Upper School Program of Studies

2021-2022

UPPER SCHOOL PROGRAM OF STUDIES

Table of Contents

01. Preface
02. Introduction
    a. Diploma Requirements (Core Curriculum)
    b. Daily Schedule & Semester System
    c. Scheduling & Course Changes
    d. Grading Policy
    e. Advanced Placement Program
    f. III Form Workshop
    g. 9th Grade Seminar
    h. 10th Grade Tutorial
    i. May Term
    j. Global Online Academy
    k. High School Courses Taken in Middle School
    l. Comprehensive Exams
    m. Independent Study
    n. Awards
    o. Study Abroad
    p. College Counseling
    q. Library
03. Course Offerings by Department
    a. Visual Art
    b. Music
    c. Theatre and Dance
    d. Classical Languages
    e. Computer Science & Engineering
    f. English
    g. History
    h. Mathematics
    i. World Languages
    j. Religion
    k. Science
04. III Form Health and Seminar Curriculum
05. Community Service
06. Athletics
07. Homework Policy

PREFACE

Some of the words and terms used in this booklet or in the course selection and scheduling process may not be familiar to all students and parents. The following explanations may be helpful.

Advanced Placement (AP) Courses

Advanced Placement, or AP, refers to college-level courses taught according to syllabi approved by The College Board Advanced Placement Program and/or to courses designed to prepare students for College Board AP Tests. Success in AP courses can be a factor in college admission. Successful performance on AP tests (a score of 3, 4, or 5 on a five-point scale) may lead to college credit and/or advanced standing in college. For further information on policies for granting AP credit, please consult specific colleges and universities. AP courses receive additional weight in the Grade Point Average (GPA) for rising 10th, 11th and 12th grade students. For rising 9th grade students (Class of 2025), this GPA weighting will be dropped.

Conflict

A scheduling conflict occurs when two or more selected courses are offered at, or can only be scheduled at, the same time.

Course Request

During the scheduling process, students request particular courses. They do not enroll in these courses until the courses are assigned to the actual schedule; they are simply requests. On occasion, a course request cannot be fulfilled because there is a conflict with another course request or because the course has been cancelled, usually due to staff availability or low enrollment.

Credits

One credit is earned upon successful completion (passing grade) of a course that meets every day assigned in the rotation for a full academic year. A half-credit is earned upon successful completion (passing grade) of a course that meets every assigned day in the rotation for a semester or a course that meets only on select days during the rotation over the course of a full year.

Elective Courses

Individual elective courses are, by definition, not required. However, students ultimately choose to take some electives in order to satisfy graduation requirements.

Extracurricular Activities

Extracurricular refers to student clubs and activities that meet outside of the regular school day and which are not part of specific courses within the traditional school curriculum.

Full Course Load

Episcopal expects students to pursue six courses during each semester in Upper School. A student may enroll in a maximum of seven courses. A junior or senior enrolled in three or more honors or Advanced

Placement courses may choose a reduced load of five courses with permission of their advisor and Form Dean.

Grade Point Average (GPA)
For rising 10th, 11th, and 12th-grade students, the Grade Point Average is computed on a weighted scale. The weighted GPA is reported on the student's transcript. GPA is computed annually for all students. Honors and AP courses are given greater weight in the GPA calculation. For rising 9th grade students, and the classes that follow, no GPA weighting will be given to any US course.

Honors Courses
Honors courses are those which are taught at a high school level but which, like AP courses, provide the greatest challenge and the best preparation for admission to, and success at, highly selective colleges. For rising 10th, 11th, and 12th grade students, honors level courses receive additional weight when the Grade Point Average (GPA) is calculated. For rising 9th grade students, however, and the classes that follow, no GPA weighting will be given to any US course.

Interscholastic
Interscholastic refers to athletic and scholastic activities that involve competitive events with other secondary schools.

Prerequisite
A prerequisite is a course that a student must complete in order to qualify for entry into another course. Before students can take Algebra 2, for example, they must complete Geometry. Thus, Geometry is a prerequisite for Algebra 2. A grade may also be used as a prerequisite.

Required Courses
Required courses are specific courses that must be taken by all students to satisfy graduation requirements. Examples of required courses include, but are not limited to, Biology 1, American Literature, and United States History.

Semester
A semester is half of a school year and includes two of the four marking periods. Semester 1 begins in September and ends in late December. Semester 2 begins in January and ends in June.

Study Hall
All III Form students are required to attend study halls during all of their free periods. All IV From students must attend one study hall if they have two free blocks. The Form Dean may require any student who is on the fortnight list or in academic distress/on academic probation to attend study hall. (Failure to do so may be considered a class cut, which warrants a Saturday detention.).

INTRODUCTION

The cornerstone of an Episcopal Academy education is the academic program. The school has a long tradition of providing a rigorous and challenging curriculum designed to develop the intellectual powers of our students and help them succeed in life. The academic program is intellectually challenging; it requires integrity, a strong work ethic, motivation, and a willingness to seek help when needed. These are characteristics students need to be successful in the Upper School at Episcopal. The Upper School experience at Episcopal employs a liberal arts curriculum rooted in classical education. As with all of the units at Episcopal, there is a particular focus on educating the Mind, Body, and Spirit of each student in the Upper School. However, added emphasis is also placed on preparing students for college and post-graduate study and in teaching them to take personal responsibility for their own education.

DIPLOMA REQUIREMENTS (CORE CURRICULUM)

Students must successfully complete 19.0 credits while in Upper School as follows:

- All US students must be enrolled and attend classes for four full academic years. Students who enroll after the conclusion of their 9th or 10th grade year, must be enrolled for three full years and two full years, respectively.

- 4.0 credits of English, including Introduction to Literature, World Literature, American Literature, and British Literature;

- 3.0 credits of Mathematics, including Algebra 2 and Geometry, or the approved departmental equivalent with courses beyond this level;

- 3.0 credits (or six semesters) of science:
  - Three of the six semesters must include: Biology 1, Chemistry 1 and Physics 1. These courses must also be completed by the end of junior year.
  - Environmental Science 1 (ES 1) can fulfill one semester. (Though ES 1 is not mandatory for graduation, it is a prerequisite for AP Environmental Science.)

- 3.0 credits of History, including one year of World History and one year of United States History; Pre-Modern History is a prerequisite for all AP History courses;

- 2.0 credits of the same Classical or World Language taken while in Upper School;

- 1.0 credit of Religion;

- 1.0 credit of Art distributed across at least two areas (music, theater/dance, and visual art) OR 2.0 credits of Art concentrated in one area;

- 0.5 credit in Computer Science for the Class of 2023 and beyond (2022 exempt)

- Completion of a May Term course for each year of enrollment in Upper School (waived for May 2020 and May 2021);

- Completion of the III Form Outward Bound course. (This requirement is waived for any student who enters EA after 9th grade or those that are medically excused by Outward Bound or for any class that is unable to attend due to COVID cancellations.)

- Three (3) seasons of athletics in the 9th, 10th, and 11th grades and at least two (2) seasons during 12th. (Ninth and tenth graders must participate in a team sport two of three seasons in a school year, while eleventh and twelfth graders must participate in at least one. During the "off" season, students must complete a specific fitness program.)

Seniors must pass each course taken for a diploma to be awarded. LIkewise, all non-academic requirements and obligations must be satisfied before the diploma is awarded. Successful completion of four May Term courses is a requirement to earn an Episcopal diploma (however, waivers of this requirement have been given for May 2020 and 2021 sessions), as is the 9th grade Outward Bound course (a waiver for any class unable to attend due to COVID cancellations). If a student is unable to attend Outward Bound due to a medical exemption, the requirement will be waived. The requirement will also be waived for any student who enters Episcopal after 9th grade. If a student chooses not to attend Outward Bound, the student must complete a comparable course at the family's expense, approved beforehand by the Form Dean and Head of the Upper School, in order to receive a diploma.

The faculty, in consultation with the Form Deans and Head of Upper School, may waive any of the above requirements. The Head of Upper School and Form Deans, in consultation with the Academic Dean and appropriate department chairs, may approve alternative means of satisfying any of the above requirements.

DAILY SCHEDULE & SEMESTER SYSTEM

The Upper School operates on an 8-day rotating schedule. Days are numbered 1 through 8 and blocks are lettered A through H. The school year consists of two semesters and a two-week, interdisciplinary, experiential May Term.

SCHEDULING & COURSE CHANGES

The scheduling process generally begins in March for the next school year. The normal course load at Episcopal Academy is six courses per semester. A student may enroll in a maximum of seven courses. A junior or senior enrolled in three or more honors or Advanced Placement courses may choose a reduced load of five courses, with permission of his advisor, college counselor, and Form Dean, in consultation with the Head of Upper School.

Many courses are offered at more than one instructional level in order to accommodate individual differences with respect to academic preparation, interests, and other student needs. Students should select the instructional level within each discipline that affords the greatest opportunity for both intellectual challenge and academic success. It is important to review course content, prerequisites, credits, and instructional levels as indicated in this Program of Studies in order to make the most appropriate course selections.

Scheduling Process

Students must be scheduled for a minimum of six class periods, or the credit equivalent, per day. Unless given expressed permission, this requirement applies to both semesters.

Course Selection

The course selection process is a complex experience in decision making. Students are encouraged to confer with their parents, advisors, college counselors, and faculty and to take full advantage of the many excellent opportunities available within the high school academic program. Courses that are under-subscribed may not be offered and courses with low selection numbers may be cancelled.

Procedure for Selecting a Course of Study

After students choose their courses and meet with their advisor, their selections are prepared for data processing. Students should be sure to verify their selections for accuracy. If scheduling conflicts occur, students are notified and asked to participate in resolving the conflict. Students are urged to consider the following suggestions as they select an individualized course of study:

- Identify both short-range and long-range goals.
- Consider the total program; anticipate course selections for future grade levels.
- Review previous courses and grades.
- Consult with parents, teachers, deans, college counselors, and advisors.
- Read this Program of Studies booklet carefully.
- Review requirements for graduation.
- Select courses with the appropriate instructional level.
- Enter all final choices in Veracross.
- Students should verify their selections. Please note that schedule conflicts may occur, and students may be asked to submit different course requests.

Schedule Change Guidelines: Adding, Dropping, and Withdrawing from a Course

Course registration should represent firm choices on the part of the student. Changes are not encouraged. Students should understand that a change in their schedule could produce changes, minor or major, in their schedules.

Students should contact their advisor or dean if they wish to add a course. Any changes made after the spring scheduling process are on a space-available basis only. Students may add courses until the end of the drop/add period in September. With the approval of the Form Dean, a teacher, and/or an advisor, a

student may drop a course if he or she continues to meet the course load minimum. The following parameters apply:

- Students enrolled in a yearlong course may drop the course without penalty until the end of the drop/add period. After that point the course will be listed on the student's official transcript with a grade of W indicating withdrawal.

- Students enrolled in a semester course may drop the course without penalty until the end of the drop/add period for each respective semester. After that point the course will be listed on the student's official transcript with a grade of W indicating withdrawal.

Moving From AP/Honors to non-AP/Honors Sections

For 9th, 10th, and 11th grade students, a move down from an AP or honors course to a non-AP or honors level course can occur at any time before Spring Break. No moves will be permitted after that date.

For 12th grade students, a move down from an AP or honors course to a non-AP or honors course can occur at any time before Christmas Break. No moves will be permitted after the break. In consultation with the Head of Upper School, only the Form Dean may approve a request for such a course change even prior to the drop deadline. Each student must also check with a college counselor before proceeding with the change.

In the case of any approved drop from AP or honors before October 31st, the student will not carry with them any grade but will start from scratch in the new course. In the case of any approved drop from AP or honors after October 31st, the student will take the grade from the AP or honors section with them after a 7% increase in the overall average (for example a 74% overall average in an AP/honors section would become an 81% once the drop has been completed).

AP Course Registration Deadline

Due to the amount of summer work required for each AP course, no student will be permitted to enroll in an AP course for the upcoming academic year after August 1st unless they receive permission from the respective department chair.

GRADING POLICY

Departmental grading standards for semester work are determined by a procedure that fits that particular department's needs. Each department will inform students of their grading standards and policies.

Grading System, Grading Scale, Grade Point Average

The weighted GPA includes only leveled courses valued at 0.5 credits or greater. The weighted GPA is cumulative and gives no advantage to the student with more courses. Appropriate weight is assigned to grades earned in AP, Honors, and unleveled courses. The unweighted GPA is computed on a traditional 4.0 system in which grades earned are valued as follows:

Regular		**Honors/AP (Only applies to Class of 2022, 2023, and 2024)**
A+	4.3 (value)	4.6 (weight)
A	4.0	4.3
A-	3.7	4.0
B+	3.3	3.6
B	3.0	3.3
B-	2.7	3.0
C+	2.3	2.6
C	2.0	2.3
C-	1.7	2.0
D+	1.3	1.6
D	1.0	1.3
D-	0.7	1.0
F	0	0

Only those courses taken at EA are included in the weighted GPA.

GRADE CALCULATIONS

Semester courses

80% for the semester work plus 20% for the semester exam or culminating assessment.

Full-Year Courses

Semester Grades
Semester one: 100% based on the semester work.
Semester two: 100% based on the semester work.
Final Year Grade: 40% for semester one plus 40% for semester two plus 20% for the final exam or other cumulative assessment.

Full-Year Lab Sciences

Semester Grades
Semester one: 100% for the semester work.
Semester two: 80% for the semester work plus 20% for the final exam or culminating assessment.

Final Year Grade: 50% for semester one plus 50% for semester two.

LETTER GRADES

Letter grades appear on reports and the school transcript.

A+	B+	C+	D+
A	B	C	D
A-	B-	C-	D-

F (Failing/Failure)

P (Passing/Pass)
W (Withdrawal)

A final grade of D, while earning credit for the course, may suggest that the student is not ready to proceed to the next course in a sequence. Grades below 60 (i.e., F) reflect unsatisfactory achievement and therefore are not credit worthy.

EFFORT GRADES

E	Exceptional
G	Good
S	Satisfactory
N	Needs Improvement
U	Unsatisfactory

E	Work habits and effort exceed what is expected. Is an active learner, always submits homework, and adds to the learning experience of the class.
G	Completes all assignments and gives his or her best effort at all times.
S	Work habits and effort meet the requirements of the course. Student completes work and does what is expected.
N	Effort varies from sufficient to insufficient, with uneven work habits.
U	Effort is poor overall.

CLASS RANK

Episcopal Academy does not provide a class rank.

ADVANCED PLACEMENT PROGRAM

Enrollment in AP and Honors courses requires the approval of the academic department. This curriculum guide provides prerequisites for each course. The faculty may recommend that a student drop down a course level if it becomes clear that the placement is inappropriate.

Carefully developed in cooperation with The College Board, AP courses are subject to an auditing process to ensure that curricular requirements are satisfied. This process has been successfully completed for all Advanced Placement courses offered at EA. Students enrolled in an AP course are required to sit for the corresponding AP examination in May. AP exams are scheduled nationally, generally occurring during the first two weeks of May for all enrolled students.

III FORM WORKSHOP

Eligible III Form students receive instruction in the areas of organization and study skills. Instruction in this for-credit course is intended to supplement the regular course offerings. In the organization and study skills strands, students are taught explicit strategies to improve their skills in the areas of time management and note taking. They learn to create a study plan, prepare for tests, and plan long-term projects. Students in III Form Workshop receive a full credit (if taken all year) and the course is assessed on a letter-grade scale. The grade is calculated into a student's GPA.

9th GRADE SEMINAR

The 9th Seminar course, a mandatory course taken by all 9th grade students. The course will run during an open block and students will meet twice during the eight-day rotation. Students will explore the following topics with a faculty facilitator: effective communication skills, equity and inclusion development, time management and organizational skills, academic integrity, a variety of mental health topics, and social media. The course will be given a .5 credit on a student's transcript and will be assessed using a pass/fail rubric. The course is not calculated into a student's GPA.

10th GRADE TUTORIAL

Eligible IV and V Form students receive follow-up instruction in the areas of organization and study skills. Instruction in this course is intended to supplement the regular course offerings. This course does not appear on a student's transcript and is run during a common study hall.

MAY TERM

May Term is an interdisciplinary program that allows EA's Upper School students to experience engaging, rigorous courses that enable students to study topics in depth and often in the field. During May Term's two-week span, each student enrolls in only one course and learns a subject area through intensive, experiential on- and off-campus study. This may include day trips, guest speakers, hands-on work and international travel.

GLOBAL ONLINE ACADEMY

Global Online Academy (GOA) is a not-for-profit consortium of leading independent schools from around the world. GOA offers EA students the opportunity to learn alongside peers from around the world. GOA courses allow EA to expand what we offer, and help students test their passions in ways typically unavailable on a single campus. The mission of Global Online Academy is to replicate in online classrooms the intellectually rigorous programs and excellent teaching that are hallmarks of its member schools; to foster new and effective ways, through best practices in online education, for students to learn; and to promote students' global awareness and understanding by creating truly diverse, worldwide, online schoolroom communities.

