyzing their forms, instrumentation and cadences. Sight singing is a component that will help build an understanding of intervals and melodic formation.

Music IB SL or HL Year 2 (12th 1 cr/yr) Availability dependent upon staffing and enrollment.
Co-requisite: enrollment in the Band, Orchestra, or Chorus (or department approval)
Prerequisite: Music Theory 1 or AP Music Theory, or permission of the department

In the second year of this two year course, students continue to analyze, create, and perform music. Students apply a variety of vocabulary related to music theory which they use to analyze and write about musical compositions. Music from around the world is also analyzed at a higher level as students complete a "Musical Links" investigation where they identify two pieces of music from distinct culture backgrounds and write a paper that analyzes and compares the pieces in terms of form and execution. The course will involve listening to compositions and then analyzing their forms, instrumentation and cadences. HL students must compare two scores during an exam while SL students will select one of two scores to analyze. HL students will record 20 minutes of solo music repertoire while SL students will prepare 15 minutes. Sight singing is a component that will help build an understanding of intervals and melodic formation.

JAZZ COMBO - Availability dependent upon staffing and enrollment. (10th, 11th ,12th - 1cr/ yr)
Co-requisite: Enrollment in band for drums, saxophone, trumpet, trombone and enrollment in orchestra for bass. 
Prerequisite: Permission of department.

Jazz Combo is open by audition to those students who play saxophone, trumpet, trombone, piano, guitar, bass, and drums (other instruments may be considered by petition). Students must be taking private lessons currently on their instrument and must play at an intermediate level or higher. The ensemble performs classic jazz literature. Students will learn techniques of improvisation and will work towards playing together as a unit. The ensemble will perform at the Winter and Spring concerts on campus and will have off-campus opportunities to perform as well. Auditions will be held during the spring preceding the school year in which the course will be taken.
All students must complete three years of laboratory science at Portledge School. The department determines placement in advanced and regular sections based on past performances in science classes, the recommendations of a student’s previous instructor, standardized test scores and, depending upon the course, the student’s aptitude in mathematics. The department tries to identify the most able students for advanced classes which proceed at a faster pace and explore the subject material in greater depth. Students are encouraged to take the appropriate SAT subject test in June. The usual laboratory sequence includes, in this order, courses in biology, chemistry, and physics. Additional science electives, IB and AP courses may be available to students and vary from year to year based on student enrollment and staffing availability. Students are encouraged to take a science course each of their four years in the upper school.

**BIOLOGY (9th - 1 cr/yr)**
A survey/laboratory approach covering a wide variety of topics in the life sciences, this course emphasizes the relationship between structure and function and the interrelationships among organisms. Topics include cells and cell biology, ecology, genetics, organismal biology, evolution and natural selection.

**BIOLOGY A (9th - 1 cr/yr)** Prerequisite: Science 8A, permission of Department
A survey/laboratory approach covering a wide variety of topics in the life sciences, this course emphasizes the relationship between structure and function and the interrelationships among organisms. Topics include all of those listed for the standard Biology course. The course moves at a faster pace, goes into greater depth, and requires more independent study skills. Students are required to read challenging journal and magazine articles, write detailed lab reports, and present projects to the class.
CHEMISTRY (10th, 11th, 12th - 1 cr/yr)

*Prerequisite: 1 year of Biology*

A laboratory course for students who want to understand the structure of matter, its properties, composition and the changes that matter undergoes without heavy reliance on mathematical relationships of chemical reactions. Topics will include the structure of the atom, chemical formulas, types of chemical reactions, phases of matter, gas laws, bonding, solutions, acids, bases and salts, electrochemistry and nuclear chemistry. The emphasis in this course will be on understanding concepts, although problem solving will require some basic algebra. Labs will provide “hands-on” experience for in-depth exploration of chemical laws and principles. Occasionally, technology will be integrated into the lab experiments.

CHEMISTRY A (10th, 11th, 12th - 1 cr/yr)

*Prerequisite: 1 year of Biology and permission of Department*

This laboratory course aims to develop an understanding of the behavior of substances under various conditions. Topics include all of the topics listed for the standard Chemistry course. The course moves at a faster pace, goes into greater depth, and requires more independent study skills. Atomic structure and the behavior of electrons are used to investigate the properties of elements and to elucidate the nature of chemical bonds. Mathematical relationships during reactions, reaction rates, chemical equilibrium, acid-base reactions and redox chemistry are explored. An important goal of the course is the development of laboratory skills. Labs are used to explore and reinforce concepts. Problem solving is used in this course, so strong mathematical skills are expected, students should be in Algebra 2 or more advanced math course. Occasionally, technology will be integrated into the lab experiments. Students are encouraged to take the SAT Chemistry subject test in June.

PHYSICS-MECHANICS (11th, 12th - 1 cr/yr)

*Prerequisite: 1 year each of Biology and Chemistry*

This laboratory course is geared to students who want to increase their knowledge of the physical world without the use of advanced mathematics. Using a modeling approach this course will investigate the broad topic of mechanics. The course will address moving with constant velocity, uniform acceleration, behavior of a particle when the sum of the force acting on it equals zero, behavior of a particle subject to a net force, projectile motion, uniform circular motion, energy storage and transfer and momentum. Experimental work helps demonstrate the interrelationship between theory and fact.
PHYSICS- ELECTROMAGNETISM AND WAVES (11th, 12th - 1 cr/yr)  Prerequisite: 1 year each of Biology and Chemistry
Using a modeling approach, this course will investigate the broad topics of electromagnetism and waves. The electromagnetism portion of the course will describe how charge both creates and responds to an electric field, how an electric field can store energy, how energy stored in an electric field can cause bulk charge flow through conducting materials and how moving charge produces and responds to a magnetic field. The waves portion of the course will explore the kinematics, dynamic and energy properties of a system of oscillating particles, the propagation of transverse and longitudinal waves, what happens when waves change media, and superposition and the characteristics of sound waves, standing waves, Doppler effect.

IB PHYSICS HL 11 (11th, 12th grade 1cr/yr)  
Prerequisite: Chemistry A, Co-requisite: Algebra II or higher
This course is an Algebra-based physics course covering topics including: Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; and mechanical waves and sound. It will also introduce electric circuits. All lab work and the Group 4 Project will be evaluated according to the IB assessment standards, using five criteria: design, data collection and processing, conclusion and evaluation, manipulative skills, and personal skills. This course can also be taken by non-IB students.

