

PERK

THE PERKIOMEN SCHOOL

2017-2018

Course Catalogue

PERK

THE PERKIOMEN SCHOOL

OUR MISSION

The Perkiomen community inspires students to risk becoming their best.

OUR PRINCIPLES

Our Students

Perkiomen students learn through experience and active inquiry. Each student is challenged to excel academically. Students are exposed to new ideas and to friendships spanning differing races, socio-economic groups, religions, interests, and learning styles; thus, preparing them for a competitive world.

Our Faculty

Perkiomen's faculty members are academically talented, with a passion to connect with and challenge students to discover their individual strengths and to develop their greatest potential.

Our Program

Perkiomen has always been and always will be about changing lives. We are committed to creating experiences that will prepare our students to excel in college and life in a world community.

Our Family

Perkiomen's community of staff, alumni, families, and friends are dedicated to nurturing relationships in an unshakable partnership with the School for the best interest of the student.

Our Campus

Perkiomen is an inviting, safe home that inspires a sense of community and belonging.

Our Motto

SOLVITUR VIVENDO (IT IS SOLVED THROUGH LIVING)

Risk being your best every day at Perk. In preparing individuals for success in college and life, we nurture common sense, a sense of justice, a sense of honor, a sense of responsibility and a sense of humor.

Typical Student Schedules for Grades 6-8

Grade 6 schedule:

1. English – Reflections on Literature and History
2. Mathematics – Pre-Algebra
3. History – Reflections on Literature and History
4. Science – Sixth Grade Science(spiral curriculum of Physics, Chemistry & Biology)
5. World Language – Introduction to Latin
6. Design Laboratory
7. Fine Arts – Theater, Art, Music

Grade 7 schedule:

1. English – Quest for Self
2. Mathematics – Algebra One
3. History – Foundations of U.S. History
4. Science – Seventh Grade Science
5. World Language – Introduction to Chinese
6. Design Laboratory
7. Fine Arts – Theater, Art, Music

Grade 8 schedule:

1. English – Engaging Communities
2. Mathematics – Advanced Algebra One
3. History – American Government and Global Issues
4. Science – Eighth Grade Science
5. World Language – Typically Level 1: Chinese, German, Latin or Spanish Students enrolled in TLC or ESL 1/ESL 2 may qualify for exception.
6. Design Laboratory
7. Fine Arts – Theater, Art, Community, Character and Leadership

Please note all Middle School students have the option to add Band or Chorus into their schedules.

Typical Student Schedules for Grades 9-11

Grade 9 Schedule:

1. English – Foundations of Literature and Composition or ESL English Literature & Composition
2. Mathematics – Appropriate level: Algebra 1, Advanced Algebra I, Geometry, Honors Geometry Algebra 2, Honors Algebra 2/Trigonometry
3. History – Foundations of the Modern World or ESL World History
4. Science – Physics or ESL Physics
5. World Language – Appropriate level. Students enrolled in TLC or ESL may qualify for exception.

*Please note: Some students select a sixth course and typically choose from various Fine and Performing Arts selections or one of the foundational courses for the Entrepreneurship Program.

Grade 10 Schedule:

1. English – World Literature/ Honors World Literature or ESL English
2. Mathematics – Appropriate level: Geometry/Honors Geometry, Algebra 2, Honors Algebra 2/Trigonometry
3. History – Modern World History or ESL World History (eligible students may select AP World History or AP Human Geography)
4. Science – Chemistry (eligible students may select to dual enroll in Biology)
5. World Language – Appropriate level. Students enrolled in TLC or ESL may qualify for exception.

*Please note: Some students select a sixth course and have the option of various Fine and Performing Arts selections or one of the foundational courses for the Entrepreneurship Program or chose to double in science or math. Some students may select to fulfill the religion requirement during one term.

Grade 11 schedule:

1. English—American Literature or ESL English (eligible students may select AP English Language and Composition)
2. Mathematics – Appropriate level (eligible students may select AP Calculus or AP Statistics)
3. History – United States History (eligible students may select AP United States History or other AP options if they plan to take US History as a senior)
4. Science – Biology (eligible students may take AP sciences and/or other electives)
5. World Language – Appropriate level. Students enrolled in TLC or ESL may qualify for exception.

*Please note: Some students select a sixth course and have the option of various Fine and Performing Arts selections or one of the cross-listed courses for the Entrepreneurship Program or chose to double in a discipline. Some students may select to fulfill the religion requirement during one term.