Students take GOA courses for credit at EA, but grades earned in GOA classes are not included in a student's GPA. GOA course workload and course intensity is equivalent to courses taken on our campus.

GOA courses cannot be used to fulfill EA graduation requirements, however. They can only be taken as elective courses. Unlike many online courses, students are not passive receptors of pre-recorded lectures from their teachers. Instead, students collaborate on challenging and interesting projects with students from around the world. They are also expected to manage their workload and time effectively to support the asynchronous nature of the courses. GOA maintains excellence through rigorous teacher training, building on the best practices and values of leading independent schools and by ensuring small class sizes that foster strong teacher-student relationships and student-to-student collaboration and interaction.

HIGH SCHOOL COURSES TAKEN IN MIDDLE SCHOOL

Credits earned toward graduation begin with September of III Form. Grade point average (GPA) is cumulative from III Form through VI Form. No credit will be awarded for classes taken before the start of III form and the grade earned will have no impact on the student's Upper School GPA.

COMPREHENSIVE EXAMS

Final exams for semester courses are held in December for first semester courses. Final exams for year-long courses and second-semester courses are held in May or June. All students are required to take exams. During the final examination period in May or June, students are required to be on campus only when taking exams. The dress code remains in effect during exams. A student is not expected to take more than two examinations in the same day. Arrangements will be made for students who need to reschedule an exam due to a conflict should the student have more than two exams scheduled for the same day. The student is responsible for informing the Form Dean of the conflict.

INDEPENDENT STUDY

Students who wish to pursue focused study within an academic discipline may wish to design an independent study with a teacher. Students interested in participating in this program should contact a Form Dean, teacher, department chair, or advisor to ensure an appropriate faculty member is assigned to supervise the work. The sponsoring faculty member, the appropriate department chairperson, the Academic Dean, and the Head of Upper School must approve the independent study proposal and whether the course receives an honors designation. Independent Study credit is not available for any course traditionally offered as part of the academic program. Independent Study is also subject to staff availability and other resources. Enrollment in approved independent study courses will be governed by all of the same policies as standard courses (grading system, drop/add period, course withdrawal, GPA calculation, attendance expectation, transcripts, etc.).

AWARDS

Prizes

The Upper School prizes are awarded to students annually at Commencement, the May Awards Assembly, the three athletic assemblies, and the fall Honors Chapel Service.

Cum Laude Society
The Cum Laude Society, founded in 1906 and established at The Episcopal Academy Chapter in 1952, is an organization that recognizes superior scholarship, promotes justice, and upholds honor. The society consists of 368 chapters located in the United States, Canada, England, France, Spain, Puerto Rico, and Republic of the Philippines. A school may induct no more than 20 percent of its senior class, commencing with up to 10 percent of the class identified for membership at the conclusion of the junior year. Induction takes place during the Fall Honors Chapel Service. Additional seniors may be inducted at the final chapel service following spring semester examinations. Selection for the Cum Laude Society is based on the student's cumulative GPA beginning with the sophomore year at EA, with appropriate consideration given to the rigor of the student's academic schedule.

STUDY ABROAD
For course planning purposes, students interested in studying abroad should discuss options with his/her Form Dean in the school year prior to the year in which they plan to travel. It is the student's responsibility to provide the Episcopal Academy with verified grades and credits upon returning to campus. High school level credits earned at a recognized institution will be treated as transfer credits. Grades earned while traveling abroad will not be factored into the student's grade point average (GPA).

COLLEGE COUNSELING
Recognized for its exceptional college counseling, The Episcopal Academy's college counseling team believes that the college search allows students to celebrate their successes, discern their preferences, and set goals. Students choose their own paths, paths that allow them to continue their academic and personal growth. Communication is key to a successful search. While the focus is on the students, there is ongoing communication between students, parents and the college counselors.

With more than five decades of experience in highly selective university admission, the four full- time college counselors offer rich, informed perspectives on the college search process, which starts with small group meetings in Forms III and IV and evolves into a one-to-one student/parent/counselor partnership junior and senior years. Although the most intensive college work happens in those last two years, college counselors are available as resources for students and their families at all grades of the Upper School.

- How can the college counselors help you?
    - College exploration and research
    - Application preparation
    - Essay drafting and revision (in cooperation with the English department)
    - Special talent recruitment (in cooperation with the coaching staff and arts departments)
    - High school course selection and planning (in cooperation with the faculty and Form Deans)

- Creating a standardized testing schedule
- Summer and extracurricular involvement

LIBRARY

The Roger Annenberg Memorial Library-Learning Center

The mission of The Episcopal Academy Libraries is to ensure that our students, faculty, staff, and families are efficient and effective users of ideas and information resources, and value literature and reading for pleasure to gain new perspectives and to stimulate the imagination. We achieve this mission by working collaboratively with academic departments to embed information literacy skills and curriculum that prepares students to be informed critical thinkers, evaluators of scholarship and data, and ethical users and creators of information.

Library Resources

To access the Upper School Library webpage from the EA home page (www.episcopalacademy.org):

- Using the Academics drop-down menu in the top bar, click on Libraries
- Under the heading "Explore our Libraries", select Upper School Annenberg Library.

In addition to the EA homepage, there is a direct link to the Library website in Veracross and Canvas.

Library Operation & Circulation

The library is open from 7:30 A.M. until 6:00 P.M., Monday through Friday. The library faculty is always available and happy to help students with information and research needs.

COURSE OFFERINGS BY DEPARTMENT

- Visual Art -

Mr. David Sigel, Chair
Mr. John Binstock
Ms. Hilary Hutchison
Ms. Ellen Erikson

Through Craftsmanship, self-discovery, and studio-based environments, students are encouraged, motivated and shaped by practicing artists/educators. The students of the Episcopal Academy are challenged to own and develop the ideas and skills learned to create a visual language, individual vision, art appreciation, and unique works of art.

Foundations of Art.
One semester, one-half credit.
This prerequisite course offers an introduction and an approach to establishing a strong foundation within the vast field of visual arts. Each session of the Foundations course requires students to rotate in three-week intervals among the visual arts faculty and five studio disciplines: Drawing, Painting, Photography, 3-D Design, and Woodworking. This brief, yet saturated, creative experience is set up to promote studio skills, art appreciation, critical thinking, and exposure to a wide variety of materials and techniques developed in the upper level studio courses.

2-D Design I.
One semester, one-half credit.
2-Design I is a beginning course which builds on the ideas, concepts, and skills introduced during the Foundations of Art course. Students learn about elements of design and composition through observational rendering, art history, museum visits, and practice. Materials range from graphite, to colored pencil, ink wash, watercolor and a variety of mixed media. Students are assessed based on the completion of well-crafted assignments, class participation, and individual growth demonstrated in a portfolio critic format.

2-D Design II.
One semester, one-half credit.
This intermediate digital and multimedia studio-based course provides a more advanced level of study in the field of developing a graphic solution. Students are challenged to test their skills with the development of well-crafted projects, while exploring an individual creative solution and body of work. Much focus is given to the observational subject. Materials include traditional and computer-based platforms. Students are assessed based on the completion of each assignment, class participation, and individual growth demonstrated in a portfolio critic format. 2-D Design I is a pre-requisite.

Honors 2-D Design III.
Full year, one credit.

The Honors 2-D Design III course is open to students who have achieved high marks in prerequisite visual art courses and demonstrated true dedication to their study. They understand the time commitment beyond scheduled classes and/or have submitted a portfolio for review by the Visual Arts Department. The course work consists of observation-based structured assignments, which test and combine complex methods, theories, and advanced levels of skills through a variety of media and an emphasis on development of an individual's creative responses.

Honors 2-D Design IV.
Full year, one credit.
This advanced course focuses on the development of a unique and creative individual solution to assignments, the construction of self-directed explorations, and the development of a portfolio. The body of work is achieved while still holding a student to set deadlines, critiques, class schedules, assignments, and evaluations. The final critique and assessment is based on the culminating Honors Art Exhibition in the spring. Students enrolled in this second year of Honors 2-D Design receive credit for advancement of skills, complex studio assignments, and development of a portfolio for A.P. and college submission.

Honors 2-D Design V.
Full Year; One Credit
This advanced senior course focuses on the completion of an individual's visual arts portfolio. During the first quarter, a PAFA faculty member will critique already-produced pieces, and discuss additional work that should be completed for a strong submittal body of work. The finished portfolio will demonstrate skill and creative voice while exhibiting both wide breadth and concentration as outlined through college standards. The second quarter will be dedicated to creating an online presence through the development of a website and artist statement, and the third quarter will allow students the opportunity to develop, curate, and invite external artists to our gallery. During the final term, students will lead the planning, development, and marketing for their senior exhibition in the Gallery.

3-D Design I; Sculpture.
One Semester, one-half credit.
The 3-D Design I course introduces students to the practice of three-dimensional object making. The projects assigned give students the opportunity to work in a variety of materials in order to develop the skills, techniques, and language necessary for successful object making. This is a studio-based course. Subjects may include figure and animal sources, natural objects, architecture, utilitarian models, and design. Students are introduced to clay, plaster, wire, cardboard, found objects, and wood, in order to create finished projects that will explore the design and sculpture concepts of assemblage and construction, modeling and casting, carving, and installation. Contemporary art and art history are introduced and discussed as resources for class assignments. Students are evaluated on effort, projects, progress, and class participation.

3-D Design II.
One Semester, one-half credit.

The 3-D Design II course is open to students with an intermediate interest in 3-D object making. This course provides students with a more in-depth study of sculpture and design materials, methods, and techniques. Students are encouraged to explore complex forms and concepts within their work in order to develop personal voice.

Honors 3-D Design III.
Full year, one credit.
The Honors 3-D Design course is a high-level studio
course for students who have demonstrated a sophisticated understanding of three-dimensional object making. This is a hands-on course, with students working daily on studio-based projects. The projects assigned give students an opportunity to work with a variety of materials in order to develop the skills and techniques necessary for successful sculpture, design, individual voice, and portfolio preparation.

Honors 3-D Design IV.
Full year, one credit.
Students enrolled in this second year of Honors 3-D Design receive credit for advancement of skills, complex studio assignments, and development of a portfolio.

Honors 3-D Design V.
Full Year; one credit
This advanced senior course focuses on the completion of an individual's visual arts portfolio. During the first quarter, a PAFA faculty member will critique already-produced pieces, and discuss additional work that should be completed for a strong submittal body of work. The finished portfolio will demonstrate skill and creative voice while exhibiting both wide breadth and concentration as outlined through college standards. The second quarter will be dedicated to creating an online presence through the development of a website and artist statement, and the third quarter will allow students the opportunity to develop, curate, and invite external artists to our gallery. During the final term, students will lead the planning, development, and marketing for their senior exhibition in the Gallery.

Ceramics.
One semester, one-half credit.
Ceramics introduces students to hand-built forms and wheel thrown ceramic techniques. Students gain an understanding of the creative possibilities involved with clay as a medium. Students explore hand-built methods such as coil building and slab construction. The pottery wheel is introduced. Students learn a variety of glazing techniques. Students are encouraged to explore functional object making, innovative approaches, and personal vision. Students are taught the importance of finish and craftsmanship. Historical and contemporary art examples are shown and discussed as resources for assignments. Students will be graded on their effort, projects, progress, and class participation.

Ceramics II.
One semester, one-half credit.

Ceramics II is an intermediate level studio art course. Students will have the opportunity to work with hand-built forms and wheel thrown ceramic techniques. Students will continue to develop, practice, and refine pottery-making skills associated with clay as a medium. Students will further explore the creative possibilities of ceramics using both contemporary and historical examples. Students will be encouraged to develop personal voice, aesthetic, and design. Students will be graded on their effort, projects, progress, and class participation.

Photography I.
One semester, one-half credit.
Students discover and explore the fundamentals of digital photography. The primary focus is on manipulating camera and lens settings to achieve a desired effect in the final images. The secondary focus is on basic digital image editing with applications Adobe Lightroom Classic and Adobe Photoshop. Students learn about elements of composition, so they have the tools to intentionally compose their photographs of what they are responding to in the world around them. Throughout the course, students will be introduced to a wide variety of both historic and contemporary photographic artists. Through fieldwork and lab time, each student works towards proficiency in image capture, processing and printing, as they begin to develop a personal photographic style. Students are evaluated on completion of assignments, class participation, and individual growth.

Photography II.
One semester, one-half credit.
This course starts by focusing on the traditional and historical aspects of photography. Students will learn about the invention of photography and original photographic processes. Students will then dive into analog film photography through the use of “old school” cameras, film processing and learning the basics of darkroom printing. Throughout the course, students will be introduced to a wide variety of both historic and contemporary photographic artists. At the end of this course, students will be tasked with creating a cohesive body of work to showcase their continually developing photographic style and artistic voice. Students will be able to choose to remain in the world of black and white film photography or transition back to digital for this personal expression project. Students are evaluated on completion of assignments, class participation, and individual growth.

Honors Photography III.
Full year, one credit.
The primary focus of this course will be to more fully develop the student’s artistic style and voice. In order to assist in achieving this, students will learn about alternative photographic processes, mixed media, contemporary photographic trends and continue to hone their digital editing skills. Students will learn about contemporary photographic artists through both teacher’s presentations, personal research and visiting artist lectures. Students will also take a deep dive into portraiture - learning from and emulating portrait “masters” and learning about lighting (available and studio/manipulated). Students will work on personal projects throughout the year and develop a strong portfolio of work. Finally, students will become familiar with practical aspects of digital photography such as file management, file

formats and image sizing. Students are evaluated on completion of assignments, class participation, and individual growth.

Honors Advanced Photography IV.
Full year, one credit.
This course is designed for students who have successfully completed the introductory photography classes and wish to continue to develop more advanced skills. Students enrolled in the second-year program of study receive credit for more complex studio assignments and development of a portfolio.

Woodworking Design & Fabrication I.
One semester, one-half credit.
Design & Fabrication I is an intermediate woodworking course offered in the Fall which builds on the ideas, concepts, and skills introduced during the Foundations of Art course. Students learn the safe and proper use of hand tools and power tools through hands-on projects. Through safety, practice, and application, students will become confident in their ability to creatively solve problems and produce well crafted, finished woodworking pieces. Materials range from construction grade dimensional lumber to rough sawn hardwoods.

Woodworking Design & Fabrication II.
One semester, one-half credit.
Design & Fabrication II is an intermediate woodworking course offered in the Spring which builds on the ideas, concepts, and skills introduced in Design & Fabrication I. Students learn how to read and understand basic woodworking instructions while selecting the appropriate tools for the tasks. Students will develop creativity, personal pride in their work, individual problem solving, and the appreciation of fine craftsmanship. Students are assessed based on overall craftsmanship, effective use of class time, and problem solving ability.

Honors Woodworking Design & Fabrication III.
Full year, one credit.
This is an advanced woodworking course open to students who completed the prerequisite Design & Fabrication courses and demonstrate the desire to create well-crafted woodworking pieces. This course is focused on developing a student's individual confidence and problem solving through the creation of individual woodworking projects. The course work consists of teacher assigned projects and student-driven projects using all available hand tools and power tools. Final pieces will be displayed in the end-of-year art exhibition.

Honors Woodworking Design & Fabrication IV.
Full year, one credit.
This is an advanced woodworking course open to students who completed Design & Fabrication III. This course is focused on creating well-crafted woodworking pieces while furthering to develop a student's depth of knowledge, independence, and problem solving ability. The course work consists of mastering basic woodworking techniques and principles while developing the skills and understanding of advanced

Japanese joinery. During the first semester, students will complete a series of assigned group projects, individual projects, and the first phase of their capstone project. The second semester begins with various assigned projects while focusing on the fabrication and completion of each student's capstone project. All finished projects will be displayed at the end-of-year art exhibition.

- Music -

Mr. James Erwin, Chair
Mr. Ryan Dankanich
Mr. James Finegan

The Music Department's comprehensive curriculum is structured in a way to prepare all students for a lifetime of participation in the musical arts as performers and/or appreciative thoughtful audience members. The music program seeks to not only develop skill in music, but to also foster individual growth and potential through support, inclusion, and joy.

The Music Department's Upper School course offerings fall into two categories:

CLASS MUSIC
- *Music Technology*
- *US Guitar*
- *Advanced Placement Music Theory*

APPLIED MUSIC
- *Concert Choir*
- *Vocal Ensemble*
- *Concert Band*
- *Jazz Ensemble*
- *Orchestra*
- *Chamber Ensemble*

CLASS MUSIC

Music Technology.
One semester, one-half credit.
In this course, students implement various computer technologies into musical compositions. Through activities and projects, students explore introduction to MIDI (Musical Instrument Digital Interface), digital recording and editing, beginning music sequencing techniques, the use of notational software, use of the internet, composition, arrangement, and basic piano skills.

US Guitar.
One semester, one-half credit.
This course serves as an introduction to guitar playing. Each day, students will be led through a routine of tuning their guitars, warming-up, group instruction, and independent group practicing and playing. Students will also learn basic maintenance of the instrument and how to change strings, clean the guitar's surface, clean strings, and maintain tuning. Focus points will be strumming and rhythms, reading chord progressions, mastering blues and pentatonic scales, improvising, and beginning songwriting.