IB PHYSICS HL 12 (12th grade only 1cr/yr)  
Prerequisite: IB Physics HL 11 and Algebra II
This course is a second year of a two year sequence that will cover the main principles of physics in depth and will stress problem solving as well as laboratory skills. It is designed to meet the needs of those students wishing to further their study of physics. This course requires a variety of IB assessments.
Science

IB ENVIRONMENTAL SCIENCE SL (11th, 12th grade only -1cr/yr)
Prerequisites: 2 years of US Science: Biology and Chemistry
This is a one year course in Environmental Science designed to be the equivalent of an introduction to Environmental Science course taken during the first year of college. The goal of this course is to provide opportunities for students to study the scientific principles and concepts of environmental science and sustainability and to understand the interrelationships of the natural world, the processes that underlie the Earth, and the human dependence on ecosystem services. Students will identify and analyze natural and human-made problems and examine and develop alternative solutions for resolving and/or preventing them. The topics include foundations of ESS; ecosystems and ecology; biodiversity and conservation; and, water, aquatic food production systems and societies, soil systems, terrestrial food production systems, and societies; atmospheric systems and societies; climate change and energy production; and, human systems and resource use. Work will include reading textbook material and current articles and conducting empirical studies, field work, laboratory experiments, case studies and projects. This course can also be taken by non-IB students.

AP BIOLOGY (11th, 12th - 1cr/yr)
Prerequisites: 2 years of US Science: Biology and Chemistry, permission of Department
AP Biology is designed to be the equivalent of a first year college biology course. The AP course in biology differs significantly from the usual first high school course in biology with respect to the complexity of laboratory work and the time and effort required of students. It aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology. The course will cover three general areas including molecules and cells, heredity and evolution and organisms and populations. The two main goals of AP Biology are to help students develop a conceptual framework for modern biology and an appreciation of science as a process. Essential to this conceptual understanding are a grasp of science as a process rather than as an accumulation of facts; personal experience in scientific inquiry; recognition of unifying themes that integrate the major topics of biology; and application of biological knowledge and critical thinking to environmental and social concerns. Laboratory work including technology and field investigations will be included in this course. Students will take the Biology AP exam in May.
AP CHEMISTRY (11th, 12th - 1 cr/yr)
Prerequisites: 2 years of US Science: Biology and Chemistry and Algebra 2, and permission of Department

AP Chemistry is designed to be the equivalent of the general chemistry laboratory course taken during the first year of college for students planning to major in science. Topics will include atomic theory and atomic structure, chemical bonding, gases, liquids and solids, solutions, reaction types, stoichiometry, equilibrium, kinetics, thermodynamics, electrochemistry and nuclear chemistry. All topics will be covered with an emphasis on chemical calculations and mathematical formulations of chemical principles. Proficiency in the use of logarithmic and exponential relationships is expected and therefore it is necessary that the student have successfully completed a second-year algebra course. In addition, students will be required to maintain a thorough, well-organized laboratory notebook in such fashion that chemistry professors at the students’ selected institutions can readily review this evidence of their lab experiences. Technology will be integrated into the lab experiments. Students will take the Chemistry AP exam in May and are expected to take the SAT Chemistry exam in June.

AP PHYSICS-C MECHANICS (12th-1cr/yr)
Prerequisite: 1 year Physics recommended, grade of A- or better in Algebra 2A recommended
Co-requisite: Calculus AB or BC or higher

An Advanced Placement science course that studies Newtonian mechanics. Methods of calculus are used wherever appropriate in formulating physical principles and in applying them to physical problems. This course is designed to be equivalent to an introductory college course in mechanics for physics or engineering majors. Students will take the Physics AP-C exam in May.
ASTROPHYSICS (12th - 1cr/yr)

Prerequisites: Algebra I, Earth Science and 2 years of Upper School Lab Science

Astrophysics is the scientific discipline dedicated to the study the physical nature of stars and other celestial bodies, and the application of the laws and theories of physics to the interpretation of astronomical observations. Topics to be covered include: The Solar System, Big Bang Theory, properties of stars, stellar evolution, the interstellar medium, galaxies, Hubble's Law, cosmology, observational astronomy, the history and development of astronomy, Kepler's laws of planetary motion, Newton's laws of motion and gravity, the Earth-moon system, the structure and composition of the planets with an emphasis on comparative planetology, asteroids, comets, the formation of the solar system, the sun and the exploration of space. Emphasis is placed on investigating the methods astronomers use to learn about the universe. Knowledge of basic algebra and Earth science skills are assumed. Students may have an opportunity to gain some college experience during lessons taught by a local university astronomy professor and/or visit a local university's astronomy lab and use their high powered telescopes for “stargazing.”

HUMAN ANATOMY AND PHYSIOLOGY (12th - 1cr/yr)

Prerequisites: Algebra I, Geometry; 3 yrs. of US Science

Human Anatomy and Physiology is a course for those students interested in science-related fields. Anatomy and physiology is a discussion and laboratory based study of the human body. The study will include molecules, cells, body systems and body processes. Dissection will complement course work. This course is designed for students interested in potentially pursuing biology and health career majors. The course will provide opportunities for students to investigate topics of interest, to conduct experiments, and to develop critical thinking and communication skills. This is a full year course centered around the following topics: Basic Chemistry, Cells and Tissues, Skin and Body Membranes and Body Systems (Skeletal, Muscular, Nervous, Endocrine, Cardiovascular, Lymphatic, Respiratory, Digestive, Urinary and Reproductive).

MOLECULAR BIOLOGY AND GENETICS (12th - 1cr/yr)

Prerequisites: Biology and Chemistry

This course will be a project-oriented study of molecular biology and genetics, including case studies, laboratory research projects, scientific journal reading and analysis, research projects, and moral and ethical evaluations. The goal is for students to conduct original research using molecular biological techniques. The course will be a lab course including such techniques as: DNA isolation, Recombinant DNA, Restriction Enzymes, PCR, gel electrophoresis, and protein isolation. Field trips to the DNA Learning Center will be integral to this course.
SCIENCE ELECTIVES (NON-CORE)  The following courses cannot be used to fulfill the 3 year lab science requirement.

ROBOTICS (10th, 11th, 12th -1 cr/yr)
Prerequisites: parent permission to attend FIRST competition
Students will design, build and program robots, applying real-world math and science concepts. Student teams develop strategy and build robots based on sound engineering principles. This course develops problem-solving, organizational and team-building skills as teams compete in the yearly FIRST Tech Challenge competition. In addition to class time, this course has 3-5 after school and weekend commitments, including a Qualifier competition in late January, that we expect students to attend.
This course cannot be used to fulfill the 3 year lab science requirement.

ROBOTICS 2 (11th, 12th -1 cr/yr)
Prerequisites: Robotics, parent permission to attend FIRST competition.
This course will continue to develop the student’s understanding of engineering process and further explore programming languages – coding syntax, testing, and debugging. Students will expand their understanding of robotics using TETRIX, Actobotics, REV and raw materials to construct mechanical elements. More focus will be placed on CAD skills in this course. Students in Robotics 2 / 3 will also be asked to take on a leadership role in an area of specialization to help peers in the Robotics course who are new to robotics design, construction and programming. In addition to class time, this course has some afterschool and weekend commitments, including two qualifier competitions in January, that we expect students to attend.
This course cannot be used to fulfill the 3 year lab science requirement.
ROBOTICS 3 (11th, 12th -1 cr/yr)
Prerequisites: Robotics 2, parent permission to attend FIRST competition.
This course will continue to develop the student’s understanding of engineering process and further explore programming languages ~ coding syntax, testing, and debugging. Students will expand their understanding of robotics using TETRIX, Actobotics, REV and raw materials to construct mechanical elements. More focus will be placed on CAD skills in this course. Students in Robotics 2 / 3 will also be asked to take on a leadership role in an area of specialization to help peers in the Robotics course who are new to robotics design, construction and programming. In addition to class time, this course has some afterschool and weekend commitments, including two qualifier competitions in January, that we expect students to attend.
This course cannot be used to fulfill the 3 year lab science requirement.
THEATRE ARTS
All Upper School students are required to take Arts Foundations (or its department approved equivalent if a student transfers to Portledge after the 9th grade) and one course in the Performing Arts (Music or Theatre). These two required courses must total a minimum of one credit. The Performing Arts portion of the requirement may be met by taking one of the Theatre Arts courses outlined below during the Upper School years.