Typical Student Schedule for Grade 12 or PG

Grade 12 schedule:

1. English—Senior Literature and Composition Seminar (eligible students may select AP English Language and Composition or AP English or Literature and Composition)
2. Mathematics— Appropriate level (eligible students may select AP Calculus AB/BC or AP Statistics)
3. History – Electives or US History (eligible students may select AP United States History or other AP options if they have taken US History as a junior)
4. Science –Eligible students may select AP courses or electives.
5. World Language – Appropriate level. Students enrolled in TLC or ESL 1/ESL 2 may qualify for exception.
6. History Elective to fulfill religion requirement (one trimester)

*Please note: Some students select a sixth course and have the option of various Fine and Performing Arts selections or one of the cross-listed courses for the Entrepreneurship Program or chose to double in a discipline. Some students may select to fulfill the religion requirement during one term.

The specific course of study for a first year senior or postgraduate will be determined with the Academic Office. Entering seniors and postgraduates should arrive with a solid academic background in order to meet The Perkiomen School requirements for graduation. Seniors and postgraduates are required to pass all of their courses each term.

Graduation Requirements

A minimum of 60 course credits are required for graduation, including:

ENGLISH

(12 credits)

All students are required to complete four years of English study for graduation. ESL composition and literature courses taken in tandem satisfy one year of English study. Qualified students may apply for enrollment in AP English Language (traditionally as juniors) or AP English Literature (traditionally as seniors). Qualified ESL students traditionally take AP English Language as seniors.

HISTORY

(10 credits)

All students are required to complete three and one third years of History study for graduation, including one required year of United States History or AP United States History. Students traditionally complete Foundations of the Modern World as freshman, Modern World History as sophomores, and either United States History or AP United States History as juniors. The combination of three History term courses in either their junior or senior year can also satisfy the completion of one year of History study. Students may take Art History or AP Art History but NOT both. Students are required to complete one term (equal to one credit) of an eligible religion elective for graduation.

SCIENCE

(9 credits)

All students must complete three years of science for graduation. The science department subscribes to the Physics First model which means that students traditionally complete Physics as freshmen, Chemistry as sophomores and Biology as juniors. Students enrolled in ESL Composition and ESL Literature classes may be required to take ESL-1110 Physics.

MATHEMATICS

(9 credits)

All students are required to complete three years of mathematics up through Algebra 2 or the equivalent. The traditional sequence is: Pre-Algebra, Algebra 1, Geometry/Honors Geometry and Algebra 2/Trigonometry or Honors Algebra 2/Trigonometry, Pre-Calculus/Honors Pre-Calculus, Calculus/AP Calculus AB, AP Calculus BC. International students planning to enroll in AP Statistics must have completed ESL Advanced classes or have the approval of the ESL Program Director.

WORLD LANGUAGES**(6 credits)**

Upper school students are required to take two consecutive years (in Upper School) of the same world language regardless of whether or not they took world language courses in middle school. Three or four years are preferable for college admission. Qualified ESL students who complete their ESL classes, as sophomores are encouraged to take two consecutive years of the same world language in their junior and senior years.

FINE AND PERFORMING ARTS**(3 credits)**

Students are required to complete one year of fine and performing arts study. Band and chorus meet every other day and taken in tandem satisfy the fine and performing arts credit. Two consecutive years of band or chorus also satisfy the fine arts requirement.

Other Courses**(11 credits)**

Students must supplement the required 49 course credits with 11 additional course credits of their choosing.

PHYSICAL EDUCATION

The Perkiomen School does not offer physical education classes for upper school students. To satisfy the physical education requirement students must participate in afterschool activities. One trimester must be an interscholastic athletic team. There are several options each trimester.

HEALTH

The Perkiomen School fulfills the health requirements through the school's Wellness Curriculum.

DIPLOMA OPTION for Entrepreneurial Distinction

Upon successful completion of their capstone students that meet all the requirements of the Entrepreneurial Program (see details in section on Entrepreneurial Program) will receive a special Entrepreneurial Distinction on their diploma and their transcript will reflect the course title of Entrepreneurship Program and Capstone with a letter grade of A and six credits.