Advanced Placement Music Theory.
Full year, one credit.
AP Music Theory is a college-level course for highly motivated students with a serious interest in music. Students will complete coursework equivalent to that of a first-year college course in music theory. Successful completion of a beginning music theory course, or years of instrumental private study is a prerequisite for enrollment. Class periods will consist of lecture and written work as well as sight-singing, ear-training, and melodic and harmonic dictation practice. Students are expected to utilize the music lab to practice skills and concepts both in and outside of class. This course is designed to prepare students for the AP Music Theory Exam given in May.

APPLIED MUSIC

Concert Choir.
Full year, one-half credit.
Concert Choir serves as the core choral group in Upper School. Enrollment in the Concert Choir is a prerequisite for participation in the Vocal Ensemble. The Concert Choir serves as the primary medium for developing a balanced and effective program in choral music. This group performs repertoire from a wide variety of periods and cultures. Skills focused on throughout the year include: vocal development, music literacy, a cappella singing, singing texts in foreign languages, performance of standard choral repertoire, and building choral discipline. The Concert Choir serves as the department's curricular choral ensemble. Thus, students receive letter grades, effort grades, and written comments for their achievement in performances and in written assessments. The Concert Choir, along with other performing groups, presents three major concerts yearly, offers anthems at school chapel services, performs for community service events throughout the year, and gives many off campus performances, including an annual touring performance trip.

Vocal Ensemble.
Full year, one-half credit.
The Vocal Ensemble is Episcopal Academy's select a cappella group. Membership in the Concert Choir is a prerequisite to membership in the Vocal Ensemble. Auditions occur in the spring with final auditions occurring in the fall. The Vocal Ensemble, along with other performing groups, presents three major

concerts yearly, offers anthems at school chapel services, performs for community service events throughout the year, serves in a leadership role for chapel services, participates in the Inter A Cappella concert with area independent schools, and presents in many off-campus performances, including an annual touring performance trip. Students receive letter grades, effort grades, and written comments for their achievement of performance and written assessment.

Concert Band.
Full year, one-half credit.
The Concert Band serves as the core instrumental ensemble in the Upper School for wind and percussion players. Enrollment in the Concert Band is a prerequisite for participation in the Jazz Ensemble, with the exception of those students who, by approval of the music department, meet an alternative music prerequisite. The Concert Band serves as the primary medium for developing a balanced and effective program in instrumental music. This group performs repertoire from a wide variety of periods and cultures. Skills developed throughout the year include: tonal development, development of technique, music literacy, rehearsal procedures and discipline, performance of standard wind/band repertoire, and instrument maintenance. The Concert Band serves as the department's curricular instrumental ensemble; therefore, students receive letter grades, effort grades, and written comments for their achievement of performance and written assessment. The Concert Band, along with other Upper School performing groups, presents three major concerts yearly, offers anthems at school chapel services, performs for community service events throughout the year, and presents in many off-campus performances, including an annual touring performance trip.

Jazz Ensemble.
Full year, one-half credit.
The Jazz Ensemble is a select ensemble for jazz instrumentalists. Membership in the Concert Band is a prerequisite to membership in the Jazz Combo, with the exception of those students who, by approval of the music department, meet an alternative music prerequisite. Auditions occur in the spring with final auditions occurring in the fall. This ensemble explores the many styles of jazz through performance. The Jazz Ensemble, along with other performing groups, presents three major concerts yearly, offers anthems at school chapel services, performs for community service events throughout the year, and presents in many off campus performances, including an annual touring performance trip. Students receive letter grades, effort grades, and written comments for their achievement of performance and written assessment.

Orchestra.
Full year, one-half credit.
The Orchestra serves as the core instrumental ensemble in the Upper School for string players. Enrollment in the Orchestra is a prerequisite for participation in the Chamber Ensemble. The Orchestra serves as the primary medium for developing a balanced and effective program in instrumental music. This group performs repertoire that is written or arranged for string orchestras from a wide variety of periods and cultures. Skills focused on throughout the year include tonal development, development of technique, music literacy, rehearsal procedures and discipline, performance of standard string orchestra

repertoire, and instrument maintenance. The Orchestra serves as a curricular instrumental ensemble. Thus students receive letter grades, effort grades, and written comments for their achievement in performances and in written assessments. The Orchestra, along with other Upper School performing groups, presents three major concerts yearly, offers anthems at school chapel services, performs for community service events throughout the year, and presents many off campus performances, including an annual touring performance trip.

Chamber Ensemble.
Full year, one-half credit.
The Chamber Ensemble is Episcopal Academy's select ensemble for string players. Membership in the Orchestra is a prerequisite to membership in the Chamber Ensemble. Auditions occur in the spring with final auditions occurring in the fall. The Chamber Ensemble, along with other performing groups, presents three major concerts yearly, offers anthems at school chapel services, performs for community service events throughout the year, and presents in many off-campus performances, including an annual touring performance trip. Students receive letter grades, effort grades, and written comments for their achievement of performance and written assessment.

- Theatre and Dance -

Mr. Dan Clay, Chair
Mrs. Cara Lavallee
Mrs. Kelly Leight-Bertucci

The Episcopal Academy Department of Theatre and Dance seeks to empower students with a comprehensive understanding of the performing arts by developing their proficiency in the theory, creation, and practice of performance. We strive to enrich the lives of our students by challenging them intellectually and artistically through a disciplined practice in the dramatic arts. Through exploration in a safe and diverse environment, students realize the value of the performing arts as a vehicle for communication and self-expression.

The Fundamentals of Acting.
One semester, one-half credit.
Through improvisation, script analysis, and the study of physical and emotional character development, students are introduced to the basics of acting. Through a series of individual and group exercises students build on their own level of experience to practice communication skills and foster self-confidence. Scene study and performance rounds out a course in which acting is defined as "behaving truthfully under imaginary circumstances".

Improvisation I and II.

One semester, one-half credit.

Improvisation has a reputation as the fun kid at the party, but look beyond the laughs and there is a deep and conscious craft of co-creation that builds ensemble and spontaneously generates genius. In this course, students participate in a range of active and intentional games and exercises designed to galvanize the group and teach the methodology of long and short-form improvisation. Students may take this course more than once and practice at their own level.

Honors Acting.

Year-long, 1 credit

Honors Acting is a year-long course designed to prepare students for professional/college auditions by providing them with a greater understanding of how to develop a personal toolbox of techniques, warm-ups, and practices that will be at their disposal in a variety of professional situations. Students will leave the course fully prepared for the college process having created a video portfolio and having undergone two different simulated audition experiences. Prerequisite: *The Fundamentals of Acting*, participation in two or more Domino Club productions, and/or permission from the Department of Theatre and Dance.

Film.

One semester, one-half credit.

This semester-long class explores different ways to look at, analyze, and appreciate film. As students view important films from a cross section of genres and various historical periods of movie making, they study the influential technological advances, changing conventions, and the cultural context in which specific films were created. Students will view films and film clips in class. They work on creative projects, take quizzes and tests, and write reviews on films viewed outside of class. Students will improve critical thinking and writing skills, and develop personal criteria for evaluating films.

Technical Theater.

One semester, one-half credit.

This class is an introduction to the elements of technical theater production dealing with the theory and practice of stagecraft and visual communication. Students will study scenery, costumes, sound, lighting, drafting, and technical divisions of labor. The technical theatre class is a conglomerate of various artistic outlets. In this class you will learn how to use tools, paint, make props, hang stage lights, use a counterweight system and work in a collaborative environment. In this hands-on class, we work on the upper school and middle school shows throughout the class building sets and doing backstage work.

Theatrical Design.

One semester, one-half credit.

The objective of this course is to introduce the principles of theatrical design, including the basic compositional elements of line, form, texture, and color. Students will study set, prop, costume, and lighting design through discussions, projects, and theoretical designs. At the conclusion of this course

students will have a basic understanding of design principles and a context in which to view and produce all areas of theatrical design.

Theatre for Change.

One semester, one-half credit.

Theatre for Change will be a space to engage in the artform of theatre while examining with a critical lens the stories we are told and consume. Using theatre as our guide, we will examine our own and others' cultures, histories and experiences. Taking journeys to other times and places, we will discuss the way in which theatre allows the audience to engage with complex feelings about identity, race, society and power.

Movement for Athletes.

One semester, one-half credit.

The focus of the course is for students to optimize their movements on and off the playing field through increased body awareness, intentional practice and meaningful goal setting. Movement will be taught through a scientific, anatomical perspective as students identify exercises that suit their individual goals and can help them to avoid injuries. Students will advance skills in balance, flexibility and coordination through a variety of units. Basic foundations of yoga, acrobatics and ballet will fuel student investigations. Body language and expressivity will also be explored. Personal reflection will take place in the form of class discussions and short, response essays. The course culminates with students sharing and celebrating their individual progress on their goals and a final paper that highlights both their physical and intellectual development of the course concepts and objectives.

Honors Dance.

Full year, one credit.

The Honors Dance course offers robust, diverse, accessible and meaningful experiences for all dance enthusiasts. The skills honed in Honors Dance foster leadership within EA's dance program and promote supportive connections between all class members. Students will challenge their thinking about dance as an art form while studying choreography in a variety of dance genres. Movement improvisation and partnering skills will also be developed throughout the year. The students in Honors Dance will create their own solo choreography for performance and be able to express their artistic point of view. Additionally, the students will participate in a master class with a guest artist. The course will have two performances, the Dance Concert in February and Arts Fest in April. Students will not need to change out of uniform unless class is the last period of the day. (Prerequisite: One year of Dance Team in middle or upper school, or by instructor approval.)

- Classical Languages -

Mr. Stephen Bosio, Chair
Dr. Lee Burnett
Mrs. Molly V. Konopka
Ms. Ashley Lewis
Dr. Melanie Subacus
Dr. Sarah Wahlberg

Latin and Greek
Learning the language of the Romans and Greeks allows students to access our society's rich cultural heritage of history, mythology, philosophy, and the arts. Students explore the ancient world through the eyes of Roman and Greek authors. Ancient literature offers a taste for anyone interested in the arts, sciences, literature, love, mathematics, politics, government, or religion. Whether reading impassioned love poetry or heroic epic in Latin, or the first western histories and drama in Greek, students who study with the Classics Department on any level leave their coursework with a greater understanding and appreciation of how Latin and Greek have shaped and continue to shape the society in which we live.

Latin 1 (I, II, III Forms).
Full year, one credit.
Latin 1 immediately immerses students in the language and lives of the Romans. Designed for students with little or no knowledge of the language, the course sets the foundation needed to read and understand Latin. Students learn the language inductively, recognizing the form and functions of words while reading a continuous story about the life of a Roman boy and his family. Rather than teaching through traditional, rote paradigms and practice sentences, the approach in Latin 1 engages the students and helps them to identify with the Romans by using their language to discover their world.

Latin 2.
Full year, one credit.
Using the same inductive, context-based approach as other Latin course offerings, Latin 2 is ideal for students who are interested in using the Romans' own language to learn more about their rich culture and history but without the accelerated pace and emphasis on future AP or Honors study. Students learn additional language concepts through their reading of the storyline started in Oxford Latin 1 and 2. With less emphasis on nuanced, technical grammar, students will engage with the language not only through reading Latin stories but also through projects and collaborative work.

Honors Latin 2.
Full year, one credit.
Honors Latin 2 is designed for students who have completed Oxford Latin 1 and 2 at EA or who are entering EA from an outside program that covers substantially the same content. Students will continue their study of language and culture while emphasizing the concepts essential to pursuing Latin on the AP or Honors level. Using an inductive, context-based approach to studying Latin, the course completes the

formal presentation of Latin grammar, develops the students' ability to produce idiomatic rather than literal translation, and introduces them to Latin literature.

Latin 3.
Full year, one credit.
The final steps of Quintus' journey take Latin 3 students through the end of the Roman Republic and the end of our textbook series. Students round out their study of the language with a few more grammar concepts, but most of the time is devoted to honing their reading skills in Latin. The story in our book continues with Antony and Cleopatra, two of the most famous people in the ancient world, as they scheme against and fight with Augustus, the man who defeats them to become the first Roman emperor. In the second semester students work on presentations of a topic of particular interest to them from the ancient world. Ideas such as ancient food, entertainment, daily life, politics, and the role of women are just a few areas rich with information for their research. By the end of the Latin 3 course students have experienced the full extent of the language and have witnessed the fall of the Republic and the rise of the Roman Empire.

Honors Latin 3.
Full year, one credit.
Honors Latin 3 will read both poetry and prose from the end of the Roman Republic, just before the emperors come to power. In reading these authors, students will gain an understanding of the culture and politics of the Late Republic. We will use readings from three major Roman authors (Catullus, Cicero and Sallust) to review grammar and introduce any new material. More importantly, students will encounter political upheaval, mayhem, and scandal through readings and a series of small projects that place the students in the role of a Roman. The Romans are nothing without a good murder or execution, and students will engage in a mock trial at the end of the year to resolve the legality of Cicero's very Roman, i.e. brutal, execution.

Latin 4.
Full year, one credit.
Students begin Latin 4 with a comprehensive review of the language through familiar story-based myths about some of the greatest names in ancient literature. Stories of Odysseus and Hercules help refresh their Latin foundation. These early readings are designed by modern authors to cover all areas of the language as students prepare to see original text for the first time. The course then introduces students to authors of the late Republic and early Roman Empire. The travels of Julius Caesar and the epic poetry of Rome's golden age put into students' hands the foundations of western literature. Readings in original Latin are scaffolded so that students have the opportunity to gradually work towards the unaltered text. Latin 4 concludes with students working on a project designed to tap their curiosity, creativity, and knowledge acquired through their experiences studying Latin.

Honors Latin 4 (Latin Poetry).
Full year, one credit.

Honors Latin 4 offers an alternative to the AP Latin 4. Unlike the AP, this course picks up where the Honors Latin 3 course ended: the end of the Republic and the beginning of the Empire. Students will read prose and poetry about the Roman Empire, its politics, its impact, and its influence. In addition to working with Latin text, students will work on a series of small projects designed to connect classical culture with the modern world.

AP Latin 4.
Full year, one credit.
Students in this course read selections from Vergil's Aeneid in Latin and the entire poem in English as well as reviewing and completing the AP selections of Caesar's Gallic Wars. Attention is given to literary interpretation and to the historical and cultural background of the two works as well as a comparison of the ideas presented therein (e.g. Roman notions of leadership, Roman attitudes towards non-Romans, etc.). Students who take this course are well prepared to take the Advanced Placement Examination in Latin.

Honors Latin 5.
Full year, one credit.
Students read, discuss, and write upon a variety of Roman authors and topics depending on the year, including Roman satire, mythology, law, and politics. Students in the past, for example, have translated satires of Juvenal and Horace, as well as selected myths from Ovid's Metamorphoses. At this level, students read beyond the text, exploring its social context, its historical and cultural background, and its literary interpretation.

Greek 1.
Full year, one credit.
This course introduces the basic grammar and vocabulary of Attic Greek, and also gives students an opportunity to explore mythology, the evolution of language, history, and other aspects of classical Greek civilization. Students will read most of the way through the first book of Athenaze, a text which introduces the language with a series of engaging stories that reflect life in the ancient world.

Honors Greek 2.
Full year, one credit.
Using the second book of Athenaze, Greek 2 expands upon the Greek grammar and vocabulary of the first course through reading a story set during the Peloponnesian war. The study of language is enriched with discussions of ancient history, culture and art. At the end of the course students will be ready to read original passages of Greek prose.

Honors Greek 3.
Full year, one credit.

In the third year, students finish learning essential Greek grammar, begin to translate and explore ancient Greek literature, and continue to learn about the culture, art, and architecture of the Greeks. The first semester each year will be dedicated to an introduction to reading the New Testament and understanding its relationship to the literature and culture we will explore during the second semester. In alternate years, the second semester will focus either on Euripidean tragedy or on Plato's dialogues with a focus on the character of Socrates. Related aspects of culture and art will also be explored. Depending on enrollment, Honors Greek 4 may follow this sequence.

Honors Greek 4.
Full year, one credit.
After following the wrath of Achilles in *The Iliad* in the fall semester, Honors Greek 4 turns to drama in the spring. The goal of the second semester work is to combine translation and performative work and provide the Greek 4 students with a meaningful, engaging, and immersive capstone project. The spring semester will focus on Greek tragedy and theater. The Greek translation work in the second semester will revolve around selections from one or more Greek tragedies. Students will also work on a series of projects and performative assignments that explore different areas of theater practice. Their work product for the projects may serve as an exam alternative.

- Computer Science & Engineering -

Mr. Matt Memmo, Chair
Mr. Matthew Davis
Ms. Shannon Crowley

Students in the Class of 2023 and after are required to take a half credit or one-semester of CS&E as a graduation requirement.

The Computer Science & Engineering Department offers a series of engaging courses that will prepare our students for a future requiring more than basic "computer literacy." In these classes, students will not just learn coding skills and engineering concepts. They will also experience broader, multidisciplinary concepts, such as computational thinking, different ways to think about technology and the impact of technology in our society. Our goals in these courses are to teach basic problem-solving skills that can be used in any endeavor and to have students understand how they can use these skills to solve real-world problems.