INTRO TO THEATRE (9th grade, other grades considered with departmental permission – 1 cr/yr)
This is an introductory course designed for students to learn beginning acting technique, theory, and basic theatre appreciation and terminology. Fundamentals covered are basic theatre knowledge, history of acting practitioners and playwrights, improvisation, devising techniques, scene work and other performing exercises designed to lay the ground work for future theatre training in this program. This beginning course will focus on the PROCESS and help develop the skills and emotional freedom to explore and create characters. All students will perform a two person scene final in this class.

CREATIVE DRAMATICS (10th, 11th, 12th – 1 cr/yr)
Prerequisite: Intro to Theatre or Permission of Department Chair.
Creative Dramatics is course designed for students to learn advanced acting technique, theory, and theatre appreciation and terminology needed to grasp the concepts of acting and creative performance. Fundamentals covered are monologues, improvisation, scene/character work and public performances designed for future Theatre training in this program (IB Theatre). This is a performance class. Students will be asked to read, analyze, and perform plays in-class and for the public. Students will also be asked to collaborate and create and perform theatre pieces based on advanced devised theatre techniques such as: Theatre for Change, Theatre of the Oppressed and Process Drama. * Students may take this course twice, but year two is registered as Advanced Creative Dramatics.
IB THEATRE SL, HL 1 (11th, 1 cr/yr)
*Prerequisites: Intro to Theatre or Creative Dramatics is strongly recommended.* Students in their first year of IB Theatre sign up for this section. This a two year advanced course and part of the IB Diploma program. Students are required to explore Theatre from the perspective of dramaturgy, director, performer, group ensemble, production team and spectator. Assessment is completed in the second year of study, with the first year focused on gaining knowledge and understanding about the topics and preparing for mock assessments.

IB Theatre SL, HL 2 (12th, 1 cr/yr)
*Prerequisites: IB Theatre (HL 1).*
Students in their second year of IB Theatre sign up for this section. All IB Theatre assessment are completed, performed and submitted to IB for grading.

ADVANCED THEATRE (11th, 12th – 1 cr/yr)
*Prerequisite: Successful completion of Intro to Theatre or Creative Dramatics.*
10th Graders will be considered if Creative Dramatics does not fit into their schedule. Permission of Department Chair is required.
Advanced Theatre is an advanced course and will be taught concurrently (i.e. in the same time and place) with IB Theater. Students enrolled in this course will be involved with all aspects of the IB course, but are not required to submit work to IB for assessment. Students may take this course twice, but year two is designated as Advanced Theatre II.

THEATRE PERFORMANCE (11th, 12th – 1/3 cr/1 trimester).
9th graders wishing to take a theatre course should be encouraged to sign up and for the Intro to Theatre course.
This is a one trimester (spring trimester) introductory course designed for students who elect to take a Theatre class to satisfy their Performing Arts graduation credit requirement. Students will participate and explore basic theatre and acting techniques. Students who take this class must be willing to participate, collaborate and take risks.
Theory of Knowledge

IB THEORY OF KNOWLEDGE (TOK) 1 (11th, 12th - 1cr/yr)
The two year TOK class raises questions about what it means “to know.” Students will write about and create presentations on the nature of knowledge in our world by studying the “ways of knowing”: sensory perception, language, memory, reason, emotion, intuition, imagination, and faith.

For IB Diploma Candidates, this is a required course. Students entering the 11th grade may elect to take this course as a Certificate Candidate. (Certificate Candidates submit assessments to the IB in the hopes of earning official recognition from the IB.) Students entering the 11th or 12th grade may elect to take this course as non-examination students. (Non-examination students do not submit their work to the IB, and are graded solely by their classroom teacher.)

IB THEORY OF KNOWLEDGE (TOK) 2 (12th - 1cr/yr)
Prerequisite: TOK 1
In the second year of TOK students continue their in-depth analysis of knowledge. Significant time is devoted to completing the official IB assessments. This is a required course for Diploma Candidates.
All Upper School students are required to take Arts Foundations (or its department approved equivalent if a student transfers to Portledge after the 9th grade) and one course in the Performing Arts (Music or Theatre). These two required courses must total a minimum of one credit.

Students who have completed the Art Foundations course may choose, upon the approval of the Department Head, from the courses listed below. All elective courses will include an art history or appreciation component related to each topic. As indicated, not all courses are offered each year. The department has listed all of its courses and the likely years they will be offered in order to assist students who are planning to take visual arts courses over multiple years. For certain art courses, enrollment may be limited. Tenth grade students are permitted enrollment in art electives only as space and scheduling permit.

**ART FOUNDATIONS (9th – 2/3 cr/yr) *Required Course**
Art Foundations is a prerequisite for all art electives. This course is designed to provide the student with the tools to both better understand art and to actually create art. An in-depth look at the Elements and Principles of Art will provide the vocabulary needed to gain a better understanding of the creative process while also providing an informed way to better appreciate art in a museum or gallery setting. The areas of composition, rendering and expression are explored through an array of mediums, techniques and styles. Emphasis is placed on both creativity and presentation. Projects will be student driven and self determined. Art Foundations (or it’s equivalent) is required of all students. (Rarely, and under extraordinary circumstances, an exemption to this requirement is granted by the Head of the Upper School in writing).

**STUDIO ART (10th, 11th, 12th - 1 cr/yr)**
Note: Students who have a serious interest in the visual arts or who plan on pursuing a career in art should consider enrolling in Studio Art during their sophomore year. Successful completion of this course will help students to develop an art portfolio and prepare them for further exploration in Advanced Portfolio. Studio Art is a prerequisite for Advanced Portfolio.
ADVANCED PORTFOLIO (10th, 11th, 12th - 1 cr/yr) Prerequisite: Studio Art or the equivalent for new students. Advanced Portfolio asks students to participate in an intensive exploration of two and three-dimensional media. Emphasis is placed on the art making process, art vocabulary, visual media along with the elements and principles of design. Realism and abstraction will be explored through the processes of drawing, painting, and printmaking. It is assumed that the student’s desire to work will reflect the intensity of a serious minded art student. This course will strive to help the student to develop an art portfolio that meets college level portfolio requirements. Field trips to galleries and museums on Long Island or in New York may be included.