Entrepreneurial Program

All Perkiomen students will have access to all of the components of the Entrepreneurial Program. Those seeking formalized recognition of their work will fulfill the following requirements:

- 1) Fulfill all Perkiomen School graduation requirements
- 2) Academic Component: 9 entrepreneurial credits
 - a. Foundations of Entrepreneurship (3 credits)
 - AND-
 - b. Two cross listed entrepreneurial courses (6 credits) or a pre-approved equivalent.
- 3) Complete a Capstone project and supporting portfolio (6 credits)

Academic Component: In addition to Foundations of Entrepreneurship, students will take two cross-listed classes. These classes will count toward graduation requirements in their home department, as well as toward the entrepreneurial experience.

ENT-100 Foundations of Entrepreneurship

This project based year-long course will provide the base for students to succeed in the Entrepreneurial Program. Students will undergo a process of personal reflection as they develop an understanding of what excites and engages them. They will examine how they interact with the world, cooperate and work with others, and lead and manage a process to completion. The course will emphasize specific skills in business development such as marketing, finance and management.

Cross-Listed Courses:

Fine Arts Department

- Graphic Design & Marketing
- Honors Graphic Design & Marketing
- Additive Manufacturing
- Music Production

History Department

- AP Economics
- AP Psychology

Math Department

- Computer Programming
- Advanced Algebra with Financial Applications
- AP Statistics
- AP Computer Science Principles

Science Department

- Engineering & Applied Science
- Biotechnology: Applications of Research

English Department

- Creating the Edge: Entrepreneurship Literature

Capstone Project: Students will engage in a significant and rigorous enterprise. The capstone project will be the synthesis of all of the knowledge a student has developed during their education. Capstone projects may be an individual or group enterprises.

DIPLOMA OPTION for Entrepreneurial Distinction

Upon successful completion of their capstone students that meet all the requirements of the Entrepreneurial Program (see details in section on Entrepreneurial Program) will receive a special Entrepreneurial Distinction on their diploma and their transcript will reflect the course title of Entrepreneurship Program and Capstone with a letter grade of an A and six credits.

English

ENG-010 Reflections on Literature and History

Reading, writing, vocabulary, grammar, and literary analysis form the core of the literature-based curriculum, which includes vocabulary, free choice reading, grammar through application, literary terms, poetry and prose, drama, creative writing, essay writing. Students are guided in the process of reading and writing through a variety of genres and on a variety of themes relevant to this age level. In addition, some selections relate to themes and events of historical relevance studied in History 010. Favorite books from the year include *Schooled*, Gordan Korman; *Roll of Thunder, Hear My Cry*, Mildred Taylor; and *Crispin*, Avi.

ENG-020 Quest for Self

Reading, writing, vocabulary, grammar, and literary analysis form the core of the literature-based curriculum, which includes vocabulary, free choice reading, grammar through application, literary terms, poetry and prose, drama, creative writing, and essay writing. Favorite books from the year include *Mississippi Trial, 1955*, Crowe; *The Outsiders*, Hinton; and *The Boy in the Striped Pajamas*, Boyne. In addition, some selections relate to themes and events of historical relevance studied in History 020.

ENG-030 Engaging Communities

Reading, writing, grammar, vocabulary, and literary analysis form the core of the literature-based curriculum, which includes vocabulary, free choice reading, grammar through application, literary terms, poetry and prose, drama, creative writing, and the essay. Students are guided in the process of reading and writing through a variety of genres and on a variety of themes relevant to their age. Through reading literature and writing, students develop and explore a sense of self and identity with a focus on the role of the individual and his or her responsibilities within a community. Many of the book selections relate to themes and content from the history curriculum. Favorite books from the year include *Monster*, Myers; *Romeo and Juliet*, Shakespeare; *To Kill a Mockingbird*, Lee; and *Animal Farm*, Orwell and *Diary of a Part-time Indian*, Alexie.

ENG-100 Foundations of Literature and Composition

This course introduces the variety of skills students need to be effective readers, writers, and thinkers. In an in-depth study of classical literature, students are guided to discover motifs and archetypes in all genres. Furthermore, students study composition in its many forms, from the expository to the creative. This course also includes development in grammar/mechanics oral presentation and vocabulary. Texts may include *The Odyssey*, Homer; *The Alchemist*, Coelho; *Oedipus the King*, Sophocles; *A Thousand Splendid Suns*; Hosseini; *Macbeth*, Shakespeare; and *Beowulf*.