Introduction to Computer Science and Engineering.
One semester; one-half credit.

Students review the basics of computational thinking, programming, data analysis, digital design, design and fabrication, and the engineering design process. Students will code interactive programs, examine large data sets, learn photoshop, excel, basic circuits, 3D modeling, and other emerging technologies. There are no prerequisites.

Robotics.
One semester; one-half credit.
Upper School robotics is a course equally about engineering design and technical building, where students will explore hands-on design and construction of large-scale robots. Students will learn about the engineering design process, including iterative design, as well as explore engineering and construction techniques already used within robotics.

The bulk of the semester will be spent working and learning about robotics and design through pursuit of a group "project" – the construction of a large-scale robot suited to a particular challenge laid out at the beginning of the year. Students will work cooperatively to design and build individual components for their robot, then spend time in integration and troubleshooting, as well as handling the electrical aspects of the project. There are no prerequisites.

Python for Data Science.
One semester; one-half credit.
Python is a programming language used widely for data science. Companies are using Python to harvest insights from their data and get a competitive edge. In Python for Data Science you will learn about powerful ways to organize and manipulate data, as well as data science tools to start your own analyses to make conclusions and predictions. The foundations of statistical thinking can be more readily realized with the help of technology, allowing for rapid application and extension. With the power of Python-based tools, your statistical analysis will go beyond the basics and allow you to better understand what your data indicates. This course is designed for 10^{th} grade students and older. Open to students who have completed Geometry or Introduction to Computer Science.

AP Computer Science A – Java.
Full year, one credit
This first-semester, college-level course equivalent in computer science introduces students to computer science with "fundamental topics that include problem-solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems" (The College Board). This course follows the AP syllabus and requires more commitment from the student. A prerequisite of one semester in another programming language is required of most students.

AP Computer Science Principles.
Full year, one credit
AP Computer Science Principles offers a multidisciplinary approach to teaching the underlying principles of computation. The course will introduce students to the creative aspects of programming, algorithms, big data, the Internet, cybersecurity concerns, and computing impacts. AP Computer Science Principles will give students the opportunity to use technology to address real-world problems and build relevant solutions. Together, these aspects of the course make up a rigorous and rich curriculum that aims to broaden participation in computer science. Prerequisite includes successful completion of Algebra 1. Students do not need to have prior knowledge of any programming language for this AP course.

Honors Advanced CS Data Structures.
One semester; one-half credit.
The goal of the course is to teach the fundamental data structures and algorithms used in Computer Science. Students will apply their knowledge to solve real-world problems such as Google Maps style pathfinding, file encryption techniques, image compression, and Markov Chain Text Generation. Course discussions will focus on strategic applications of each data structure. This course is intended to be the equivalent of a second-semester college level CS course. A prerequisite of the successful completion of AP Computer Science A and the recommendation on a computer science department member is required.

Honors Artificial Intelligence.
One semester; one-half credit.
This course will introduce students to the basics of AI and its applications. The course will begin with a review of data structures and quickly more to the application of advanced algorithms including complex searching algorithms which assist in machine learning, probabilistic reasoning and the creation of neural networks. Projects will include, natural language processing, predictive analytics and robotics & computer vision to name a few. This course is intended to be the equivalent of a second-semester college level CS course.

Web and Mobile App Design
One semester; one-half credit.
In this course, students will learn how to build dynamic web pages and mobile apps using Javascript, HTML, CSS, React Native and other tools. Students will explore elements of good design and best practices for user interfaces. Additionally, students will learn how to deploy their mobile apps to the Apple app store and Google Play store. Projects include creating an Instagram clone web app with a login system which securely authenticates users and a mobile game that syncs with a real-time database.

Digital Video Development
One semester; one-half credit

In Digital Video Development students will learn how to produce and edit a variety of video styles including Newscast/sportscast, interviewing, narrative, time-lapse, experimental and other forms. Students will also learn about storyboarding, script writing, framing, lighting, sound, advanced editing techniques and video effects. The assessments in this class are project based.

- English -

Mrs. Anne Barr, Chair
Mrs. Lee Billmyer
Ms. Lindsay Coleman
Mr. John Dilworth
Mr. Anthony Herman
Ms. Jennifer Maier
Mr. Christopher McCreary, Howard Morgan Chair of Creative Writing
Dr. Rachael Nichols
Mr. Douglas Parsons
Mr. Sam Willis

Students must take English every year. The goal of the English Department is to develop effective readers, writers, and speakers. We believe that the skills of reading, writing, and formal and informal public speaking complement each other and that by strengthening one skill, we will strengthen the other two. The ultimate goal of the department is to produce students who read closely, write effectively, and speak confidently.

Particularly in the III and IV Forms, a great deal of class and homework time is devoted to writing skills and to strengthening competence in grammar, mechanics, and vocabulary. In V and VI Forms, the students continue their study of literature and refine their ability to analyze sophisticated prose and poetry.

Introduction to Literature (III Form).
Full year, one credit.
This course is designed for III Form students to improve their ability to read, speak, and write by paying attention to details and learning to express themselves with greater clarity. Readings for the III Form year are selected from the major literary genres: poetry, drama, short stories, and longer prose works. Students will read: Charles Dickens's *A Christmas Carol*, Shakespeare's *Macbeth*, and more contemporary

works. Established authors of different genders and ethnicities are included in the year-long course. Students study poetry using the anthology *An Introduction to Poetry*. Throughout the year, III Form students build vocabulary as well as review grammar and style with particular emphasis on mechanics, usage, and sentence variety. III Form students write frequently with emphasis on the analytical essay, including well-crafted thesis sentences supported by body paragraphs. Students will also establish their writing "voice" through personal, creative writing.

World Literature (IV Form).
Full year, one credit.
The World Literature curriculum challenges IV Form students to examine the power and import of storytelling from a variety of global cultures. Basic skills acquired during the III Form year are stressed, but in the IV Form writing is more extensive and reading is more demanding. Students write frequently and continue to develop competence in the mechanics of essay writing. Particular attention is focused on the student's growing ability to craft organized, focused paragraphs and use textual evidence in the service of an argument. The year begins with Chinua Achebe's novel *Things Fall Apart*. Other texts may include William Shakespeare's *Othello*, Marjane Satrapi's autobiographical graphic novel *Persepolis*, Erich Maria Remarque's *All Quiet on The Western Front*, Gabriel Garcia Marquez's *Chronicle of a Death Foretold*, Franz Kafka's novella *The Metamorphosis* and Albert Camus' *The Stranger*, in addition to other texts.

American Literature (V Form).
Full year, one credit.
By exploring major literary figures and their works, students examine regions, eras, attitudes, and beliefs that have shaped the American experience from the early Colonial period to present day. Students will read a selection of novels, short stories, and essays from the Puritan, Enlightenment, Romantic, Transcendental, Realist, Modern, Postmodern and contemporary eras. Throughout the year, reading a similarly diverse selection of American poetry will enable students to build their literary lexicons and hone their analytical skills. Many of the assignments and activities aim to refine public speaking, rhetorical and close reading abilities. Timed in-class writing prompts, critical analysis and synthesis essays along with building vocabulary remain integral parts of the curriculum. Frequent exploration of the American identity and the American Dream engage students in considerations of what it really means to be a citizen of the United States and how the literature of the nation reflects the American ethos. Finally, the course seeks to combine canonical literature with more contemporary pieces as a means of allowing students to recognize and understand thematic connections and overlap between the different decades in American literary history.

American Studies (V Form).
Full year, two credits
(This course meets both the American Literature and US History requirements)
American Studies is an interdisciplinary approach to the study of American culture in the colonial through modern eras. This course emphasizes the application of methods of historical and literary analysis and question framing by investigating the interplay of national identity, class, race, and gender.

Classroom activities are oriented around discussion, collaboration, and writing. Team-taught by one English and one history teacher, American Studies is a double block that replaces the American Literature and United States History courses. As such, it is a two-credit course open to juniors only. In place of a textbook, students will use a course pack of readings and several works of literature. A research paper and one final exam will be required in the spring semester.

Honors American Literature (V Form).
Full year, one credit.
Honors American Literature covers the full curriculum of the standard American Literature class and at least six additional, complementary full-length fiction and nonfiction texts. Students are asked to read four of these texts prior to the start of the course, and these four pieces will be paired with in-class curriculum as a means of viewing certain literary and historical periods through a diversity of lenses. The volume of the material and pacing of the class make it most appropriate for students who wish to devote substantial time and effort to reading and writing. The course spends significantly less time covering the basics of plot or confirming understanding and significantly more time pursuing literary patterns, addressing abstraction, and synthesizing documents.

***Students who have earned an A- or higher in both freshman and sophomore years of English qualify to take Honors American Literature; students who have earned a B+ or higher in both freshman and sophomore years may petition their World Literature teachers for recommendations to enroll in the class.*

British Literature (VI Form).
Full year, one credit.
This course is focused on understanding the history of the English language as well as the critical study of literary milestones that mark its evolution. During the fall semester, students focus on canonical text of major eras in British history: the Anglo-Saxon epic *Beowulf*, Geoffrey Chaucer's *Canterbury Tales*, and William Shakespeare's tragedy *Hamlet* before transitioning to 20th and 21st Century literature and supplemental materials in a variety of genres. Students will write detailed analytical essays with a focus on increasing the fluidity of their writing and incorporating scholarly secondary resources. The course seeks to prepare students for collegiate-level reading, writing, thinking, and discourse.

Honors British Literature (VI Form).
Full year, one credit.
Honors British Literature is for independent readers who are passionate about the humanities and wish to engage in literary study at a higher level. The course covers the full curriculum of the standard British Literature class as well as additional, complementary texts. Mastery of the course content is assumed: students will take part in scholarly Socratic discussion and be expected to formulate independent thought as they further enhance their reading and writing skills and prepare to succeed in the college humanities classroom.

***Students who have earned a B+ or higher in Honors American Literature or an A- or higher in both their sophomore and junior years of English may enroll in the class. Students who have earned a B+ in their*

sophomore and junior years of English may petition their American Literature teacher for a recommendation to enroll in the class.

- History -

Mr. Steve Schuh, Chair
Mrs. Kris Aldridge
Mr. Jerome Bailey
Mr. Chuck Bryant
Mr. J. Max Kelly
Mr. Damon Kuzemka
Dr. Adam Lavallee
Mrs. Jennifer Maier
Mr. Robert Maier
Mrs. Anna McDermott
Mr. David Mercante
Dr. Rachael Nichols
Mr. Michael Whalen

The History department believes that students need to understand the history and traditions of their own and other cultures, so that as adult citizens they will be able to make wise decisions on matters affecting them, the nation, and the world. We invite students to participate in doing history by encouraging independent thinking and questioning. We seek a balance between presenting what we believe students need to know and inviting students to ask questions of their own. We aim to teach the skills necessary for good citizenship and lifelong learning.

Pre-Modern History (III Form).
Full year, one credit.
This course for 9th graders begins with a look at the rise of civilizations in the earliest river centers. Next, we examine major developments in philosophy, religion and empires as we study the history of China, Greece, Persia and Rome. Foundations of the modern world will be examined later in the course, looking at changing times in Asia and Africa with the rise of Islam and in Europe with the Renaissance. Throughout the year, students will engage in several group and individual projects, which expose them to the library and its resources, the importance of the drafting process, and the need for sophisticated and original thought in historical writing. Reading primary sources and looking at art and architecture will help bring the past to life and encourage students to think for themselves about the past and its relevance to their lives.

Modern World History (IV Form).
Full year, one credit.
This course for 10th graders examines the modern world from 1500 to the present. Topics include early modern economic systems and the age of kings, political revolutions, industrialization, imperialism, nationalism, world wars, decolonization, and international organizations. Skills include writing (both essays and short papers), doing research and speaking in class. Shared texts read in both English and History will provide in-depth primary sources to enhance students' understanding of the past and its continuing relevance.

AP World History. (IV-VI Forms).
Full year, one credit.
The purpose of this course for 10th graders and beyond in AP World History is to develop greater understanding of the evolution of global processes and contacts, in interaction with different types of human societies. The course highlights the nature of changes in international frameworks and their causes and consequences, as well as comparisons among major societies. The course emphasizes relevant factual knowledge used to address interpretive issues with historical evidence. The course builds on an understanding of cultural, institutional and technological precedents that, along with geography, set the stage for human advancement.

The course examines World History from 8000 BCE to the present day by dividing that time into 6 periods.

- Technological and Environmental Transformation (to 600 BCE)
- Organization and Reorganization of Human Societies (600 BCE-600 CE)
- Regional and Transregional Interactions (600 CE-1450 CE)
- Global Interactions (1450 CE-1750 CE)
- Industrialization and Global Integration (1750 CE-1900 CE)
- Accelerating Global Change and Realignments (1900 CE – the present)

*** Please note this course has entry requirements. See AP Guidelines below.*

American Studies (V Form).
Full year, two credits
(This course meets both the American Literature and US History requirements).
American Studies is an interdisciplinary approach to the study of American culture in the colonial through modern eras. This course emphasizes the application of methods of historical and literary analysis and question framing by investigating the interplay of national identity, class, race, and gender. As students you will learn from each other, in discussing books and articles, in talking about your writing, just as you will from the instructors. Team taught by one English and one history teacher, American Studies is a double block that replaces the American Literature and United States History courses. As such, it is a two credit course open to juniors only. In place of a textbook, we will use a course pack of

readings and several works of literature. There will be a research paper and one final exam in the spring semester.

United States History (V Form).
Full year, one credit.
This course for 11th graders begins in the sixteenth
century with the meeting of three cultures - American, European and African - and continues through the present. We focus on the development of major themes in United States History: political themes such as federalism, republicanism, rights and responsibilities in democratic governance; economic development from agricultural to industrial to postindustrial society; and social history using race, class and gender as categories of analysis. Each student is guided through the process of writing an extended, thesis-based research paper, which must be completed satisfactorily in order to receive credit for the course.

Advanced Placement United States History (V Form).
Full year, one credit.
This advanced placement laboratory course for 11th graders follows the same basic outline as the regular United States History course, but in considerably greater depth. In addition to an expanded version of the college- level textbook, students will read an interpretive analysis of major themes in U.S. history, along with a number of primary source documents. These additional resources inform student work in the writing lab segment of the course, which meets once every six days for in-depth practice for both the "documents-based question" and "free response" portion of the A.P. U.S. History exam.

*** Please note this course has entry requirements. See AP Guidelines below.*

FULL YEAR ELECTIVES

Honors Identity and Culture in Modern US History, 1865-Present (V and VI Forms).
Full year; one credit.
This is a full-year, honors level course in modern United States history (1865-present) through the lens of race and ethnicity. We will emphasize the close reading of primary sources and an in-depth analysis of many diverse sources of original scholarship in our study of how race and ethnicity have shaped the modern history of the United States. We'll begin by examining the modern notions of race and ethnicity from a personal as well as scholarly perspective. We'll trace the trajectory of African American history from the Civil War through to the present. We'll look closely at the experiences of Asian American people, indigenous people, people of Latin American origin, and the many disparate immigrant groups from Europe, Asia, Africa, and elsewhere who have moved to the United States in the modern era. We'll see how racial categories - including whiteness - have been shaped and reshaped through generations of discrimination, assimilation, and resistance. In the final unit of the year, we'll look at how race and ethnicity operate in the United States today, and, informed by a year of in-depth historical analysis, students will produce a significant research paper on a topic of their choosing.

Honors Philosophy (V and VI Forms).
Full year; one credit.
Philosophy means "love of wisdom"—and wisdom has been revered by sacred and secular philosophers for millennia. It is wisdom, and the love of wisdom, which not only makes us most fully human, but makes society itself possible. In an increasingly "post-truth" age, the study of philosophy and the cultivation of rational thought is urgently needed. This course will study texts and major philosophical subfields from Socrates to Tutu, including examples from ancient Greece, China, and the Islamic world, as well as western and contemporary sources. The course is structured as a seminar: students will learn leadership skills as they exegete primary and secondary texts in collaboration with their peers, and there is a heavy emphasis on clarity of the written and spoken word. Course prerequisites: sound completion of Premodern History and Modern World History.

Honors American Political Thought (V and VI Forms).
Full year; one credit.
The health of a nation is directly connected to its political discourse. When citizens have a better understanding of their nation's history and the ideas which gave birth to it, they can be constructive participants. Unfortunately, the public has not only become less versed in American political thought, but has also become less inclined to have honest dialogue. Trust, respect and compromise have been replaced by name-calling and identity politics. This course will attempt to alleviate this problem. We will cover the evolution of American political thought from the Declaration of Independence to the Trump administration. Through their exposure to a variety of different viewpoints and mediums, including reading books, listening to speeches and watching documentaries, students will have the opportunity to formulate and question their own belief systems. In doing so, they will hopefully learn to recognize that dialogue and not the suppression of ideas is the foundation of the American Republic. Because of the nature of this course, specifically the discussion of politics, participation and writing will comprise the majority of the assessments. This course will also offer students the opportunity to develop their argumentative skills both on paper and in speech. Course prerequisites: sound completion of Premodern History and Modern World History.