ARCHITECTURE (10th, 11th, 12th - 1 cr/yr)
Students will be introduced to the technical fundamentals of architectural design, solve conceptual problems and develop an awareness of architecture’s ecological and social relationships. Students will develop skills in rendering, drafting, work with form and spatial relationships, construct models and produce computer-aided designs. An overview of the history of Architecture will also be covered.

CERAMICS (10th, 11th, 12th – 2/3 cr/yr)
This course is presented as an introduction to ceramics. Students will learn the basics of clay construction as they produce works using pinch, coil and slab building techniques with clay. The proper use of clay tools and materials will be intertwined with an examination of the role of ceramics in a variety of cultures. Trips to galleries and museums on Long Island and/or New York may be included. Students interested in enrolling in the Advanced Ceramics art elective must have completed Ceramics and receive approval from the instructor before enrolling in the course.

ADVANCED CERAMICS (10th, 11th, 12th – 2/3 cr/yr)
Advanced Ceramics is designed to explore in greater depth the hand built techniques of ceramics. Projects will evolve from being utilitarian to sculptural with an emphasis on the aesthetic aspects of ceramics. Students interested in enrolling in Advanced Ceramics must have completed Ceramics and receive approval from the instructor before enrolling in the course.
JOURNALISM & FILMMAKING (10th, 11th, 12th - 1 cr/yr)
This course aims at achieving two goals: interpreting and creating films. Students will grow their knowledge of cinema by examining film as an art form while learning about how the medium has evolved over time. Students will then gain the practical skills of writing, directing, camera operating, editing and post production through various projects.

GRAFFITI ART (10th, 11th, 12th – 1 cr/yr)
Students will examine the long history of graffiti, the evolution of the art form and its current role in modern culture. Students will choose an alias and create a variety of letter designs. Students will also learn about the current street art movement and create hand cut stencils. Individual evaluation will be based on the strength of individual assignments and participation in class.

PHOTOGRAPHY/MEDIA (10th, 11th, 12th - 1 cr/yr)
This course is intended to introduce students to digital photography. The class will focus on learning how to operate a digital camera and use a computer as a digital dark room. Basic camera use and rules of composition will be stressed. Cameras used will include basic point and shoot digital cameras, the cell phone as a camera and Digital SLRs. Photographs will be corrected and manipulated in Photoshop addressing, color correction, retouching and more. An overview of the history of photography and discussion of influential photographers will be covered. A Digital SLR is not required but highly recommended for serious students.
**Visual Arts**

**IB ART 1 (11th, 12th - 1 cr/yr)**
IB Art is a studio based course exploring the students' creativity and culminating in the production of two and three dimensional art. Drawing, painting, sculpture and the digital realm will be explored. Students will develop their own artwork through research and thoughtful exploration of the art making process. Students are expected to be motivated and be able to connect and relate to a variety of styles, cultures, time periods and make connections to their own personal art making practice. The creative process will be documented in journals in written and visual forms.

**IB ART 2 (12th - 1 cr/yr) Prerequisite: IB Art 1**
IB Art 2 is the second year of a studio based course exploring the students' creativity and culminating in the production of two and three dimensional art. Drawing, painting, sculpture and the digital realm will be explored. Students will develop their own artwork through research and thoughtful exploration of the art making process. Students are expected to be motivated and be able to connect and relate to a variety of styles, cultures, time periods and make connections to their own personal art making practice. The creative process will be documented in journals in written and visual forms.

**IB FILM SL (11th, 12th - 1 cr/yr)**
Students will learn how film creates meaning and will gain the skills to develop ideas through the various stages from conception to finished production. Through the study and analysis of film texts and exercises in film-making, the course explores film history, theory, and socio-economic background. The course develops students’ critical abilities, enabling them to appreciate the multiplicity of cultural and historical perspectives in film. To achieve an international understanding within the world of film, students are taught to consider film texts, theories, and ideas from the points of view of different individuals, nations, and cultures. Students also develop professional and technical skills (including organizational skills) needed to express themselves creatively in film. (www.ibo.org)
In order to meet the graduation requirement, each Upper School student must successfully complete a Level 3 course in French or Spanish or Mandarin by earning a minimum of either 2 or 3 credits for courses taken in consecutive years. We encourage students to enroll in a language course during all four years. Interested students may study a second foreign language as an elective.

**FRENCH 1** (9th, 10th or special permission - 1 cr./yr; 3-yr sequence required)  
(Permission of Department required if taken as a 2nd World Language)  
This is a beginning course for students who are new to learning French and for those who need one more year to solidify their knowledge and usage of the fundamentals. In the course, students learn proper pronunciation and acquire basic vocabulary, grammar, and idioms. An introduction to the geography and civilization of francophone countries gives depth to the program.

**FRENCH 2** (9th, 10th, 11th - 1 cr./yr; 2-3 yr sequence required)  
In this course, students work to increase their competency in all four language skills: listening, speaking, reading, and writing. They continue their study of grammar and vocabulary and practice their skills in a variety of ways, such as conversations in class, activities with audio-visual materials (including feature films), oral presentations, and short essays. They also reach a deeper understanding of the culture and history of the francophone world. Successful completion of the course qualifies the student to enroll in French 3 in the following school year.

**FRENCH 2A** (9th, 10th, 11th - 1 cr./yr; 2-3 yr sequence required)  
French 2A students follow the French 2 curriculum, with enrichment: the student must undertake the study of more complex grammar structures, complete additional reading and writing assignments, and do more independent work. Successful completion of the enrichment program in Level 2A is a prerequisite to French 3A.
World Languages

FRENCH 3 (9th, 10th, 11th, 12th - 1 cr./yr, required course)
This course builds on the content of French 2 by providing reinforcement of basic concepts as well as further grammar study, emphasizing the subjunctive and conditional moods. Students build upon their vocabulary, practice with idiomatic expressions, and generally have opportunities to gain fluency when expressing themselves in French. By studying various aspects of French-speaking societies in-depth, students begin to make subtle comparisons with their own culture and experience. In this course, we continue our exploration of francophone literature, cinema, and news reports.

FRENCH 3A (10th, 11th - 1 cr/yr, required course)
Pre-requisite: Permission of the Department
In this course students are expected to learn and use the most advanced structures possible to create authentic and sophisticated writing and speech. In addition to the exploration of the conditional and subjunctive moods (in all tenses), grammar lessons may include the aspect of adjectives, the infinitive mood, the relative pronouns, the literary past tense, the passive voice and indirect discourse. In addition to the excerpts from our textbook(s), students will read classic French short stories as well as a novel or play, and continue their exploration of poetry and film. The work they do will develop the competencies they will need to demonstrate on the AP and/or IB exams.