ENG-200 World Literature

This course is a study of diverse perspectives, both classical and contemporary. While reading major works of world literature from the five major genres—short stories, essays, novels, poetry, and drama—students learn in-depth critical thinking and writing skills. Writing assignments are varied, and the review of grammar/mechanics is stressed. Texts may include *The Inferno*, Dante; *The Taming of the Shrew*, Shakespeare; *Candide*, Voltaire; *Canterbury Tales*, Chaucer; *The Kite Runner*, Hosseini; *Purple Hibiscus*, Adichie; and *The White Tiger*, Adiga.

ENG-201 Honors World Literature

This course is open to qualified students upon the recommendation of the English Department based on previous performance in English class.

This course is a study of diverse perspectives, both classical and contemporary. While reading major works of world literature from the five major genres—short stories, essays, novels, poetry, and drama—students learn in-depth critical thinking and writing skills. Writing assignments are varied, and the review of grammar/mechanics is stressed. The basic goals and content of this honors course closely match those of the regular World Literature class, but more challenging works and more demanding writing assignments help to meet the needs of qualified students. Texts may include *Oedipus the King*, Sophocles; *Macbeth*, Shakespeare short story selections; *I Know Why the Caged Bird Sings*, Angelou; *Fences*, Wilson; *Does My Head Look Big In This?*, Abdel-Fattah and *American Born Chinese*, Luen Yang.

ENG-300 American Literature

This course enhances the critical reading and writing skills introduced and developed during English 100 and 200, respectively. American literature, from its roots through the twenty-first century, is read concurrently with the study of United States history to emphasize the innumerable ways in which prose, poetry, literature, and nonfiction texts represent America's diverse history, culture, and society. Texts may include *The Narrative of an American Slave*, Douglass; *The Adventures of Huckleberry Finn*, Twain; *Passing*, Larsen; *Into the Wild*, Krakauer; *One Flew Over the Cuckoo's Nest*, Kesey and *Flight*, Alexie

Perkiomen Senior English Electives

Seniors enrolled in either AP English Language and Composition or AP English Literature and Composition may take English electives as single courses. However, seniors using electives as their full year in English need to enroll in a combination of three (3) electives that will carry a full year course title and grade.

The full year course title will be Senior Literature and Composition; please note that all combinations include Writing with Purpose. Below are the combinations of electives being offered for the 2016-2017 school year.

ENG-500 Senior Literature and Composition

Term 1: ENG 415 Writing with Purpose

This course is divided into three unique term offerings. In the fall, all students take a “core” course designed to meet the developing literary and compositional needs of Perk seniors: essay writing (to include the college essay), critical reading, vocabulary acquisition, resume writing, interview skills, business writing protocols and other real-world applications. In the winter and spring, students are given a menu of courses from which to choose. These courses are designed to both challenge and invigorate the mature student who is curious about exploring new perspectives, from public speaking to creative writing and everything in between.

Term 2: ENG 414 Graphic Novel

This term course is intended to acquaint students with the history of the graphic novel, as well as the vast graphic novels representing social justice issues. Students will gain an understanding of key elements of a graphic novel: layout, drawing and style, word and images, characterization, tone, setting, and theme. Through the understanding of the key elements, students will be able to analyze the depiction of social justice issues that are prevalent in today’s society. Course participants will have daily class discussions on the development of the graphic novel as well as its approach to storytelling with a focus on social justice issues. There will be several response papers, quizzes/tests, and one final project. Texts may include: *American Born Chinese*, Yang; *Americus*, Reed; *Maus*, Spielman; *A.D.: New Orleans After the Deluge*, Neufield; *How I Made it to Eighteen*, Tracey; *This One Summer*, Tamaki; *Yummy*, Greg

Term 3: ENG 419 Humor in Literature and Film

This course is intended to acquaint students with the nature of comedy and humor in literature and film. Students will gain an understanding of different categories of humor: comedy, wit, satire, parody, irony, and farce. Through the understanding of humor, students will be able to explore various literary forms and social, political, and cultural contexts that define humor and to assess the extent to which literary humor is or is not translatable across cultures or ethnic communities, or other groups. Culminating projects will include: response papers, presentations, and a research assignment. Texts may include: *The Importance of Being Earnest*, Wilde; *The Taming of the Shrew*, Shakespeare; *How to be Black*, Thurston; *Slaughterhouse Five*, Vonnegut; *A Confederacy of Dunces*, Toole; *How to be Black*, Thurston