AP Economics (V and VI Forms).
Full year, one credit. (cross listed with Mathematics)
Open to V and VI Forms; Rising seniors given priority. AP Economics is a full year course designed to provide students an in-depth exploration of the principles of economics. The course balances the history of economic thought with current theory and events. Concepts from microeconomics and macroeconomics are integrated into the course to promote economic understanding. This course focuses on how economic decisions are made by individuals, firms, and governments. Supply-and demand analysis is developed to demonstrate how market prices are determined and how those prices determine an economy's allocation of goods and services. Government intervention and policies, as well as various market structures, are introduced and evaluated using concepts such as efficiency and equity. Macroeconomic concepts include national income, inflation, unemployment, productivity, monetary policy, fiscal policy, and the basics of international trade and finance. Upon completion of the course, students will be prepared to take both the AP Microeconomics and AP Macroeconomics exams.

*** Please note this course has entry requirements. See AP Guidelines below.*

AP European History (V and VI Forms).
Full year, one credit.
Open to V and VI Forms; Rising seniors given priority. This course offers an opportunity to study the history of Europe from 1450 to the present in depth. The substance of this course is driven by the curriculum required for the Advanced Placement Exam in European History and students should expect a rigorous and demanding course. Our study of European History will begin in the Late Middle Ages and the transition to the Renaissance. We will discover and analyze the political and diplomatic, economic and social history of Europe, as well as its intellectual and cultural history from the Renaissance through the demise of the Soviet Union.

*** Please note this course has entry requirements. See AP Guidelines below.*

AP United States Government and Politics (V and VI Forms).
Full year, one credit.
This course will begin with an examination of the constitutional underpinnings of American government and politics. Topics will include political beliefs and behaviors, political parties and interest groups, institutions and policy processes of national government, and civil rights and civil liberties. We will keep abreast of current events, as well as examining selected case studies from the past. This course is open to seniors only.

*** Please note this course has entry requirements. See AP Guidelines below.*

AP Art History (V and VI Forms).
Full year, one credit.
What do your doodles have to do with Leonardo da Vinci? Why was “ultramarine” blue a Renaissance status symbol? How did Augustus invent the imagery of modern political campaigns? Since before there was written language, we have communicated with art. AP Art History course will introduce students to the history of artistic expression through the visual arts, primarily painting, sculpture, and architecture. We will survey works from cave paintings to contemporary art, and from Italy to India. While the survey will provide the foundation for the course, we will frame out the class with a focus on themes such as purpose, patronage, politics, the human form, religion, and symbolism. The overarching goal is to instill in students both knowledge and appreciation for the historical context of art and artists within society, and develop the ability to apply that knowledge to the art they make and encounter in their lives. The substance of this course is driven by the curriculum required for the Advanced Placement Exam in Art History and students should expect a rigorous and demanding course.

*** Please note this course has entry requirements. See AP Guidelines below.*

AP Human Geography (V and VI Forms).

Full year, one credit.
Why do southerners have an accent that is very different from people from Long Island? Why is the Entertainment industry centered in LA, while the fashion industry is in NY and government in DC? Is there a relationship between these cities that influences their main function? Why are Baseball and football so popular in the US instead of Cricket and Rugby? What does the spread of the popularity of Crocs have to do with the threat of an Ebola epidemic? Human geography studies the way people affect and are affected by their physical surroundings. It looks at topics such as migration, urbanization, language, religion, customs, economics and political systems and specifically examines these topics using geographical skills and demography to study populations and cultural patterns as they have changed through history. The roots of differences in populations around the globe today can be examined through this lens as students think critically about why those differences exist and how they will change in the future. Students will use maps, geographic models and systems to collect, organize, interpret, evaluate and synthesize data.

*** Please note this course has entry requirements. See AP Guidelines below.*

SEMESTER ELECTIVES

Psychology (V and VI Forms).
One semester, one-half credit.
This course will give an overview of general psychology. Topics covered include perception, memory, sleep and dreams, learning, motivation, emotion, personality development, psychological disorders, and social psychology (group influence; why good people do bad things). In addition to a textbook, relevant articles and segments of popular literature will be read. Selected film clips and documentaries will further enhance the subject matter on key topics.

<u>AP and Honors Recommended Entry Guidelines for Upper School History:</u>

AP World History
(All rising sophomores who meet recommended guidelines pre-registered):

- *At least an A- in the first term of 9th grade Pre- Modern History*
- *At least an A- for the final grade in June OR a B+ on the final exam AND an effort grade of E for the year.*

AP US History
(All rising juniors who meet recommended guidelines are pre-registered):

- *At least a B+ in the first term of AP World, or a minimum average of A- in Pre-Modern and the first term of Modern History*

- *At least an A- in the first term of 10th grade Modern History and an A- or higher in 9th grade Pre-Modern History*
- *At least an A- for the final grade in June in Modern History OR a B+ on the final exam AND an effort grade of E for the year.*

AP European History (Open to V and VI Form)
(Rising seniors given priority)

- *At least a B+ in the first term of AP US History, or a minimum average of A- in Pre-Modern, Modern and the first term of regular U.S. History.*
- *At least a B+ for a final grade in June for AP US, or an A- average for a final grade in June for regular US History OR a B+ on the final exam AND an effort grade of E for the year.*

AP Government and Politics (Open to V and VI Form)
(Rising seniors given priority)

- *At least a B+ in the first term of AP US History, or a minimum average of A- in Pre-Modern, Modern and the first term of regular U.S. History.*
- *A least a B+ for a final grade in June for AP US, or an A- average for a final grade in June for regular US History.*

AP Human Geography (Open to V and VI Form)
(Rising Seniors given priority)

- *At least a B+ in the first term of AP US History, or a minimum average of A- in Pre-Modern, Modern and the first term of regular U.S. History.*
- *At least a B+ for a final grade in June for AP US, or an A- average for a final grade in June for regular US History*

AP Economics
(Rising seniors given priority)

- *Final grade of B in AP US, or final grade of A- in regular US History and completion of Algebra 2 or Pre-Calculus with a B+ or higher or a B in the equivalent Honors courses.*

- Mathematics -

Ms. Kelly Edwards, Chair
Ms. Chris Anderson

Mr. Keenan Friend
Mr. James E. Farrell, III
Dr. Thomas Goebeler
Mr. Jay Jennings
Mr. Ryan Klein
Mr. Mike McNulty
Mr. Steve Morris
Mrs. Tracy Motley
Mr. Eric Mundy
Ms. Tanuja Murray
Mr. Andrew Newton
Mrs. Ashley O'Connor
Ms. Grace Wingfield
Mr. Charles Yespelkis

The Mathematics department believes that students at Episcopal should be encouraged to explore mathematics and its applications to develop problem solving and analytical tools. As students move through the courses, we strive to provide a strong foundation at each level to provide a background ready to support future studies. Inquiry and logical reasoning are encouraged to help develop conceptual understanding beyond procedural facility. Our goal is to foster logical thinking and an appreciation for the elegance of mathematics both as a language and as a methodology. To this end, the department provides a sequence of yearlong courses, with standard level and honors level offerings, as well as electives in Statistics, Python for Data Science, AP Statistics and Advanced Topics including Multivariable Calculus, Linear Algebra, and Combinatorics. We strive to match a student's background, interest, work ethic, and ability with the intensity level of the course.

In order to fulfill the mathematics graduation requirement, a student must pass three consecutive years of mathematics while in upper school, beginning with the III Form year. By the end of V form, all students should have taken at least first- and second-year Algebra, and Geometry-- the minimum for college-bound students.

Initial placement is based on a number of factors, including past performance in math classes, standardized test scores, and a placement test. Students will advance through the sequence following the successful completion of each course and placement will be re-evaluated as students advance with the goal of a strong foundation first and foremost in mind. Higher- achieving non-Honors students may be offered an opportunity to move into Honors courses through summer bridgework and successful completion of the honors placement test. Admission into honors-level courses is contingent upon a student meeting performance standards and his or her willingness to take on the additional work required by honors courses.

Characteristics of a successful Honors Math Student:

- *Has an enthusiastic, positive attitude about math*

- *Has a thorough mastery of computational skills*
- *Learns math rapidly and with ease, needing little repetition*
- *Connects the different strands of the mathematics taught*
- *Thinks intuitively as well as conceptually about quantitative material, using an absolute minimum of memorization*
- *Reads the math text with a high level of comprehension*
- *Willingly works to improve their mathematical communication skills to justify solutions*
- *Thinks and learns independently*
- *Prepares homework assignments consistently*
- *Takes pride in the presentation and correctness of work*
- *Has developed strong organizational skills*
- *Has developed the ability to stay on-task and in focus during a variety of classroom activities: teacher demonstrations, student demonstrations, class discussions, small group work, and lab activities*
- *Is seldom absent*

Diploma Requirements: three credits, including Algebra 2 and Geometry, or their departmental approved equivalent with courses beyond this level.

EA Mathematics Course Prerequisites and Placement Guidelines

Python for Data Science

- *Algebra I*

Honors Algebra 2

- *Honors Geometry or bridge equivalent*
- *Teacher recommendation*
- *Department Chair approval*

AP Statistics

- *Honors Algebra II, or Algebra II with an A- or above*
- *Teachers recommendation*
- *Department Chair approval*

Honors Pre-Calculus AB

- *Honors Algebra II or bridge equivalent*
- *Teacher recommendation*
- *Department Chair approval*

Honors Pre-Calculus BC

- *Honors Algebra II or bridge equivalent*
- *Teacher recommendation*
- *Department Chair approval*

Honors Linear Algebra

- *Honors PreCalculus, or Precalculus with an A- or above*
- *Teacher recommendation*
- *Department Chair approval*

AP Calculus AB

- *Honors Pre-Calculus AB or bridge equivalent*
- *Teacher recommendation*
- *Department Chair approval*

AP Calculus BC

- *Honors Pre-Calculus AB or bridge equivalent*
- *Teacher recommendation*
- *Department Chair approval*

Multivariable Calculus

- *BC Calculus*
- *Teacher recommendation*
- *Department Chair approval*

Calculus Based Probability and Statistics

- *Calculus and AP Statistics*
- *Teacher recommendation*
- *Department Chair approval*

Algebra 1.
Full year, one credit.
Students in III Form with some previous Algebra, who may need a further strengthening of basic algebra skills before moving ahead, will be placed in an Algebra 1 section. The course covers manipulating expressions, solving linear and quadratic equations, and graphing skills are among the themes developed. It is expected that students from this section will go on to Geometry in IV Form, but they will need to complete their Algebra 2 requirement in V Form. Summer coursework in Geometry and Algebra 2 is offered for strong performing Algebra 1 students who want the opportunity to work ahead.

Geometry.
Full year, one credit.
This is a full year course in deductive Geometry that focuses on the concepts of basic logic while building an understanding of the essential geometric principles and applications in one, two, and three

dimensions. Methods of proof and problem-solving are stressed throughout the course. Topics include congruence, similarity, parallelism, inequalities, right triangle trigonometry, area, and volume.

Honors Geometry.
Full year, one credit.
With the concept of proof as central to the course, the emphasis here is on logical thinking and precision of mathematical language. Students will cover the material of Geometry with greater rigor including additional units in coordinate geometry, logic, locus, and oblique triangle trigonometry. Like all honors level courses, more is expected of these students in terms of both industry and insight.

Algebra 2.
Full year, one credit.
Algebra 2 is a demanding course that expands upon the material covered in Algebra 1. Building on knowledge of linear functions, quadratic and other polynomial functions, logarithmic and exponential functions are studied. Included are equations with irrational and complex solutions, rational exponents, and rational expressions. Functions and their transformations, data analysis, pattern recognition, function rules, and applications are stressed along with an ongoing development of manipulative proficiency and efficiency.

Honors Algebra 2.
Full year, one credit.
This course is intended for those students who have a strong background in algebra and an appetite for mathematical challenges. It covers the material of Algebra 2 with greater depth and at a quicker pace. The curriculum goes beyond Algebra 2 by including additional units in sequences and series, conic sections, probability and statistics. **This course is open to students who have successfully completed Honors Geometry or its bridge course equivalent, and have teacher recommendation and department chair approval.**

Python for Data Science.
One semester; one-half credit.
Python is a programming language used widely for data science. Companies are using Python to harvest insights from their data and gain a competitive edge. In Python for Data Science you will learn about powerful ways to organize and manipulate data, as well as data science tools to start your own analyses to make conclusions and predictions. The foundations of statistical thinking can be more readily realized with the help of technology, allowing for rapid application and extension. With the power of Python-based tools, your statistical analysis will go beyond the basics and allow you to better understand what your data indicates. This course is designed for Python beginners. **This course counts towards your computer science requirement.**

Descriptive Statistics and Inferential Statistics.
One semester, one-half credit.
Full year, one credit (Listed on transcript as "Statistics").

Students may take this course as a one-year course or as individual semester-long courses. The fall semester will cover multiple topics in basic statistics. Students will learn how data is manipulated to extract information for public policy and persuasive arguments. Specific topics will include graphical displays, data descriptions of central tendencies and variability, standardized scores, bivariate data exploration, and categorical data analysis. The second semester will delve into the basic laws of probability and specific probability models. Topics will include discrete and continuous distributions and the expected values and variances. We will be taking a deeper look at Bernoulli trials, binomial distributions, geometric distribution, and the normal distributions. The course will incorporate experimental design and statistical inference for both a proportion and a mean.

Advanced Placement Statistics.
Full year, one credit.
Open to students who have completed **Honors Algebra II, or Algebra II with an A- or better accompanied by a teachers recommendation**, this course is designed to provide students with a basic but solid understanding of the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The built-in statistical features of the graphing calculator help facilitate the manipulation and interpretation of real-world data. The course will prepare students for the AP Statistics exam. Depending on a student's score, he/she may earn college credit for a full semester of statistics. (Note: Statistics is a required course for many different college majors, including all the social sciences, life and physical sciences, education, psychology, business, economics, and communications.)

Functions and Trigonometry.
Full year, one credit.
This course is specifically designed for students who would benefit from reviewing, enhancing, and extending their knowledge of algebra before studying topics including polynomial, rational, exponential, and logarithmic functions, analytic geometry, and trigonometry.

Pre-Calculus.
Full year, one credit.
Intended for students who have successfully completed Algebra 2 and Geometry, this course offers the challenge of extending and synthesizing the skills developed earlier. This is a course in functions. Beginning with a quick review of quadratic functions, the course explores other polynomial functions, trigonometric, exponential, and logarithmic functions and their applications. It is here that the power of the graphing calculator becomes particularly exciting.

Honors Pre-Calculus AB.
Full year, one credit.
This course is for students of proven interest and ability and provides a thorough preparation for the AP/AB Calculus course. Here, again, greater mathematical facility is expected. The course covers all of the themes of Pre-Calculus described above, but in greater depth and at a quicker pace in order to make room for an introduction to the concept of limit that is the foundation of calculus. **This course is open to**

students who have successfully completed Honors Algebra 2 or its bridge-course equivalent, and have teacher recommendation and department chair approval.

Honors Pre-Calculus BC.
Full year, one credit.
In addition to all of the topics described in Honors Pre-Calculus AB, the class will explore the techniques of differential calculus including limits, continuity, derivatives, optimization, curve sketching, and related rates. The pace of the course is necessarily swift, and a great deal of mathematical courage is expected. **This course is open to students who have successfully completed Honors Geometry and Honors Algebra 2, or its bridge course equivalent, and have teacher recommendation and department chair approval.**

Honors Linear Algebra.
Full year, one credit
This course covers systems of linear equations, vector and matrix operations, Gauss-Jordan elimination, geometric interpretations, determinants, the Invertible Matrix Theorem, LU factorizations, real and complex vector spaces, basis and dimension, rank-nullity theorem, change of basis, Eigentheory, diagonalization. Additional topics will vary but may include applications including linear optimization, more theoretical topics including the butterfly theorem and Gram-Schmidt orthogonalization, or hybrid topics such as singular value decomposition. To enroll, students must have completed a course in Precalculus, **either with Honors status or with an A- or better**, and secure permission of the instructor and department chair. **Note: This course does not replace Calculus.** This is an honors credit course.

Calculus.
Full year, one credit.
This full year calculus course begins with the development of the concept of limit and explores the techniques of differential and integral calculus. Derivatives and integrals are manipulated with an eye toward selected applications in physics and business. The class is open to students who have completed Pre-Calculus.

Advanced Placement Calculus (AB).
Full year, one credit.
This course is based upon the AB Advanced Placement Syllabus, which covers the first semester of college calculus. Students explore and master topics including limits, continuity, rates of change, differentiation rules and techniques, implicit differentiation, linear approximations, logarithmic differentiation, L'Hopital's Rules, related rates, problems of optimization, Intermediate Value Theorem, Mean Value Theorem, curve sketching, applications of derivatives, Riemann sums, the Fundamental Theorem of Calculus, definite and indefinite integrals, areas in the coordinate plane, volumes of solids and applications of integration. The expectation is for students to work at the college level, maintaining a rigorous pace and committing a serious and sustained effort. They will explore calculus from the numerical, analytical, intuitive, and graphical perspectives with an emphasis on clear and concise written support and explanations of their work. Each student is required to sit for the AP exam in May.