FRENCH 4CC: CONVERSATION & CULTURE (11th, 12th - 1cr/yr)
This course is a continuation of French 3 (or of French 3A for those who wish to opt out of the Advanced track), offering practice at a high beginner/intermediate level. Students will gain confidence using the language by daily practice drilling grammar concepts that have been taught in previous French courses. The comprehensive grammar review book (Reprise, Glencoe) and on-line grammar exercises are among the course materials. In addition, students learn the vocabulary needed to converse about the topics in the curriculum. While students do some reading (often as a class) and some writing (to reinforce their command of grammar), the emphasis is placed on oral communication. The class explores various cultural themes through short reading selections, internet websites, songs, poems, and movies. Each individual student is encouraged to investigate those aspects of the francophone world that correspond to his or her personal interests. An open exchange of ideas and information is a key element of the course; students will be responsible for at least one oral presentation per term.
World Languages

FRENCH 4A (11th, 12th – 1 cr/yr)
*Pre-requisite: successful completion of a level 3 French course.*
This course, for students who have reached the intermediate level, is part of the two year sequence that prepares students for the Advanced Placement examination in French Language and Culture. Students explore themes such as science & technology, world issues, and social relationships by reading articles, poetry, and prose, listening to and watching news programs and films, and doing research projects. The grammar concepts learned in previous courses are reviewed, and some advanced grammar topics are introduced. All students will engage in tasks used in AP assessments, and thereby improve their interpersonal, analytical, and presentational communication skills in French. This course will be conducted in the same class period as the French IB-Year 1 course.

FRENCH 5CC: CONVERSATION & CULTURE (11th, 12th - 1cr/yr)
*Prerequisite: A Level 4 French course.*
This course is a continuation of French studies offering practice at a high beginner/intermediate level. Students will gain confidence using the language by daily practice drilling grammar concepts that have been taught in previous French courses. The comprehensive grammar review book (*Reprise*, Glencoe) and on-line grammar exercises are among the course materials. In addition, students learn the vocabulary needed to converse about the topics in the curriculum. While students do some reading (often as a class) and some writing (to reinforce their command of grammar), the emphasis is placed on oral communication. The class explores various cultural themes through short reading selections, internet websites, songs, poems, and movies. Each individual student is encouraged to investigate those aspects of the francophone world that correspond to his or her personal interests. An open exchange of ideas and information is a key element of the course; students will be responsible for at least one oral presentation per term.

French IB-Year 1- SL (11th, 12th – 1 cr/yr)
*Pre-requisite: successful completion of a level 3A French course, or permission of the department.*
This course, for students who have reached the intermediate level, is part of the two year sequence in the IB program and also prepares students for the Advanced Placement examination in French Language and Culture should they wish to sit for it in their senior year. Students enrolled in this course will prepare for exams at the Standard Level, taken in the second year of the two year sequence. Students will explore themes such as science & technology, world issues, and social relationships by reading articles, poetry, and prose, listening to and watching news programs and films, and doing research projects. The grammar concepts learned in previous courses are reviewed, and some advanced grammar topics are introduced. All students will engage in tasks used in IB assessments, and thereby improve their interpersonal, analytical, and presentational communication skills in French. This course will be conducted in the same class period as the French 4A course and the IB-yr 1-HL course.
French IB-Year 1- HL (11th, 12th – 1 cr/yr)
Pre-requisite: successful completion of a level 3A French course, or permission of the department.
This course, for students who have reached the intermediate level, is part of the two year sequence in the IB program and also prepares students for the Advanced Placement examination in French Language and Culture should they wish to sit for it in their senior year. Students who select “HL” will prepare for exams at the High Level, taken in the second year of the two year sequence. Students will explore themes such as science & technology, world issues, and social relationships by reading articles, poetry, and prose, listening to and watching news programs and films, and doing research projects. The grammar concepts learned in previous courses are reviewed, and some advanced grammar topics are introduced. In addition, HL students must read be prepared to discuss and write about a novel or play written in French. All students will engage in tasks used in IB assessments, and thereby improve their interpersonal, analytical, and presentational communication skills in French. This course will be conducted in the same class period as the French 4A and IB-yr 1-SL course.

French IB-Year 2- SL (12th – 1 cr/yr)
Pre-requisite: successful completion of French IB-Year 1 - SL
This is the second year of the two year sequence in the IB program (which also prepares students for the Advanced Placement examination in French Language and Culture should they wish to sit for it in May). Students who select “SL” will take their exams at the Standard Level. In the second year, students continue their exploration of themes such as science & technology, world issues, and social relationships by reading articles, poetry, and prose, listening to and watching news programs and films, and doing research projects. Students engage in the kinds of tasks used in IB assessments so that they are prepared to sit for the exams, which are administered at various points throughout the school year, culminating in May. This course will be conducted in the same class period as the French AP course and the IB-yr 2-HL course.

French IB Year 2- HL (12th – 1 cr/yr)
Pre-requisite: successful completion of French IB-Year 1 - HL
This is the second year of the two year sequence in the IB program (which also prepares students for the Advanced Placement examination in French Language and Culture should they wish to sit for it in May). Students who select “HL” will take their exams at the High Level. In the second year, students continue their exploration of themes such as science & technology, world issues, and social relationships by reading articles, poetry, and prose, listening to and watching news programs and films, and doing research projects. In addition, HL students must again read a piece of authentic French language literature (a minimum of 2 works must be studied during this two-year course.) Students will engage in the kinds of tasks used in IB assessments so that they are prepared to sit for the exams, which are administered at various points throughout the school year, culminating in May.
**World Languages**

**AP FRENCH 5 (11th, 12th - 1cr/yr)**

*Pre-requisite: permission of Department*

This course is part of the final two-year sequence needed to prepare for the Advanced Placement examination in French Language and Culture. Students receive more opportunities to practice techniques for fluent reading, writing, and speaking. Requirements include weekly writing assignments, listening comprehension activities, active participation in class debates, and several oral presentations per term. Students practice analyzing, discussing, and presenting their ideas on the 6 “themes” covered on the AP exam, by exploring a wide range of texts including literary works (by authors such as Maupassant, Dadié, Ionesco, etc.), historical documents, non-fiction works, current events articles and broadcasts, and feature films. Grammar lessons, as needed, help reinforce what they have studied in previous French courses and allow them to refine their understanding of advanced structures. All students will develop a better command of the three modes of communication: interpretive, analytical, and presentational. Those who are in their 12th grade year will sit for the Advanced Placement exam in May.

**SPANISH 1 (9th, 10th, 11th - 1cr./yr; 3 year sequence required)**

*Prerequisite: Permission of Department required if taken as a 2nd World Language*

This is a beginning course for students who are new to Spanish and for those who need one more year to solidify their knowledge and usage of the fundamentals. In the course, students learn proper pronunciation and acquire basic vocabulary, grammar, and idioms. An introduction to the geography and civilization of Spanish-speaking countries gives depth to the program.

**SPANISH 2 (9th, 10th, 11th - 1 cr/yr; 2-3 year sequence required)**

In this course, students work to increase their competency in all four language skills: listening, speaking, reading and writing. They continue their study of grammar and vocabulary and practice their skills in a variety of ways, such as conversations in class, activities with audio-visual materials (including selections from feature films), oral presentations, and simple writing assignments. They also reach a deeper understanding of the culture and history of the Hispanic world. Successful completion of this course means the student is ready to advance to Spanish 3 in the following school year.
SPANISH 2A (9th, 10th, 11th - 1 cr./yr; 2-3 yr sequence required)
Spanish 2A students follow the Spanish 2 curriculum, with enrichment: the student must undertake the study of more complex grammar structures, complete additional reading and writing assignments, and do more independent work. Successful completion of the enrichment program in Level 2A is a prerequisite to Spanish 3A.