ENG-501 Senior Literature and Composition

Term 1: ENG 415 Writing with Purpose

See previous description under ENG-500

Term 2: ENG 417 Creating the Edge: Entrepreneurship Literature

“Logic will get you from A to B. Imagination will take you everywhere.”-
Albert Einstein

This course is designed to provide a space to allow things to happen through both a practical and creative approach, so that students become acquainted with the concept of entrepreneurship. Starting with acquiring a common vocabulary, exploring various entrepreneur case studies and gaining exposure to the parameters of entrepreneurship, students will build a foundation from which to begin to formulate their own entrepreneurial vision. Built into the course is an introduction to planning, budgeting and executing individual and/or group ventures. The later part of the course will include pitching their vision to a panel of assorted business people who will critique the presented project. *Please Note: This course qualifies for both graduation requirements and the Entrepreneurship program.*

Term 3: ENG 401 Memoir: As Literature and Craft

Everyone has a story to tell in this term course. Whether a life is unconventional or relatively normal, there's bound to be something fascinating about it. That's why the contemporary memoir – everyday people telling their tales – has become such a popular phenomenon. Memoirs appear in magazines and books, and a lucky few, such as the *Glass Castle* and the controversial *A Million Little Pieces*, even make the bestseller list. Students learn how to focus their life stories, give them literary purpose, and apply such craft elements as character, plot, description, dialogue, setting, pacing, and theme. Students encounter a variety of readings and develop a greater understanding of and appreciation for memoir as a form of creative nonfiction writing. They explore creative techniques for writing and crafting memoir, including approaching and selecting a topic, research, organization, and style.

ENG-502 Senior Literature and Composition

Term 1: ENG 415 Writing with Purpose

See previous description under ENG-500

Term 2: ENG- 408 Literature: Drama

This term course provides opportunities to explore dramatic forms and techniques, using material from a wide range of sources and cultures. Students use the elements of drama to examine situations and issues that are relevant to their lives. Students study, create, perform and record monologues. Current Pulitzer nominated or winning plays will be the foundation for a project that includes reading, researching, performing a scene and reviewing a play. Examples of previous plays are: *Proof* by David Auburn, *Water By the Spoonful* by Quiara Alegria Hudes, *The Humans* by Stephen Karam, *The Flick* by Annie Baker, *Disgraced* by Ayad Akhtar, and *Clybourne Park* by Bruce Norris. They create, perform, discuss, and analyze drama, and then reflect on the experience to develop an understanding of themselves, the art form, and the world around them.

Term 3: ENG 418 Creative Writing

This term course is designed to help young writers experiment in order to find an original voice. To develop their stamina, students will work over the terms toward a portfolio of pieces in genres including poetry, fiction, and creative non-fiction. Course requirements include daily drafts or exercises in the particular genre; active participation in discussions of classmates' work; craft essays focusing on what the student can learn, borrow and personalize from a published writer of particular concern or interest as a fellow writer; a class presentation on a specific aspect of writing such as characterization, tone, point of view, scene and summary, rhythm, line, etc., that interests or challenges the student. Readings will include both instructor and student selections of relevant authors in the focus genre.

ENG-503 Senior Literature and Composition

Term 1: ENG 415 Writing with Purpose

See previous description under ENG-500

Term 2: ENG 416 Asian Literature and Film

This new course explores modern fiction in Southeast Asia. The narratives in the writing and film investigate such themes as family honor, generational conflict and cultural identity in some of the finest contemporary literature from South Korea, China, Thailand and India. Comparisons will be made into how the stories were crafted into film, thus basic film techniques will be learned. Texts may include: *A Thousand Years of Good Prayers* by Li Yiyun, *Please Look After Mom*, Kyung- Sook Shin's prize-winning novel, *Summer of Betrayal* by Hong Ying, Jhumpa Lahiri's *Interpreter of Maladies*, and *A Chant to Soothe Wild Elephants: A Memoir* by Jaed Coffin from Thailand.