Depending on a student's score, he/she may earn college credit for a full semester of calculus. This course is open to students who have successfully completed Honors Pre-Calculus AB or its bridge course equivalent, and have teacher recommendation and department chair approval.

Advanced Placement Calculus (BC).
Full year, one credit.
This course is based upon the BC Advanced Placement syllabu, which covers the first two semesters of college calculus. Topics include all of the differential and integral calculus of the AB course as well as further techniques of integration, parametric equations, power series, and tests for convergence. In order to cover the additional topics, the course is faster paced. The expectation is for students to work at the college level, maintaining a rigorous pace and committing a serious and sustained effort. They will explore calculus from the numerical, analytical, intuitive, and graphical perspectives with an emphasis on clear and concise written support and explanations of their work. Each student is required to sit for the AP exam in May. Depending on a student's score, he/she may earn college credit for a full semester of calculus. **This course is open to students who have successfully completed Honors Pre-Calculus BC or its bridge course equivalent, and have teacher recommendation and department chair approval.**

Honors Calculus-based Probability and Statistics.
Full year, one credit.
This course examines many of the topics covered in AP Statistics, but at greater depth and freely making use of techniques from Calculus. The course will explore random variables, densities and distributions, sampling, the Central Limit Theorem, and an introduction to Bayesian priors. Additional topics will be chosen according to student and instructor interest, but may include nonparametric tests and a theoretical comparison of estimators. To enroll, students must have completed or be currently enrolled in courses in Statistics AND Calculus, and secure permission of the instructor and department chair.

Honors Multivariable Calculus.
Full year, one credit.
This class offers students who have **completed AP Calculus BC** the opportunity to explore mathematics beyond the scope of the usual high school course sequence. It strives to deepen the broad array of techniques they developed in their pursuit of BC Calculus by solidifying their skills in a variety of natural mathematical extensions of single-variable Calculus. Topics are chosen from such areas as three-dimensional geometry and vectors, space curves and motion in space, partial differentiation, multiple integration, line and surface integrals, and the theorems of Green, Gauss, and Stokes. Time-permitting, additional topics may be chosen from the study of Differential Equations. This course is an honors credit course.

- Modern Languages -

Mrs. Erin Bilbao, Chair
Mrs. Amy Brotschul
Ms. Cristina Deirmengian
Ms. Sophie Fu
Mrs. Christele Furey
Mrs. Lauren Golden
Mr. Jamison Monahan
Mrs. Pamela Rudolph
Mr. Andrew Shimrock
Mr. Ke Yi
Mrs. Mireya V. Yaros

The World Language Department aims to provide a rigorous program, guiding students to become proficient speakers, readers, listeners and writers of French, Spanish or Mandarin. We define proficiency as the ability to negotiate meaning in the target language as appropriate to the level. Our classrooms are active, student-centered environments where appreciation for the cultures of the countries where the languages are spoken are spoken is emphasized. Our primary goal is to teach students to communicate with and relate to members of other cultures, thereby fostering the empathy necessary to be a responsible global citizen.

After Level 1, French and Spanish students who meet the requirements detailed in each course description may enroll in Honors courses. Upon enrolling in the Honors track, students make a commitment to a more rigorous and demanding course of study. All Mandarin classes are designated as "Regular" with an option to earn Honors credit retroactively through additional work within the course. Details are provided in Mandarin course syllabi.

French 1
Full year, one credit
Level 1 is the first of two "foundation"- building levels. The French Level 1 course aims to develop proficiency in speaking, listening, writing, and reading. Speaking activities include questions and answers

based on vocabulary and grammar points studied, directed dialogues and skits, open-ended questions and answers, and student presentations. Students learn the fundamentals of grammar and master vocabulary essential for communicating about themselves and daily life. Finally, students are introduced to the cultures of the countries where the target language is spoken. In addition to using a text program as the primary guide for Level 1, the course is supplemented with extensive use of authentic materials from native speakers.

Foundations of Mandarin
Full year, One credit
Mandarin 1 is for students with no experience in the language. This course aims to develop awareness and understanding of fundamentals of the Chinese language, including the sound structure, tones, and the Chinese pictographic/logographic writing system. It also aims to begin building students' proficiency in speaking, listening, reading and writing. Students learn the fundamentals of grammar, character recognition and naming in order to build the vocabulary essential for communicating about themselves and daily life. Finally, students are introduced to cultures of the countries/regions where Mandarin is spoken. In addition to the textbook, the course is supplemented with extensive authentic materials from native speakers. Students successfully completing this course will progress to Mandarin 1 next year.

Spanish 1
Full Year, one credit
Level 1 is the first of two "foundation"- building levels. The Spanish Level 1 course aims to develop proficiency in speaking, listening, writing, and reading. Speaking activities include questions and answers based on vocabulary and grammar points studied, directed dialogues and skits, open-ended questions and answers, and student presentations. Students learn the fundamentals of grammar and master vocabulary essential for communicating about themselves and daily life. Finally, students are introduced to the cultures of the countries where the target language is spoken. In addition to using a text program as the primary guide for Level 1, the course is supplemented with extensive use of authentic materials from native speakers.

French 2
Full year, one credit.
This course builds upon the foundation from French 1 or successful completion of the EA MS World Language program in French. This course adds content regarding the francophone world through readings and audio-visual presentations. Proficiency in speaking and listening is emphasized. Cultural readings, level-appropriate literary selections, videos, realia and art are examples of the "content"-oriented materials used in French 2. This course also continues to familiarize students with cultures where the target language is spoken.

Mandarin 2 (Honors designation possible through additional coursework)

Full year, one credit.

Mandarin 2 continues the development of skills introduced in Middle School or Mandarin 1. Instruction of expanded grammatical structures enables students to communicate in a variety of contexts, while increased vocabulary allows students to interact with more complex themes. Students will engage in interpretive, interpersonal, and presentational activities with increasing independence, and they will continue to practice writing in Chinese characters. Technological resources and tools will be utilized to facilitate cultural exploration and provide opportunities for practice. Grading for the course will follow standards set by the instructor and the World Language Department. Students in the course may retroactively earn an Honors designation by completing additional coursework as detailed in the course syllabus.

Spanish 2.

Full year, one credit.

This course builds upon the foundation from Spanish 1 or successful completion of the EA MS World Language program in Spanish. This course adds content regarding the Hispanic world through readings and audio-visual presentations. Proficiency in speaking and listening is emphasized. Cultural readings, level-appropriate literary selections, videos, realia and art are examples of the "content"- oriented materials used in Spanish 2. This course also continues to familiarize students with cultures where the target language is spoken.

Honors French 2

Full year, one credit

Honors French 2 is an accelerated course in which grammar, vocabulary, and culture are integrated into chapter themes that are current and relevant. There is greater emphasis on spontaneous language production through speaking and writing, and the context of the course is presented through a Francophone cultural perspective.

Prerequisites:

Recommended: A- or above in French 8 Hons, A or above in French 8 or French I

Required: Skills assessment, departmental approval

Honors Spanish 2

Full year, one credit

Honors Spanish 2 is an accelerated course in which grammar, vocabulary, and culture are integrated into chapter themes that are current and relevant. There is greater emphasis on spontaneous language production through speaking and writing, and the context of the course is presented through a Hispanic cultural perspective.

Prerequisites:

Recommended: A- or above in Spanish 8 Hons, A or above in Spanish 8 or Spanish I

Required: Placement test, departmental approval

French 3

Full year, one credit.
Level 3 in French continues to build on the foundational skills from Level 2. It includes a review of grammar, and transitions into more advanced structures of the language. Culture will be emphasized in this level through a variety of short films and videos. The principal goal of level 3 continues to be communication, with a heavy emphasis on vocabulary development and grammar to enhance and refine oral and written proficiency.

Mandarin 3 (Honors designation possible through additional coursework)
Full year, one credit.
Mandarin 3 is an intermediate language course that continues to focus on oral proficiency. This course combines accelerated training in vocabulary, grammar, reading comprehension, and intensive oral practice through class discussions, presentations, skits, and oral reports on assigned topics. Current affairs and world news in Chinese will be incorporated into class to supplement the textbook. Grading for the course will follow standards set by the instructor and the World Language Department.
Students in the course may retroactively earn an Honors designation by completing additional coursework as detailed in the course syllabus.

Spanish 3
Full year, one credit.
Level 3 in Spanish continues to build on the foundational skills from Level 2. It includes a review of grammar, and transitions into more advanced structures of the language. Culture will be emphasized in this level through a variety of short films and videos. The principal goal of level 3 continues to be communication, with a heavy emphasis on vocabulary development and grammar to enhance and refine oral and written proficiency.

Honors French 3
Full year, one credit
Honors 3 is an intermediate course in which students continue to learn and use French to explore and discuss 21st Century themes such as nutrition and diet, young people, the environment and global warming, technology and social media, art, immigration, new families, among others. Vocabulary, culture, recent trends and literary selections are related to the chapter themes for which authentic materials from international and domestic sources in the target language are used. As members of today's global society, students in this course not only learn how to understand the target language, but they also acquire a broader world view, so that they may understand and appreciate the diversity of our world. We also strive to reinforce their analytical, communicative, collaborative and presentational skills.
Prerequisites:

- Departmental approval
- B or above in Honors French 2
- A- or above in French 2 and successful completion of summer coursework

Honors Spanish 3

Full year, one credit

Honors 3 is an intermediate course in which students continue to learn and use Spanish to explore and discuss 21st Century themes such as nutrition and diet, young people, the environment and global warming, technology and social media, art, immigration, new families, among others. Vocabulary, culture, recent trends and literary selections are related to the chapter themes for which authentic materials from international and domestic sources in the target language are used. As members of today's global society, students in this course not only learn how to understand the target language, but they also acquire a broader world view, so that they may understand and appreciate the diversity of our world. We also strive to reinforce their analytical, communicative, collaborative and presentational skills.

Prerequisites:

- Departmental approval
- A- or above in Honors Spanish 2
- A or above in Spanish 2, successful completion of summer work and skills assessment

French 4

Full year, one credit

In the fourth year of French, students will apply their prior knowledge and skills to communicate effectively in both oral and written forms while continuing to focus on reading and listening comprehension. Students will study Francophone culture in-depth, and will apply their cultural knowledge in skits, essays and dialogues. Some new grammar will be introduced, as well as a wide range of vocabulary.

Mandarin 4 (Honors designation possible through completion of additional coursework)

Full year, one credit

The fourth year of Chinese study is dedicated to the development of reading and writing longer, more formal passages and engaging in more meaningful discussions in Chinese. The textbook is used in conjunction with authentic reading materials to give students a working vocabulary and expand their grammatical foundation. There is a continued emphasis on differentiating between colloquial and formal Chinese. Topics include holidays, traveling, and history. Students in the course may retroactively earn an Honors designation by completing additional coursework as detailed in the course syllabus.

Spanish 4

Full year, one credit

In the fourth year of Spanish, students will apply their prior knowledge and skills to communicate effectively in both oral and written forms while continuing to focus on reading and listening comprehension. Students will study Hispanic culture in-depth, and will apply their cultural knowledge in skits, essays, debates and dialogues. Some new grammar will be introduced, as well as a wide range of vocabulary.

Honors French 4

Full year, one credit

This course is intended to prepare students for the AP French Language and Culture course. Honors French 4 aims to develop students' skills through the exposure of short stories, poetry, cultural readings, podcasts and film. In order to enhance oral proficiency, students will contribute to discussions, participate in conversation and present a variety of cultural topics. Students will also be prompted to write poetry, compositions and essays in order to enrich style and tone.

Prerequisite:

- Departmental approval
- B+ or above in Honors French 3
- A in French 3, successful completion of summer coursework and skills assessment

Honors Spanish 4

Full year, one credit

This course is intended to prepare students for the AP Spanish Language and Culture course. Honors Spanish 4 aims to develop students' skills through the exposure of short stories, poetry, cultural readings, podcasts and film. In order to enhance oral proficiency, students will contribute to discussions, participate in conversation and present a variety of cultural topics. Students will also be prompted to write poetry, compositions and essays in order to enrich style and tone.

Prerequisite:

- Departmental approval
- A- or above in Honors Spanish 3
- A in Spanish 3, successful completion of summer work and skills assessment

French 5

Full year, one credit

This course continues to develop student comprehension and production of French through the context of Francophone culture. Skills are honed through the use of short and full-length films, frequent readings and authentic recordings that require a deeper level of understanding and analysis. Participation in daily discussions is paramount and students should be prepared to share their opinions and engage others in meaningful conversation daily to improve comfort with the language.

Mandarin 5 (Honors designation possible through additional coursework)

Full year, one credit

Mandarin 5 is an advanced course designed to broaden students' views on Chinese language and culture, and is designed for students who are committed to taking their language skills to the next level. Students continue to use their textbook as a guide in the process of character and grammar pattern acquisition and supplement with various authentic texts, videos, and songs. Students learn through reading short stories by important Chinese and Taiwanese writers, watching clips of modern Chinese television shows, reading newspaper articles, and discussing Chinese life and culture in the target language. Students in the course may retroactively earn an Honors designation by completing additional coursework as detailed in the course syllabus.

Spanish 5

Full year, one credit
This course continues to develop student comprehension and production of Spanish through the context of Hispanic culture. Skills are honed through the use of short and full-length films, frequent readings and authentic recordings that require a deeper level of understanding and analysis. Participation in daily discussions is paramount and students should be prepared to share their opinions and engage others in meaningful conversation daily to improve comfort with the language.

Advanced Placement French Language and Culture
Full year, one credit
The AP French Language and Culture course is designed to promote intermediate high to advanced low proficiency and to enable students to explore culture in contemporary and historical contexts. The course focuses on communication across interpersonal, presentational and interpretive modes, encourages cultural awareness and incorporates themes such as Global Challenges, Science and Technology, Contemporary Life, Personal and Public Identities, Families and Communities, and Beauty and Aesthetics. Instructional content will reflect interests shared by students and their teacher (the arts, current events, literature, and sports). In addition to textbooks, authentic materials are heavily incorporated.

The course helps students develop language skills that can be applied beyond the language courses in further study and everyday life.
Prerequisites:

- Departmental approval
- B or above in Honors French 4
- Skills assessment and summer course work

Advanced Placement Spanish Language and Culture
Full year, one credit
The AP Spanish Language and Culture course is designed to promote intermediate high to advanced low proficiency and to enable students to explore culture in contemporary and historical contexts. The course focuses on communication across interpersonal, presentational and interpretive modes, encourages cultural awareness and incorporates themes such as Global Challenges, Science and Technology, Contemporary Life, Personal and Public Identities, Families and Communities, and Beauty and Aesthetics. Instructional content will reflect interests shared by students and their teacher (the arts, current events, literature, and sports). In addition to textbooks, authentic materials are heavily incorporated. The course helps students develop language skills that can be applied beyond the language courses in further study and everyday life.
Prerequisites:
Required:

- Departmental approval
- Rising Senior with A- or above in Honors Spanish 4, successful completion of summer coursework

Or

- Rising Senior with A or above in Spanish 4 or Honors Spanish 3, successful completion of AP Spanish Summer Bridge Course

- Religion-

Fr. Tim Gavin, Chair
Dr. Christopher Row

Mission Statement: We Engage the Mind to Nurture the Heart and Spirit.

At The Episcopal Academy, religion plays a key role in the day-to-day life of the school. Spiritual development and self-discovery is a journey, an ongoing process of growing in relationship with one another, ourselves and God. As teachers of religion we do not aim to change one's religious affiliation or non-belief in a supreme being. Instead, through character development and academic study, we encourage our students to consider and think critically about their own faith journey, and those of others, so they can come to understand why they and others believe what they believe. We strive to teach students the necessity of empathy, compassion, and inclusion in order to live lives of purpose, faith, and integrity.

In order to have a basic understanding of scripture and the Judeo-Christian tradition, all students beginning with the Class of 2025 are required to take Biblical Literature. The students also have a number of electives from which to choose including Ethics, World Religions, Genocide, and Deliver Us from Evil. There are also a variety of religious studies courses offered in the summer when students can also fulfill their religion requirements.

Also, all religion courses require a departmental essay that expects students to apply what they are learning in their course of study to a given situation, case study, or scenario.

Biblical Literature. (Required of All Students Starting with Class of 2025)
One semester, one-half credit.
Biblical Literature is a survey course of The Bible. The course takes a literary approach to the stories of The Bible, examining them through theological and literary analysis, ethical assessment, and anthropological approaches. We aim to develop discussion around the human and divine condition in order to ascertain a better understanding of humanity and the divine nature of God. Based on the readings, students will learn how to ask critical questions about the world and how people interact with one another. In addition, students will not so much seek to find the "right" answers to these critical

questions but will learn how to support and develop a valid response. Many of the stories we cover in class will help the students create new insights to what motivates people to behave the way they do. In addition, the students will examine how God interacts with the world.