SPANISH 3 (10th, 11th, 12th - 1 cr/yr; required course)
This course builds on the content of Spanish 2 by providing reinforcement of basic concepts as well as further grammar study, emphasizing the different uses of past tenses, and the subjunctive mood. Students build upon their vocabulary, practice with idiomatic expressions, and generally have opportunities to gain fluency when expressing themselves in Spanish. By studying various aspects of Spanish-speaking societies in-depth, students begin to make subtle comparisons with their own culture and experience. In this course, we continue our exploration of Hispanic literature and cinema.

SPANISH 3A (10th, 11th - 1 cr/yr; required course)
Pre-requisite: Permission of the Department
This course allows students who have reached the intermediate level to practice and develop all four language skills. Students are expected to learn and use the most advanced structures possible to create authentic and sophisticated writing and speech. In addition to the exploration of conditional phrases and the subjunctive mood (in all tenses), grammar lessons may include the infinitive, special uses of the future tense, and ways of marking time. In addition to the excerpts from our textbook(s), students will become used to reading Spanish-language newspapers and they will be exposed to classic short stories, a novel or play, and more examples of poetry and film. The work they do with these texts—which includes performing dialogues and debates, preparing topics for oral presentation, writing personal essays, and completing researched-based projects—will develop the competencies they will need to demonstrate on the AP and/or IB exam at the end of their senior year.
World Languages

SPANISH 4CC: CONVERSATION AND CULTURE (11th, 12th - 1cr/yr)
Prerequisite: permission of Department
This course is a continuation of Spanish 3 (or of Spanish 3A for those who wish to opt out of the Advanced track) designed to provide practice at a high beginner/intermediate level. The comprehensive grammar review book (Repaso, Glencoe) and on-line grammar exercises are among the course materials. In addition, students learn the vocabulary needed to converse about the topics in the curriculum. While students continue to work on all four language skills, the emphasis is placed on oral communication. The class explores various cultural themes through short reading selections, songs, poems, and movies. Each individual student is encouraged to investigate those aspects of the Spanish-speaking world that correspond to his or her personal interests. An open exchange of ideas and information is a key element of the course; students will be responsible for at least one oral presentation per term.

SPANISH 4A (11th, 12th – 1 cr/yr)
Prerequisite: successful completion of a level 3 Spanish course.
This course, for students who have reached the intermediate level, is part of the two year sequence that prepares students for the Advanced Placement examination in Spanish Language and Culture. Students explore themes such as science & technology, world issues, and social relationships by reading articles, poetry, and prose, listening to and watching news programs and films, and doing research projects. The grammar concepts learned in previous courses are reviewed, and some advanced grammar topics are introduced. All students will engage in tasks used in AP assessments, and thereby improve their interpersonal, analytical, and presentational communication skills in Spanish.

SPANISH 5CC: CONVERSATION AND CULTURE (11th, 12th - 1cr/yr)
Prerequisite: A Level 4 Spanish course or permission of Department
This course is a continuation of Spanish designed to provide practice at a high beginner/intermediate level. The comprehensive grammar review book (Repaso, Glencoe) and on-line grammar exercises are among the course materials. In addition, students learn the vocabulary needed to converse about the topics in the curriculum. While students continue to work on all four language skills, the emphasis is placed on oral communication. The class explores various cultural themes through short reading selections, songs, poems, and movies. Each individual student is encouraged to investigate those aspects of the Spanish-speaking world that correspond to his or her personal interests. An open exchange of ideas and information is a key element of the course; students will be responsible for at least one oral presentation per term.
SPANISH IB-Year 1-SL (11th -1 cr/yr)
Pre-requisite: successful completion of a level 3A Spanish course, or permission of the department. This course, for students who have reached the intermediate level, is part of the two year sequence in the IB program and also prepares students for the Advanced Placement examination in Spanish Language and Culture, should they wish to sit for it in their senior year. Students who select “SL” will prepare for exams at the Standard Level, taken in the second year of the two year sequence. Students explore themes such as science & technology, world issues, and social relationships by reading articles, poetry, and prose, listening to and watching news programs and films, and doing research projects. The grammar concepts learned in previous courses are reviewed, and some advanced grammar topics are introduced. All students will engage in tasks used in IB assessments, and thereby improve their interpersonal, analytical, and presentational communication skills in Spanish. This course will be offered at the same time as the IB-Year 1- HL course.

SPANISH IB-Year 1-HL (11th -1 cr/yr)
Pre-requisite: successful completion of a level 3A Spanish course, or permission of the department. This course, for students who have reached the intermediate level, is part of the two year sequence in the IB program and also prepares students for the Advanced Placement examination in Spanish Language and Culture, should they wish to sit for it in their senior year. Students who select “HL” will prepare for exams at the High Level, taken in the second year of the two year sequence. Students explore themes such as science & technology, world issues, and social relationships by reading articles, poetry, and prose, listening to and watching news programs and films, and doing research projects. The grammar concepts learned in previous courses are reviewed, and some advanced grammar topics are introduced. In addition, HL students must read be prepared to discuss and write about a novel or play written in Spanish. All students will engage in tasks used in IB assessments, and thereby improve their interpersonal, analytical, and presentational communication skills in Spanish. This course will be offered at the same time as the IB-Year 1-SL course.
Spanish IB-Year 2- SL (12th – 1 cr/yr)
Pre-requisite: successful completion of Spanish IB-Year 1 SL
This is the second year of the two year sequence in the IB program (which also prepares students for the Advanced Placement examination in Spanish Language and Culture should they wish to sit for it in May). Students who select “SL” will take their exams at the Standard Level. In the second year, students continue their exploration of themes such as science & technology, world issues, and social relationships by reading articles, poetry, and prose, listening to and watching news programs and films, and doing research projects. Students engage in the kinds of tasks used in IB assessments so that they are prepared to sit for the exams, which are administered at various points throughout the school year, culminating in May.

Spanish IB Year 2- HL (12th – 1 cr/yr)
Pre-requisite: successful completion of French IB-Year 1 HL
This is the second year of the two year sequence in the IB program (which also prepares students for the Advanced Placement examination in French Language and Culture should they wish to sit for it in May). Students who select “HL” will take their exams at the High Level. In the second year, students continue their exploration of themes such as science & technology, world issues, and social relationships by reading articles, poetry, and prose, listening to and watching news programs and films, and doing research projects. In addition, HL students must again read a piece of authentic Spanish language literature (a minimum of 2 works must be studied during this two-year course.) Students will engage in the kinds of tasks used in IB assessments so that they are prepared to sit for the exams, which are administered at various points throughout the school year, culminating in May.