Term 3: ENG 420 Fiction into Film

This course is a study of various directors' attempts to transfer masterpieces of fiction into film. Concerning both genres students will ask Gertrude Stein's question: What are masterpieces, and why are there so few of them? Students will use the famous film text, *Introduction to Film* by Thomas and Vivian Sopochnik in order to build a working foundation of terminology and focus from which to explore the genre of fiction and film. Works may include fiction by Austen, Bierce, Carter, Cowley, Doyle,

Faulkner, Forster, Fowles, Kesey, Joyce, McCullers, Morrison, Nabokov, O'Connor, Thompson, Walker, Spielberg, Woolf, Yamamoto as directed by Burton, Forman, Felini, Gilliam, Huston, Jordan, Kurasawa, Lee, Potter, and others.

ENG-490**AP English Language and Composition**

This course is open to qualified students upon the recommendation of the English Department and prepares them to take the Advanced Placement English Language and Composition exam.

AP English Language and Composition engages students in becoming skilled readers of prose written in a variety of rhetorical contexts as well as skilled writers who compose for a variety of purposes. Both their writing and their reading should make students aware of the interactions among a writer's purposes, audience expectations, and subjects, as well as the way genre conventions and their sources of language contribute to effectiveness in writing. The purpose of this course is to enable students to read complex texts with understanding and to write prose of sufficient richness and complexity to communicate effectively with mature readers.

ENG-491**AP English Literature and Composition**

This course is open to qualified students upon the recommendation of the English Department and prepares them to take the Advanced Placement English Literature and Composition exam.

AP English Literature and Composition is designed to enable students to explore how literature and its meanings, values, and socio-historical aspects are relevant to contemporary times. Through close reading and analysis of a plethora of works, ranging from Greek drama to Shakespearean sonnets to contemporary novels, drama, and poetry, students develop their understanding of how a writer uses language and technique to develop meaning. Students consider a work's structure, style, and themes as well as its figurative language, imagery, tone, diction, and syntax. Writing is an indispensable part of this course. Analytical writing may take the form of one-paragraph responses or longer, more in-depth essays and requires students to evaluate a literary work and the author's purposes through interpretation and argument. Evaluation of a student's work rests on how compellingly and persuasively the student explains and supports his or her argument.

**** Seniors who are in an AP English course are welcome to take any of the English electives as well.**

English as a Second Language

ENG-0100 Foundations of Composition

This course develops expressive English language proficiency, focusing on discussions and direct grammar instruction as well as basic vocabulary and writing development. Students complete daily assignments, using current events, school related events and short readings with an emphasis on correct pronunciation, vocabulary selection and grammar. Frequent group activities provide students with opportunities to practice speaking using a variety of primary sources and literature from other classes. Direct grammar instruction is also utilized to build vocabulary and basic writing skill. In addition, students work individually and in small groups to produce different types of projects utilizing various presentation tools.

This is a required companion course to ENG-0110: Literature and American Culture. Placement is determined by the English as a Second Language Department in consultation with the Office of Admission.

ENG-0110 Literature and American Culture

This course examines literary works written in English that explore traditional American culture. ESL students increase their reading comprehension and fluency while learning basic vocabulary, structure, and strategies that help them transition to more language challenging works or ideas. Students read from a variety of sources, such as newspaper and magazine articles, short essays and short stories. Some students may shift to a young adult novel during the third term. Reading is often done in class followed by class discussions that focus on communicating meaning and developing basic literary analysis skills. Written work is added through direct instruction on sentences and paragraphs. Emphasis is placed on reading comprehension, reading fluency, vocabulary development, and short essay writing skills.

This is a required companion course to ENG-0100: Foundations of Composition. Placement is determined by the English as a Second Language Department in consultation with the Office of Admission.

HIS-0200 Twentieth-Century History

Using a sheltered instruction protocol, this course explores twentieth-century U.S. history, beginning with discussions about life in the United States today. Students read current events and short stories that take place in different geographic and social regions of the country. As the year progresses, the class continues to explore life in the United States one era at a time, noting important cultural, political, and social changes. Along the way, the class investigates important global events and their impact on American life.

HIS-0300 World Cultures

This course focuses on major areas of the world: the United States, Canada, Mexico, Western Europe, Africa, South America, Russia, Eastern Europe, Asia, and the South Pacific. Broad acceptance and respect for other cultures are important goals. In addition, geography and map skills are reviewed, and study skills including organization, test-taking, and writing are emphasized.

ENG-1000 Intermediate English Composition

This course develops expressive English language proficiency through writing and oral presentations as well as direct grammar instruction. Students complete daily writing assignments such as reading questions, short essays, and creative pieces and focus on correctly using grammatical structures and rules within the context of writing, especially sentence and paragraph development. Frequent group activities provide students with opportunities to practice speaking using a variety of primary sources and literature from other classes. In addition, students work individually and in small groups to produce different types of projects utilizing various presentation tools.