Armed with knowledge of the Hebrew and Christian scriptures, students will explore the use of The Bible in contemporary times. The course is designed to develop a deep thirst for academic inquiry and the joy of intellectual exploration. Formal assessments include but are not limited to quizzes, essays, projects, and presentations. Students are required to write a five paragraph essay, which addresses one of the major concepts covered in the course. A primary goal of the course is to develop cosmopolitan students who can navigate an increasingly interconnected and religious world.

Ethics: Past, Present and Future.
One semester, one-half credit.
This course in Systematic Ethics covers the thinking and perspectives on decision making of such as Epicurus, Aristippus, Plato, Augistine, Aquinas, John Stuart Mill, Jean Paul Sartre, Nietzsche, Hobbes, Locke, Rousseau Midgely, Fletcher, and as well as the ethics of religious views. The course focuses on helping students to understand why they make the choices they make. It offers students a variety of ethics platforms from which they can analyze the decision-making process of any given dilemma. The course uses a case study approach to apply the various ethical theories and philosophy we study. In addition, students will study the effects and systematic causes of poverty, using the various ethical theories and models to alleviate poverty. Finally, the students will study a current issue such as human trafficking and develop strategies to spread awareness of the problem, to identify where it's happening, and to prevent it from happening in the future.

World Religions: Eastern Thought.
One semester, one-half credit.
World Religions is a survey course, which will cover a wide range of religions. Students will study Islam, Hinduism, Buddhism and Sikhism. There are three primary objectives of this course. As a class, we will cover a brief history of each religion and the customs and beliefs of its practitioners. This background knowledge will provide the context in which to recognize and analyze the profound impact that each of these religions has had on the world. One only has to pick up a history textbook or turn on the evening news to see religion's influence at work. Through their examination of these religions, students will also have the opportunity to reflect on their own personal relationship with religion.

Genocide.
One semester, one-half credit. (Cross-listed with History)
The philosopher George Santayana warned: "Those who cannot remember the past are condemned to repeat it." With this warning in mind, students in this course study the recurring phenomenon of genocide from ethical, historical, philosophical, psychological, sociological and theological perspectives. Lamentably, current events are utilized extensively in our class discussions. The course begins with an examination of genocide's twentieth- century roots in the Armenian Genocide, then progresses through the work of Raphael Lemkin—the man who coined the word "genocide." A large portion of the course is

dedicated to examining the genocide of National Socialist Germany. We conclude the course with a view into the "auto-genocide" of Pol Pot's Cambodia and contemporary genocides around the world. Through the course, students are asked to assay these genocides against the classical ethical models at the heart of this course: Psychological and Ethical Egoism; Utilitarianism; Kant and Respect for Persons; Social Contract Theory; Rawls' Theory of Justice; and Virtue Ethics. An examination of the International Criminal Court, and the rise of meta-national law, is also undertaken. Students discuss the nightly readings in seminar format, and thoughtful daily class engagement is expected. A prime goal of the course is to empower students with the skills necessary to combat genocide proactively in the world. Genocide is a Religion course which is cross-listed in the course offerings of the History Department.

Deliver Us From Evil: God and the Problem of Evil.
One semester, one-half credit.
Is evil real, or do bad things "just happen"? Why do bad things happen to good people—and why, so often, do evil people seem to triumph? How can an all- powerful, all- knowing, and all-loving God allow evil to exist? Does the presence of evil in our universe prove that God does not exist—or is that assertion just spurious reasoning? How does a thoughtful consideration of the Incarnation of God in Christ change our understanding of evil? Through Biblical, Patristic, classical and contemporary readings, these age-old questions—and others like them—are addressed. Students will discuss together the nightly readings in seminar format, and thoughtful daily class engagement is expected. A prime goal of the course is to empower students with the ability to identify and defeat evil—both in the world and in themselves.

- Science -

Mrs. Grace Limaye, Chair
Mr. Dan Baxter
Dr. Katalin Colyer
Mrs. Cheryl Isleib Cossel
Mrs. Jennifer Jones
Mrs. Susie Lim
Mr. George Lorenson
Mr. Edward Mathisen
Mr. Bryan McDermott
Mrs. Christy Rheam
Mr. Jeffrey Rubel

The science department aims to expose all students to a well-rounded foundational experience in the natural sciences. We believe that students should become scientifically literate global citizens. The science faculty is passionate and committed to nurturing student interests and developing their scientific acumen. In our science classrooms students build models, design experiments, analyze data, and work together to share ideas and information. Students are encouraged to develop their knowledge and skills via traditional pedagogies, emerging technologies, meaningful laboratory experiences, inquiry-based activities, and research opportunities.

The course teams collaborate regularly to ensure our students receive the strongest curricular instruction. Our graduation requirements consist of three credits of hands-on, lab-driven courses informed by national standards and designed to best support our mission to develop curious and skilled young scientists. Our new science curriculum sequence offered to rising freshmen and sophomores for the 2021-22 school year will continue to emphasize scientific investigation within the core disciplines, feature greater choice, flexibility and challenge for students as well as highlight the importance of environmental stewardship. We also offer Advanced Placement and elective options to help students further pursue their interests in science. Placement is based on several factors including past performance in science and math classes, teacher recommendations and placement test results. Students must fulfill the course prerequisites prior to enrollment. Course prerequisites are listed in the description for each course. Course prerequisites may be adjusted only by the science department chair in consultation with department colleagues.

Biology Overview

Simply put, biology is the study of life. Through biology, we seek to understand the structure and processes driving all living things from microscopic organisms to humans to the largest whales. These processes include the function, growth, origin, interaction, evolution and distribution of organisms. Biology addresses many fundamental questions. How did life arise on Earth? How has it changed over time? How do living things derive energy or move? What makes living things similar or different? It is difficult to study life without using the tools of math or concepts from physics and chemistry or considering the history of science.

Biology Level 1.

One semester, one-half credit.

Course Prerequisites

- All 9th grade students are eligible for this course.

Biology Level 1 is an introductory level course covering some of the the major levels of biological organization. Students study a range of topics in evolution, cell biology, genetics, DNA structure and biochemistry. Students will be introduced to the traditional core content in order to gain a strong foundation for the field; however, they will also be challenged to apply this material to their own lives. Furthermore, this course has a strong focus on the lab component, in which critical thinking and the scientific method are emphasized. A culminating project will link environmental changes to core biology curriculum.

Biology Level 2.
One semester, one-half credit.
Course Prerequisites

- Completion of Biology Level 1.

Biology Level 2 is the second course in the biology sequence. Students study a range of topics including cellular energy, advanced genetics concepts, protein synthesis, and genetic mutations. Students will build upon their foundation from Biology Level 1 and gain a deeper understanding of the themes in biology. Hands-on lab exercises incorporating the skills learned in the Biology Level 1 course will be implemented. Critical thinking and the scientific method will continue to be emphasized.

Honors Level Biology 2 (or Biology Level 2H).
One semester, one-half credit.
Course Prerequisites

- Biology Level 1 teacher recommendation.
- Final Grade B+ or better in Biology Level 1.
- Final Exam Grade B+ or better in Biology Level 1.

Biology Level 2H is a rigorous, honors level second course in the biology sequence. Students study a range of topics including cellular energy, advanced genetics concepts, protein synthesis, genetic mutations, gene expression, and biotechnology. Students will build upon their foundation from Biology Level 1 and gain a deeper understanding of the themes in biology. Hands-on inquiry-based lab exercises incorporating the skills learned in the Biology Level 1 course will be implemented. Students will learn how to write college-level lab reports and they will design and carry out their own experiments. Departmental approval is required.

Chemistry Overview
Chemistry is the study of matter -- the physical material that makes up our world. Through chemistry, we identify the properties of matter, how and when matter combines or separates and how it harnesses energy. By understanding the ingredients of matter -- the elements -- we can predict how substances will interact when they come in contact or how forms of energy affect changes among them.

Chemistry Level 1.
One semester, one-half credit.
Course Prerequisite

- All 9th grade students are eligible for this course.

Chemistry Level 1 is an introductory course covering the behavior of matter, atomic and molecular structure, the periodic table, chemical bonding, stoichiometry, kinetic molecular theory, gases and electrochemistry. Models are used to help students visualize the atomic world. Students will also develop quantitative problem-solving skills and engage in hands-on laboratory experiences.

Chemistry Level 2.
One semester, one-half credit.

Course: Prerequisite

- Completion of Chemistry Level 1.

Chemistry Level 2 is the second level chemistry course designed to study chemical concepts and develop problem- solving skills. An emphasis will be placed on critical thinking, laboratory exploration, and mathematical manipulation. Topics covered include intermolecular forces, solution chemistry, reaction rates, chemical equilibrium, acids and bases, and thermodynamics. Models are used to help students visualize the infinitesimally small atomic world. Students will continue to develop quantitative problem-solving skills and engage in hands-on laboratory experiences.

Honors Chemistry Level 2 (Chemistry Level 2H)
One semester, one-half credit.

Course Prerequisites

- Chemistry Level 1 teacher recommendation.
- Final Grade B+ or better in Chemistry Level 1.
- Final Exam Grade B+ or better in Chemistry Level 1.

Honors Chemistry 2 is the second level chemistry course designed to study chemical concepts in-depth and develop sophisticated problem-solving skills. An emphasis will be placed on critical thinking, laboratory exploration, and mathematical manipulation. Topics will be covered in greater depth and include reaction rates, chemical equilibrium, acids and bases, and thermodynamics. Students will build models in order to visualize the infinitesimally small atomic world. An emphasis is placed on quantitative problem-solving and in-depth laboratory exploration.

Earth and Environmental Science Overview

Environmental science is the study of the effects of both natural and artificial processes on the Earth. Involving aspects of all of the major branches of science (chemistry, biology and physics), environmental science explores how the natural world works, how humans interact with the environment, and also how humans affect the environment.

Earth and Environmental Science Level 1.
One semester, one-half credit.

Course Prerequisites

- All 9th grade students are eligible for this course.

Environmental Science Level 1 introduces students to the topics and methods that underlie environmental science. Students will study ecology, water, energy, and climate to examine the complex relationship between people and the environment. Through a systems approach to studying Earth, students will study environmental interrelationships, develop an understanding of sustainability, and uncover their own beliefs about the role of humans on Earth. In developing students' understanding of the natural world, the course will consider the environment on both global and local scales through a variety of lab investigations, on-campus field studies, and creative projects.

Physics Overview

Physics is the science that seeks to describe and mathematically model our observations of nature. From motion to electricity, and light to gravitation, physics addresses the question of "How does that work?" Through physics, we develop tools and techniques that help us understand, explain, and predict phenomena we see in the world around us each day. From the devices that keep us engaged to the motions of the world around us, threads of physics connect all elements of our universe.

Physics Level 1.

One semester, one-half credit.

Course Prerequisites

- All 9th grade students are eligible for this course.

Physics Level 1 is an introduction to the world of physics. Over the course of the semester, we will look at particular areas within the broad scope of physics. Each of these units constitutes a significant exploration of phenomenon that can be measured and analyzed, and then tied to our central recurring theme of energy. Individual units will cover topics such as light, kinematics, Newtonian forces, and current electricity. A direct examination of energy in its many forms will serve as the final unit of the course. In addition, Physics Level 1 includes a long-form project tied to environmental studies. The project will include a self-directed series of interconnected laboratory experiments that will consider the generation, storage, and transfer of energy within our human society, including both renewable and non-renewable sources.

Physics Level 2.

One semester, one-half credit.

Course Prerequisites

- Completion of Physics Level 1.

Physics Level 2 builds upon the topics and concepts explored initially in Physics Level 1. This includes more comprehensive investigations of mechanics, including momentum, rotation, gravitation, and projectile motion. Novel topics are considered as well, built upon the framework laid out in Physics Level 1, allowing exploration of electricity and magnetism, including electromagnetic induction. Students will explore these topics through inquiry labs, hands-on activities and explorations. Student assessment is based upon labs (including practicals and challenges), quizzes and tests throughout the semester as well as a final exam.

Honors Physics Level 2 (or Physics Level 2H).

One semester, one-half credit.

Course Prerequisites

- Physics 1 teacher recommendation.
- Final Grade B+ or better in Physics Level 1.
- Final Exam Grade A- or better in Physics Level 1.

Physics Level 2H is an expanded and fast-paced dive into physics, picking up where Physics Level 1 left off. It begins with a reexamination of mechanics through new lenses, including momentum, rotation, gravitation, and projectile motion. These topics will include mathematical analysis and problems solving

of more complex scenarios that include concepts initially explored in Physics Level 1. In addition, Physics Level 2H will investigate topics within electricity and magnetism and their application in our current society. Finally, students will explore the world of modern physics, including use of Bohr's atoms, emission spectra, and other noted theories pioneered during the modern era. Student assessment is based upon labs (including practicals and challenges), quizzes and tests throughout the semester, as well as a final exam.

Physics courses only offered to rising juniors or seniors in 2021-2022:

Physics. (Rising juniors or seniors only)
Full year, one credit.
Course Prerequisites
• Completion of Chemistry.
Physics is a lab-based introductory survey course with an emphasis on the qualitative over the quantitative. Knowledge of basic algebra and geometry is required. Laboratory work is integrated with the investigated topics. The course is divided into two semesters: first semester is primarily mechanics, while the second semester consists of electricity and magnetism, as well as optics.

Honors Physics. (Rising juniors or seniors only)
Full year, one credit.
Course Prerequisites
• Placement test score of 80% or better or completion of placement lab.
• Grade A- in grade-level Chemistry or B in Honors Chemistry.
• Completion or concurrent enrollment in Pre-Calculus.
Honors Physics is an introductory study of physics that emphasizes the quantitative as well as the qualitative. Laboratory work is integrated with the investigated topics. A solid foundation in algebra is required. The course is divided into two semesters: the first semester is primarily mechanics (including waves and sound), while the second semester consists of electricity and magnetism, light and optics, and modern physics (such as quantum, atomic, and nuclear physics). Knowledge of geometry and trigonometry is helpful. Successful completion of a departmental placement test or laboratory assessment is a prerequisite. Departmental approval is required.

Advanced Placement Courses in Science
Advanced Placement (A.P.) courses offer students the opportunity to deepen their knowledge of the material introduced in introductory courses. Enrollment in these courses is by department approval prior to returning their course selection form. Aspiring A.P. students must discuss their interest with both their current science teacher and the teacher of the desired A.P. course as part of the approval process. Enrollment in these courses is limited and should involve thoughtful planning by students and advisors.

A.P. Biology.
Full year, one credit.
Course Prerequisites for rising juniors and seniors:

• Grade of B+ in Honors Biology, A- in grade-level Biology, or teacher approval.
• Students must enroll in the course by August 1 due to the summer work requirement.

Course Prerequisites for rising sophomores:
• Biology Level 1 teacher recommendation.
• Final grade of A or better in Biology Level 1.
• Final exam grade of A- or better in Biology Level 1.
• Completion of or concurrent enrollment within the same year in Chemistry Level 1 and Physics Level 1.
• Students must enroll in the course by August 1 due to the summer work requirement.

A.P. Biology is designed to be the equivalent of a two-semester undergraduate biology course in its quality and sophistication. This course will contribute to the development of the students' abilities to think clearly and to express their ideas, orally and in writing, with an emphasis on integrating inquiry, reasoning, and quantitative skills. Students will design several experiments and master plans for data collection and analysis, apply mathematical routines, and connect concepts in and across primary domains of science (biology, chemistry, physics). Curricular content is framed around "Four Big Ideas," (evolution, cellular process, genetics and information transfer, and ecology) which encompass core scientific principles, theories and processes governing living organisms and biological systems. Primary emphasis will be on developing an understanding of concepts rather than on memorizing terms and technical details. Essential to this conceptual understanding are the following: 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.

A.P. Chemistry.
Full year, one credit.
Course Prerequisites for rising juniors and seniors:
• Chemistry teacher recommendation.
• Concurrent enrollment in or completion of Physics.

Course Prerequisites for rising sophomores:
• Chemistry Level 1 teacher recommendation.
• Final grade of A or better in Chemistry Level 1.
• Final exam grade of A- or better in Chemistry Level 1.
• Completion of or concurrent enrollment within the same year in Biology Level 1 and Physics Level 1.

A.P. Chemistry covers material equivalent to a two-semester undergraduate course. Topics include the structure of matter, kinetic theory, stoichiometry, acids- base theories, electrochemistry, chemical equilibria, chemical kinetics, and thermodynamics. Particulate-level modeling and qualitative explanations/descriptions will be stressed, in addition to the necessary quantitative analysis for each component of the course. Students are expected to think critically, analyze data, carry out and design lab

experiments, and write comprehensive lab reports. Labs include both guided inquiry and traditional procedures.

A.P. Physics 1 and 2.
Full year, one credit.
Course Prerequisites for rising juniors and seniors:
• Completion of Physics, or Honors Physics.
• Science Teacher Recommendation.
• Grade A- in grade level Physics, or B in Honors Physics.