AP SPANISH 5 (12th grade) (11th, 12th - 1cr/yr)
This course is part of the final two-year sequence needed to prepare for the Advanced Placement examination in Spanish Language and Culture. Students receive more opportunities to practice techniques for fluent reading, writing, and speaking. Requirements include weekly writing assignments, listening comprehension activities, active participation in class debates, and several oral presentations per term. Students practice analyzing, discussing, and presenting their ideas on the 6 “themes” covered on the AP exam, by exploring a wide range of texts including literary works, historical documents, non-fiction works, current events articles and broadcasts, and feature films. Grammar lessons, as needed, help reinforce what they have studied in previous Spanish courses and allow them to refine their understanding of advanced structures. All students will develop a better command of the three modes of communication: interpretive, analytical, and presentational. Those who are in their 12th grade year will sit for the Advanced Placement exam in May.
World Languages

BLEND MANDARIN BEGINNER/ADVANCED BEGINNER (9th, 10th, 11th – 1 cr/yr)
This is a beginning course for students who are new to learning Mandarin and for those who need one more year to solidify their knowledge and usage of the fundamentals. In the course, students learn proper pronunciation and acquire basic skills such as writing in pin and recognizing Chinese characters. They will also build their vocabulary and explore Chinese culture. Connecting the language to culture through explorations of holidays and traditions adds depth to the program.

BLEND MANDARIN INTERMEDIATE/ADVANCED (9th, 10th, 11th, 12th – 1 cr/yr)
Prerequisite: Completion of a Portledge Mandarin course or permission of the instructor.
Students in this language and culture course must have already studied Mandarin for at least one year. It is expected that students can recognize and write Chinese characters and converse about basic, real-life topics. In this class, students will build on their existing knowledge, increasing their vocabulary and their cultural knowledge in addition to their overall fluency. The class is designed to allow each class member to advance at his/her own pace, while providing many opportunities to practice communicating in Mandarin.

MANDarin IB-SL/YEAR 1 (11th - 1 cr/yr) Pre-requisite: successful completion of an intermediate level Mandarin course, or permission of the department.
This course, for students who have reached the intermediate level, is part of the two year sequence in the IB program. Students enrolled in this course will prepare for exams at the Standard Level, taken in the second year of the two year sequence. Students will explore themes such as science and technology, world issues, and social relationships by reading articles, poetry, and prose, listening to and watching news programs and films, and doing research projects. The grammar concepts learned in previous courses are reviewed, and some advanced grammar topics are introduced. All students will engage in tasks used in IB assessments, and thereby improve their interpersonal, analytical, and presentational communication skills in Mandarin.

LANGUAGE CULTURE AND SOCIETY (9th, 10th, 11th, 12th ) 1 cr/yr
This interdisciplinary course, taught in English, offers students who are exempt from language study or who are studying English as a foreign language at Portledge the opportunity to reflect on the role of language in their own lives, in their society, and in the world. A wide array of sources (historical, linguistic, journalistic, literary, sociological, etc.) will be studied in order to gain a better appreciation of the languages that exist in the world today, their evolution, and their influence both on our lives and on our societies. Students will engage in projects and activities that stimulate their critical thinking and their creativity. **Students who are exempt from studying a second language should enroll in this course.**

ONLINE LEARNING
Students wishing to study another language online as an elective should speak with Dr. Atkins or Mrs. Wu.
COLLEGE COUNSELING (12th in the fall and 11th in the winter and spring.) A required non-credit course. This seminar is intended to provide students a structured weekly meeting which focuses on preparing for, managing and thoughtfully completing the college admissions process. All seniors are automatically enrolled in a section of this seminar during the 1st trimester. Beginning in January (mid-2nd trimester), all Juniors will be automatically enrolled in a similar seminar that will conclude before APs and finals.

HEALTH (10th) A required non-credit course. Pass/Fail
This tenth grade required class is designed to address common challenges high school students face as well as provide information about fundamental topics in order to be a successful Portledge student. It is Portledge’s belief that adolescents are able to make appropriate and healthy decisions when they are well educated and afforded the space for self-reflection when confronted with difficult situations and ethical dilemmas. Classes will be taught through a variety of formats around topics including, but not limited to: Mental Health, Nutrition, CPR Training, Substance Use, Sex and Gender, and Emotional Intelligence. This class enables students to critically think, converse, and reflect on these issues with their peers in a safe and engaging manner of discussions, lectures, activities, and media content which will set them up for a successful and healthy teenage and Portledge high school experience.

TAILS – TEACHER ASSISTANTS IN LOWER SCHOOL (10th, 11th, 12th) Not for credit. Spaces are limited. Upper School students enrolled in TAILS will be matched up with a class in the Lower School. Students will be expected to work directly with the Lower School class during one of their free periods each week. During a separate, scheduled period, once a week, all TAILS students will meet with Ms. Henry to reflect on experiences happening with their fieldwork. This class session will include, but not be limited to, discussions/presentations on the many dimensions of education (philosophies, learning abilities, global educational systems, etc.). Each student will present once to the class independently and once in a partner/group presentation on educational topics.

SENIOR SEMINAR (12th) A non-credit required course. Pass/Fail

YEARBOOK PRODUCTION (9th, 10th, 11th, 12th – a non-credit activity that is scheduled into the school day). This non-core offering involves students in every aspect of the production of Collage, the Portledge Yearbook. The book is produced through desktop publishing utilizing InDesign and Photoshop software. Students are involved in layout, planning, text and photography, advertising, meeting deadlines, and exhorting all members of the Class of 2019 to become active contributors to various aspects of the Yearbook. Yearbook staffers are required to be available to work on the book for a minimum of 3 periods per week. Enthusiasm, perseverance, organizational, and time-management skills are all prerequisites for this endeavor.
PHYSICAL EDUCATION (Required for 9th, 10th, 11th, 12th - not for credit)

9th Grade students note: No exemptions will be allowed for 9th grade. All 9th grade students must take PE or participate on a varsity team.

Each trimester each student must fulfill a state-mandated physical education requirement by participating in a varsity sport (or junior varsity if available), an in-school PE class, or by getting an exemption approved by the Athletic Director. The Portledge choices may include:

**Fall:**
- Girls Varsity - Soccer, Cross Country, Tennis, Intramural Golf
- Boys Varsity - Soccer, Cross Country, Intramural Golf
- In-school PE Class

**Winter:**
- Girls Varsity - Basketball, Hockey, Squash
- Boys Varsity - Basketball, Hockey, Squash
- In-school PE Class

**Spring:**
- Girls Varsity - Golf, Lacrosse, Softball
- Boys Varsity - Golf, Lacrosse, Baseball, Tennis
- Coed - Badminton
- In-school PE Class
Arts Scholar Course Requirements

MUSIC ARTS SCHOLAR COURSE REQUIREMENTS
• A Music Arts Scholar must demonstrate a commitment to choral or instrumental music by electing to participate in a performing ensemble during each trimester of his/her Upper School career.
• A Music Arts Scholar must elect at least one academic course in music. Courses include Music Survey/Music Theory 1, IB Music SL and HL, Digital Music and Recording. All courses are based on enrollment.
• A Music Arts Scholar must participate in at least one spring NYSSMA Solo Evaluation Festival at Level IV or higher during his/her Upper School career and earn a rating of “good” or better.
• A Music Arts Scholar’s cumulative average for all music courses taken must be above a B+.
• A Music Arts Scholar must attend, or perform in, the Musical Showcase (1st Wed. in April).
• Arts Scholar designation will be conferred by vote of the music faculty upon completion of the requirements in the senior year.