This is a required companion course to ENG-1010: Intermediate English Literature. Placement is determined by the English as a Second Language Department in consultation with the Office of Admission.

ENG-1010 Intermediate English Literature

This course uses the literary theme "Slices of the American Pie" to examine literary works written in English that explore the lifestyles, choices, values, experiences, and perspectives of diverse people who make up our multicultural society. Intermediate ESL students increase their reading comprehension while learning basic vocabulary, structure, and strategies that help them attack difficult

works or ideas. Writing assignments focus on communicating meaning and developing basic literary analysis skills. The first and second terms utilize short stories and articles, while the third term introduces the novel.

This is a required companion course to ENG-1000: Intermediate English Composition. Placement is determined by the English as a Second Language Department in consultation with the Office of Admission.

SCI-1110 Physics

Using a sheltered instruction protocol, this course for intermediate English language learners parallels the regular Physics class. This course explores the major areas of Newtonian Mechanics and is designed to allow all students to participate regardless of previous knowledge. Incorporating experiments and current events, the hands-on, lab-friendly curriculum provides students with a thorough background in physics; enables them to practice applying this knowledge through critical analysis, design, and interpretation of scientific experiments; brings real-world applications to the classroom; and prepares students for future studies.

HIS-1200 World History

Using a sheltered instruction protocol, this course is designed to meet the needs of beginning and intermediate English language learners. Starting with ancient river civilizations, the first segment of this two part class uses a case study approach to introduce history as seen in American schools and colleges. By focusing on what defines cultures and civilizations, students work to expand both their familiarity with English as well as their historical skills. This begins with determining the validity of sources, reading primary documents, and viewing events via a cause and effect method. A short research paper introduces students to the expository research process. This course prepares students for entry into either HIS-2201 or HIS 3100 depending on grade level.

ENG-2000 Advanced English Composition

This course develops expressive English language proficiency utilizing a variety of source material within the class as well as from other classes. Students learn about and practice writing the basic components of a typical academic essay. In addition, frequent writing assignments such as reading questions, essay test questions, and creative pieces provide students with consistent practice with the writing process while addressing their individual strengths and weaknesses.

Presentations, projects, speeches, debates, and class discussions are the primary ways students practice and build their speaking and listening competencies.

This is a required companion course to ENG-2010: Advanced English Literature. To enroll in this course, returning students must have at least a B average in the intermediate-level courses and the recommendation of those teachers. Placement for new students is determined by the English as a Second Language Department in consultation with the Office of Admission.

ENG-2010 Advanced English Literature

This course uses the literary theme "The Outsider" to examine literary works written in English that explore American society from the perspective of those who do not feel quite at home due to their views, ethnicity, or place of origin. Advanced ESL students prepare for the rigors of a mainstream English class by increasing their reading comprehension while learning more advanced vocabulary, structure, and strategies that help them attack difficult works or ideas. Writing assignments focus on communicating meaning and developing more advanced literary analysis skills. The course begins with a themed short story anthology before the introduction of increasingly more challenging novels.

This is a required companion course to ENG-2000: Advanced English Composition. To enroll in this course, returning students must have at least a B average in the intermediate-level courses and the recommendation of those teachers. Placement for new students is determined by the English as a Second Language Department in consultation with the Office of Admission.

HIS-2200 Advanced World History

In the second segment of the course, students will focus on the western world starting with the Renaissance and ending with globalization. In doing so, students will be expected to write more often, utilize more complex sources, collaborate, and speak in front of their peers. The class will end with students completing a 4-6-page research paper or a 20-minute presentation on a historical topic of their choice. Prerequisite for this course is HIS-2200. This course prepares students for entry into HIS- 3100.

ENG-3000 Advanced English Plus Composition

This course is designed for second language students who have completed or partially completed ENG-2000 but, as assessed by the English as a Second Language Department, do not have the requisite English proficiency skills necessary for a mainstream English class. The class builds and strengthens expressive English language proficiency utilizing a variety of source material within the class as well as from other classes. Students practice writing a variety of academic essays as well as frequent writing assignments based on reading comprehension and reflections on readings and/or class discussions.