Course Prerequisites for rising sophomores:
• Physics Level 1 teacher recommendation.
• Final grade of A or better in Physics Level 1.
• Final exam grade of A- or better in Physics Level 1.
• Completion of or concurrent enrollment within the same year in Biology Level 1 and Chemistry Level 1.

A.P. Physics 1 and 2 includes topics in both classical and modern physics. It includes an in-depth look at topics from Honors Physics as well as several new areas. Emphasis will be placed on kinematics, dynamics, momentum energy, fluid mechanics, thermodynamics, electricity, magnetism, optics, and modern physics. The course is designed to prepare students for both the A.P. Physics 1 and the A.P. Physics 2 examinations through a combination of lab work and inquiry-based problem solving.

A.P. Physics C: Mechanics.
Full year, one credit.
Course Prerequisites for rising juniors and seniors:
• Recommended for students considering a physical science or engineering as a course of study in college.
• Completion of Pre-Calculus BC or any Calculus Course.
• Science Teacher Recommendation
• Completion of Physics, or Honors Physics.
• Grade A+ in grade level Physics, or A- in Honors Physics.

Course Prerequisites for rising sophomores:
• Physics Level 1 teacher recommendation.
• Final grade of A or better in Physics Level 1.
• Final exam grade of A- or better in Physics Level 1.
• Completion of Pre-Calculus BC or any Calculus Course.
• Completion of or concurrent enrollment within the same year in Biology Level 1 and Chemistry Level 1.

A.P. Physics C: Mechanics will be taught over the course of the year, with a focus on the A.P. material in the fall semester. In addition to the calculus-based material laid out in the A.P. curriculum, students will engage and learn about other advanced physics topics not included in the A.P. Physics C curriculum,

including (but not limited to): selected topics in mechanics, fluid dynamics, thermodynamics, advanced and solid-state circuits, and modern/quantum physics. These additional topics would be the focus of the later part of the spring semester in addition to continuing to prepare students for the A.P. test in May. At the end of the year, students are required to take the A.P. Physics C: Mechanics Exam.

A.P. Environmental Science.
Full year, one credit.
Course Prerequisites for rising juniors and seniors:
• Concurrent enrollment in or completion of Physics.
• Completion of Biology and Chemistry.
• Biology or Chemistry teacher recommendation.
• If student is a Junior: Grade A in a grade level Chemistry or B+ in an Honors Chemistry in Sophomore year.
• If student is a Senior: Grade A in a grade level physics or B+ in an honors physics in Junior year.
• Students must enroll in the course by August 1 due to the summer work requirement.

Course Prerequisites for rising sophomores:
• Environmental Science 1 teacher recommendation.
• Final grade of A or better in Environmental Science Level 1.
• Completion of or concurrent enrollment within the same year in Biology Level 1, Chemistry Level 1 and Physics Level 1.
• Students must enroll in the course by August 1 due to the summer work requirement.

The goal of the A.P. Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human- made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study. Topics include: earth systems (atmosphere, water, soil); ecosystems, energy flow, nutrient cycling, ecological succession; population concepts; land and water use (agriculture, mining, development); energy resources and consumption; and pollution and climate change.

Elective Courses in Science
Elective courses are open to all students who meet the course prerequisites.

Honors Anatomy and Physiology.
Full year, one credit.
Course Prerequisites
• Concurrent enrollment or completion of Physics.
• Consult with course teacher for recommendation.

• Grade B+ in the prior year's science course.

Honors Anatomy and Physiology is a course designed to provide students with an in-depth look at human anatomy/physiology. The course will focus on understanding human body systems and the coordinated effort of these systems to promote human health and well-being. Students will be guided as they explore the connection between human biology in health and disease. The course will employ a combination of demonstrations, experiments, lectures, discussion of current events, and activities. This is an experiential-based learning course with at least one major dissection experiment per unit.

Honors Astrophysics.
One semester, one-half credit.
Course Prerequisites
• Completion of Physics and Chemistry is useful, but not essential.
• Completion of Geometry.

How did the Solar System form? What are stars made of? What is a black hole and where do they come from? How are galaxies moving, and how do we know? Is there life beyond the Earth?

Honors Astrophysics enables students to engage with mankind's journey from space-observer to space-traveller, while giving opportunities for the direct application of principles studied in both Chemistry and Physics. Building on familiar concepts including linear mechanics, gravity, optics, atomic models, and waves, the course steps into new areas such as angular mechanics, stellar evolution, telescopy, nuclear fusion, cosmology, and the search for extraterrestrial life.

The course lends itself to developing student communication in addition to numerical skills, interpersonal skills as well as independent study, academic research alongside laboratory measurement. Students will learn how to navigate the night sky, build telescopes and estimate the age of the universe, among other skills. We will meet to study the night sky, looking for planets, moons, stars, and galaxies, even with homemade telescopes. Possible field trips to Fels Planetarium at The Franklin Institute and the Strawbridge Observatory at Haverford College will enhance student understanding of the cosmic realm. Assessment of progress will be based on labs, research, projects, topic quizzes and a final exam.

Bio-Chemistry: Pharmaceuticals.
One semester, one-half credit.
Course Prerequisites
• Completion of Biology.

Students are eager to make connections between the processes they learn in biology and their daily lives. The ubiquity of over-the-counter medications, prescribing of infection-specific medicines, and epidemic of narcotics abuse each present the unique convergence of biology with sociology. Students will gain a perspective on the pharmaceutical industry while examining the historical and current ramifications of drug development and dispersal to the public.

This interdisciplinary course will examine the pharmaceutical industry from drug discovery to patient delivery including pharmacology, the study of potential side-effects, and addiction. The pharmaceutical industry and its regulation are also explored. Students will investigate current events involving the pharmaceutical industry's business practices and societal effects and present their findings in a variety of formats for class discussion. Observation, collaboration, communication, laboratory techniques, and problem-solving are integrated into each section. Class activities will include case studies, data analysis, critical reading of scientific journal articles, laboratory investigations, and problem-based learning about current issues in the field of pharmaceuticals.

The course will culminate with a final project which includes a paper and presentation. Students will examine one modern pharmaceutical and discuss the target treatment, isolation and manufacturing, side-effects including metabolism, and industry and consumer information.

Environmental Sustainability.
Full year, one credit.
Course Prerequisites
• Completion of Biology.
This interdisciplinary course that will examine environmental issues through multiple lenses with a theme of moving toward sustainable practices both locally and globally. The course will focus on observation, collaboration, communication, and problem-solving. Class activities will include field studies on campus, lab investigations, design challenges, and problem-based learning on current environmental issues. We will also incorporate a citizen science investigation. A second strand of the course will be the strengthening of science literacy. Students will take turns analyzing environmentally related news stories in order to assess their accuracy and scientific validity throughout the year by creating a class blog.

Principles of Engineering
One semester, one-half credit.
Course Prerequisites
• Completion or concurrent enrollment in Physics.
• Completion or concurrent enrollment in Pre-Calculus.
In this one-semester course, students will gain an understanding of the fundamentals of the engineering design process, an appreciation of the far-reaching impacts of engineering, a grasp of the four main fields of engineering, and a better understanding of the profile of an engineer, including the typical training of an engineer and valuable soft skills. The focus of this class will be the engineering design process, including defining the problem, identifying criteria for success, discussing potential ethical issues, brainstorming conceptual designs, and formulating the final design. Students will work in teams on a design problem, and in the process will experience the engineering design approach, as well as learn the importance of managing the design process and communicating design outcomes.

By the end of this class, students will:
• Understand how to apply the engineering design process.

• Have constructed a prototype to solve an engineering problem.
• Have explored multiple fields of engineering.

- III Form Health and Seminar Curriculum -

The III Form year begins with an experiential education program in the mountains of North Carolina. The purpose of this experience is to "inspire our students to discover and develop their potential to care for themselves, others, and the world around them through a challenging experience in unfamiliar settings." This experience brings the class together in a profound way and provides the platform for our III Form advisory, health seminars, and leadership programs. All students are required to fully participate in the III Form Health, Wellness, and Leadership Curriculum to earn an Episcopal diploma.

The III Form advisory groups are formed from the Outward Bound crews. The advisory groups meet briefly every morning during homeroom, as well as once every eight days for an extended period of time. In addition to this, all 9th grade students will complete the 9th grade seminar course that will cover topics such as effective communication skills, identity and equity, time management and organizational skills, academic integrity, a variety of mental health topics, and social media.

A graduation requirement, the Outward Bound experience forms the foundation for future leadership opportunities available to our students. Leadership opportunities at EA provide our students with a practical way to continue and develop Outward Bound's core themes of leadership, compassion, self-reliance, and service.

- Community Service -

From serving the hungry to after-school homework help at a neighboring community center to planting trees to prevent stream erosion at an environmental center, Episcopal Academy students are challenged to lead lives of purpose, faith and integrity.

Service strengthens and supports academic subjects while the learning enhances the quality and value of the service. Service programs are offered after school, on the weekends and in the evenings. Summer and May Term service travel trips offer students immersive experiences and opportunities to see and serve with communities beyond our campus and city.

Students can choose to participate in Community Service/Fitness for a semester and still meet an athletic requirement. Two days in the gym and two days of after-school tutoring with younger students in low-income, after-school programs, allow our students to share their time, energy and talents.

While Episcopal Academy does not have a service-hour requirement, we do recognize students who participate in our service efforts throughout the year and during a special Chapel program.

- Athletics -

Student participation in competitive athletics enhances the overall educational mission of the school. Team accomplishments enhance the spirit and morale of the teams themselves and of the school as a whole. The goals of the athletics program include:

- Development of physical fitness
- Development of athletic skills
- Enhancement of leadership
- Development of good sportsmanship
- Demonstration of cooperative teamwork
- Demonstration of respect for others
- Promotion of enjoyment of participation
- Encouragement of a variety of athletic activities (e.g.i ndividual and team sports; contact and lifetime sports; weight training/fitness and interscholastic competition)
- Fielding viable, competitive teams in interscholastic competition

Ultimately, the emphasis of the athletic program is on both participation and competition. Competitive athletics will be new to some students and familiar to others. The goal is to develop young men and women of character who are transformed by their athletic experiences so they can transfer these valuable lessons into all areas of their lives.

Interscholastic Teams

- **Fall**
  - Boys: Cross Country, Football, Golf, Soccer, Water Polo
  - Girls: Cross Country, Field Hockey, Tennis, Soccer, Water Polo
- **Winter**
  - Boys: Basketball, Dance, Ice Hockey, Squash, Swimming, Indoor Track, Wrestling
  - Girls: Basketball, Dance, Squash, Swimming, Indoor Track
- **Spring**
  - Boys: Crew, Lacrosse, Track, Baseball, Tennis

- Girls: Crew, Golf, Lacrosse, Softball, Track

The Athletic Requirement

Upper School students must fulfill their athletic requirements each year in order to graduate. While there are many options available to students to meet these requirements, there are limitations with regard to the number of manager positions and athletic contracts a student may receive, as well as how robotics can be used with regard to athletics.

<u>For all US students, the following apply:</u>

- All **9th and 10th grade students** must fulfill an athletic requirement in two seasons. Fitness may be used for one season (2 sports; 1 fitness).
- All **11th grade students** must fulfill an athletic requirement in one season. Fitness may be used for two seasons (1 sport; 2 fitness).
- All **12th grade students** must also fulfill an athletic requirement in one season. However, they may use one fitness and one "cut" for the other two seasons (assuming they have not received an "Unsatisfactory" grade in a prior sport season; see below).

FITNESS / MANAGER POSITIONS / DRAMA OPTIONS / ROBOTICS

<u>What Constitutes an Athletic Requirement (Limitations and Restrictions):</u>

- Students may only use a team manager position to fulfill an athletic requirement once per academic year.
- With approval from the Athletic Director and US Head, an athletic contract can be used as a fitness. Contracts cannot be substituted for a full athletic requirement (details on contracts is below).
- Therefore, 9th and 10th grade students will only be granted a contract for one season (they are eligible for only one fitness per year).
- It is possible that an 11th or 12th grade student will be granted a contract in two seasons, because they may use two fitness options, but it is highly unlikely.
- Robotics may NOT be used as a student's only athletic requirement unless they are a senior.
- Serving as a team manager may NOT be used as a student's only athletic requirement unless they are a senior.
- Students may NOT use robotics and a team manager position to fulfill their athletic requirements for one year.

CONTRACT PROGRAM

The Episcopal Academy offers a large variety of sports and activities. However, there are students who have found athletic pursuits outside our program or are engaged at such a level of skill that

playing in our program would be considered regressive (Students who have already been recognized as an All-League player).

As a result, students who meet these criteria, as determined by the Athletic Director and US Head, can apply for an Independent Sports Contract. Under special circumstances, students in good standing may be approved by the Athletic Department for an athletic contract for one sports season. An independent contract, approved only by the Athletic Director, is the equivalent of a fitness. In addition, 9th grade students are ineligible for a contract for the fall season and students who participate outside of EA in sports the school does not offer can apply for an alternative fitness agreement through the same process as an independent sports contract. The same rules and guidelines apply for an alternative fitness agreement

Application forms (a Google form sent to the student-athlete upon request) for an independent sports contract must be completed and submitted by the deadline for each season. These deadlines are:

- **Fall Season - Aug 10th**
- **Winter Season - November 1st**
- **Spring Season - February 10th**

Once the application has been completed and submitted by the required deadline, the Athletic Department will consult with the external trainer/coach and student to verify the demands of the proposed program. The student may also wish to discuss this decision with his/her advisor and Form Dean. A detailed syllabus or training program must be approved. A one-page report may be requested within two weeks of the conclusion of the season for which the contract was granted. A student who fails to submit a report will be ineligible to apply for another contract and will receive an "Unsatisfactory" grade for that sports season (see below). Check with the Athletic Department for additional details.

All activities under the Independent sports contracts or alternative fitness options must be supervised by an adult coach, trainer or professional. Students must fulfill a minimum of 8 hours a week during the entire athletic season. None of the students activities should take place on EA's campus during domino period or sports block.

UNSATISFACTORY GRADE FOR SPORTS

At the conclusion of each sports season, every respective coach will submit grades for each student-athlete on their roster. Should a student receive a "U," or unsatisfactory grade, for the season, that student will lose their senior cut. Should the student in question be a senior in their last sports season, that student will have to complete a comparable athletics/fitness program approved only by the Athletic Director and Upper School Head before receiving their diploma.

MEDICAL EXCUSAL

Students who have medical waivers from athletics (full documentation must be provided by a physician) are still required to participate in the after-school activities/community outreach program two days a week.

HOMEWORK POLICY

Purpose

With an instructional purpose at its core, homework presents an additional opportunity for learning that allows students to practice and review classroom concepts. It is also an excellent means by which students can be exposed to upcoming material or stretched beyond classroom discussions. It is designed to be purposeful, relevant, rigorous, and meaningful.

By promoting growth in organizational skills, self-confidence, independence, self-discipline, and personal responsibility, homework encourages students to assume ownership of their learning and education.

Daily Homework Guidelines

The majority of students enroll in six courses. With the new schedule, they will have, on average, four classes per day. As many as ninety minutes of unassigned time during the school day (not including the Domino block), affords students an opportunity to complete at least an hour of homework on campus each day.

Depending on their academic load, students will generally have between two and four hours of homework per night,

In assigning homework, the following guidelines must be followed:

Course Level	**Total homework that can be assigned per class session**	**Average per day - 5 class sessions over 8 days (per class)**	**Total homework given over 8-day school rotation (per class)**
Regular	Up to 35 minutes	Approximately 20 minutes	2.5 to 3 hours
Honors	Up to 55 minutes	Approximately 35 minutes	4 to 4.5 hours

AP	Up to 70 minutes	Approximately 45 minutes	5.5 to 6 hours

In addition, the following must also be followed:

- No assigned work of any kind can be due on days when a student does not have class.
- Homework cannot be assigned on days when class is not in session (for example, additional homework emailed to students on a day when class did not meet)
- However, classes scheduled to meet on days that are cancelled due to weather or some other unforeseen event may assign homework in keeping with the policies stated above.
- Teachers are not permitted to double-up on homework (for example, assigning homework over two days totaling the equivalent of two days worth of work when class meets on only one of these days).
- All homework must be assigned before the end of the school day (3:45 pm) if due the following class period.

Homework Over School Breaks

- All homework intended to be done over break must be assigned at least one week in advance of that break.
- All regular and honors classes are permitted to only assign one class session's homework equivalent over a school break, regardless of the length of that break. For regular classes this equates to up to 35 minutes total for any break; for honors classes this equates to up to 55 minutes total for any break.
- However, AP classes are permitted to assign an additional class session's homework equivalent (up to 70 minutes) if the break exceeds five school days. Thus, the following homework equivalents for any AP course would be:
    - Fall Break (Columbus Day Weekend) – Up to 70 minutes
    - Thanksgiving Break – Up to 70 minutes
    - Christmas Break – Up to 140 minutes
    - Winter Break – Up to 70 minutes
    - Spring Break – Up to 140 minutes