THEATRE ARTS SCHOLAR COURSE REQUIREMENTS
• A Theatre Arts Scholar must demonstrate a commitment to participating or performing in at least one Upper School play or musical each year of their Portledge career.
• A Theatre Arts Scholar must take at least two (2) academic courses in Theatre.
• The Theatre Arts scholar must be an active member of the Drama Club for at least two (2) years and be willing to participate in workshops, field trips and other theatrical activities on and off campus.
• A Theatre Arts Scholar must assist in at least one (1) Lower School or Middle School production during their Portledge career. Duties can include: Assistant Director, SM, ASM, crew, or other duties deemed necessary by the Director.
• A Theatre Arts Scholar’s cumulative average for all Theatre courses taken must be no lower than B+.

VISUAL ARTS SCHOLAR COURSE REQUIREMENTS
• A Visual Arts Scholar must complete a minimum of two elective credits in the Visual Arts.
• A Visual Arts Scholar’s cumulative average for all visual art courses, beginning with Art 9 and including all art electives, must be no lower than B+. The transcripts of students entering Portledge after 9th grade will be reviewed to determine whether previous coursework may be applied towards fulfilling the Arts Scholar requirements for visual arts.
• Beginning in ninth grade and continuing through eleventh grade, a Visual Arts Scholar candidate must participate in both the winter and spring art exhibitions each year. A candidate may fulfill this requirement if currently enrolled in an art elective during the date of the exhibition or alternatively, by submitting one or more works, created independently, to an art department member for approval and inclusion in each exhibition.
• During the spring of his or her senior year, a Visual Arts Scholar candidate must prepare a body of his/her own works, between 5-10 pieces, for inclusion in the annual graduating Visual Arts Scholar exhibition, traditionally held in April. Art teachers will guide the student in the selection of works. Students are expected to be an active participant in this process.
• Visual Arts Scholar candidates are required to attend this final exhibition and be available to answer questions about their works on exhibit.
• A Visual Arts Scholar must receive art department-approval for their senior project. Approval must be secured in advance of submitting the project proposal to the senior projects committee.
The STEAM Scholar Program is a planned, multi-year program of study in Science, Technology, Engineering, Arts and Math; it is open to all high school students, but we recommend that you begin the process by tenth grade. A student wishing to become a STEAM Scholar may be nominated by a member of the STEAM Review Board or complete the application process outlined below for Review Board consideration and approval.

Ms. Allen - Science Department Head  
Mr. Coleman – Upper School Science/Engineering Teacher  
Mr. Corby - Upper School Math Teacher  
Mr. Krause - Middle & Upper School Art Teacher  
Dr. Muratore – Upper School Science and Director of STEAM  
Mr. Nelson - Middle & Upper School Technology Teacher

Name ___________________ Current Grade _______ Advisor ____________________________

Date of Application ___________________________Year of Graduation ____________

Faculty Member who nominated this candidate ____________________________

**Self Nomination Process:** Students who choose to self nominate must submit a written statement expressing their interest in STEAM and their goals as a STEAM student at Portledge. Students should also note the applicable courses they have taken and plan to take throughout their Portledge career to meet the requirements. This essay should be one page maximum, double spaced, submitted with this application.

A student who is accepted into the program will be considered a STEAM Scholar Candidate and be identified as such throughout their upper school years. Students are assigned a STEAM Scholar Advisor (a Review Board member) to guide them through his or her progress in meeting the requirements of the STEAM Scholar program.
STEAM Scholar Application
(for 2021+ graduates)

STEAM Scholar Requirements:

1. A STEAM Scholar must complete a minimum of five credits from the courses included in the table below. These credits should be interdisciplinary, so a student is expected to take Science, Technology, Engineering, Art, and Math courses (5 Total).

   Students with scheduling problems may petition the department to substitute up to 1 credit with an approved alternative STEAM course. Lists will also be revised as new courses are introduced and current courses are modified or discontinued.

2. A STEAM Scholar’s cumulative average for all STEAM selected courses must be no lower than B. The transcripts of students entering Portledge after 10th grade who have taken equivalent STEAM approved courses will be reviewed to determine whether previous coursework may be applied towards fulfilling the STEAM Scholar requirements.

3. During the fall of his or her junior year a STEAM Scholar Candidate should have a full draft of his or her multimedia digital portfolio. During the spring of her or his senior year, a candidate must finalize a digital portfolio documenting his or her accomplishments in and outside of the classroom. The STEAM review board and advisor will guide the student in the documenting process and selection of items to include. Students are expected to be an active participant in this process and be documenting their progress throughout their Portledge career.

4. Graduating STEAM Scholar designation will be conferred by vote of the STEAM Review Board, upon successful completion of all stated requirements. The STEAM Scholar designation will be noted under the awards section of the candidate’s final transcript and be announced during graduation.
The candidate understands the requirements of the STEAM Scholar Program and that failure to complete all stated requirements could make him or her ineligible for receiving the award. Please sign this application and make a photocopy. Keep one and return a copy to a member of the STEAM Review Board.

Student Signature: ____________________________  Date: ________________

Student email: ________________________________  Cell Phone: ________________

Parent Signature: ______________________________  Date: ________________

Parent email: ________________________________  Home Phone: ________________

Courses Counted Toward STEAM Scholar Program

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<thead>
<tr>
<th>Science</th>
<th>Technology</th>
<th>Engineering</th>
<th>Art</th>
<th>Mathematics</th>
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<tbody>
<tr>
<td>AP Physics-C Mechanics</td>
<td>Intro to Programming</td>
<td>Engineering Design</td>
<td>3D Design Sculpture</td>
<td>IB Math Studies SL/HL</td>
</tr>
<tr>
<td>Physics-Electromagnetism &amp; Waves</td>
<td>Computer Science Principles</td>
<td>Robotics I</td>
<td>Architecture</td>
<td>Precalculus (R, AB, or BC)</td>
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<tr>
<td>Physics-Mechanics</td>
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<td>Robotics II/III</td>
<td>Film &amp; Broadcasting</td>
<td>Calculus (R, AB, or BC)</td>
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<tr>
<td>Science Research</td>
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<td>Nanotechnology</td>
<td>Photo/Media</td>
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<td>IB Physics</td>
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<td>Underwater Robotics</td>
<td>Studio Art</td>
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<td>Astrophysics</td>
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<td>IB ITGS</td>
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For STEAM Board Use only:

The applicant has completed the application process and received STEAM Review Board approval. ☐

STEAM Scholar Advisor: ____________________________

Date of Acceptance: ________________  Board Member Signature: ____________________________

Completed Digital Portfolio: ☐

Date of Completion: ________________  Board Member Signature: ____________________________