Presentations, projects, speeches, debates, and class discussions are the primary ways students practice and build their expressive competencies.

The required companion course to ENG-3010:Advanced English Plus Literature.

ENG-3010 Advanced English Plus Literature

This course is designed for second language students who have completed or partially completed ENG-2010 but, as assessed by the English as a Second Language Department, do not have the requisite English proficiency skills necessary for a mainstream English class. The class builds and strengthens receptive English language skills with a continuation of the literary theme "The Outsider" to examine literary works written in English that explore American society from the perspective of those who do not feel quite at home due to their views, ethnicity, or place of origin. Reading comprehension and fluency is emphasized along with learning more advanced vocabulary, structure, and strategies that help them attack difficult works or ideas. Writing assignments focus on communicating meaning and refining more advanced literary analysis skills.

The required companion course to ENG-3000:Advanced English Plus Composition.

HIS-3100 United States History

Using a sheltered instruction protocol, this yearlong course is designed for Advanced English language learners and mirrors the regular US history course offering. In this particular class, students focus on the history of the United States by way of the perspective of someone outside of the nation. In doing so, students engage with both the history and current issues facing the nation with an understanding that their individual backgrounds influence these viewpoints. As a requirement for the course, students are expected to conduct original research regarding a topic in US history. This assessment can take the form of a research paper of 8-10 pages with a short presentation of 5 minutes or a large-scale 25 minute presentation coupled with a written abstract of 2-3 pages.

Fine and Performing Arts

FIA-010 Foundations of Music

Sixth-grade students expand upon their fundamental knowledge of music and develop their musical skills through rhythmic exploration, composition, aural experiences, and in-class performance opportunities. In looking at how music tells a story and brings people together, students gain a basic foundation of music literacy through group work and ensemble playing.

FIA-011 Art in Historical Context

In this class, students are introduced to a wide variety of media and techniques and learn about artists, styles, and movements throughout the history of art and from around the world. They build connections between art assignments and other areas of the academic curriculum. In particular, work in the art room parallels and engages with work being done in sixth-grade history. Starting with Ancient Greece and Rome and moving through to the Age of Exploration, students create two- and three-dimensional works of art, develop and expand problem-solving skills, develop visual literacy, and begin to understand art within a larger context.

FIA-012 Creative Dramatics

Theatrical arts for sixth-grade students explores the craft of acting through improvisational exercises, scene work, and theater games in order to develop effective performance techniques and improve public speaking and presentational skills. The course focuses on character development and creative dramatics, making students more imaginative performers.

FIA-020 Exploring American Music

This course helps seventh-grade students develop relationships with the musical world. Complementing the seventh-grade history curriculum, the class explores the struggle for human rights and how music plays a role in American history. Students explore music that speaks for groups of people and music that has brought about and aided change, delve into the history of American music and how it affects current artists, and develop musical skills through rhythmic exploration and composition, aural experiences, and in-class performance opportunities.

FIA-021 Art Activism through Group Installation

Students continue to improve their skills by working within the fine plastic arts as well as in craft traditions. As a complement to the seventh-grade history curriculum, this course focuses on the struggle for human rights and challenges to having one's voice heard. Students examine the power that art can have not only to convey a message but also to enact change. The course culminates in a group installation piece that combines individual projects into one whole. Students create works of art in a variety of media and techniques, exercise research and problem-solving skills, work as individuals and in groups, and use art as a medium for expressing a clear and powerful message.

FIA-022 Explorations in Acting

Theatrical arts for seventh-grade students continues the exploration of the craft of acting through improvisational exercises, scene work, and theater games in order to develop effective performance techniques and improve public speaking and presentational skills. The course focuses on scene work in groups of two or three students with an emphasis on listening, commitment, and teamwork.

FIA-030 Middle School Band

The Middle School Band is open to instrumentalists who are interested in furthering their proficiency on a given instrument. Band rehearsals focus on developing playing skills specific to each student's instrument and the group as a whole; musical literacy involving notes, rhythms, and musical style; and group dynamics. The band prepares varied literature to be performed at such events as Vespers, the Winter Concert, and the Fine Arts Festival.

FIA-031 Drawing Technique and Composition

This course introduces students to realistic drawing techniques in preparation for upper school classes. Students start with a series of exercises that familiarize them with concepts such as creating the illusion of three-dimensional shapes and naturalistic perspective. They then create a number of drawing projects, including architectural drawing and a finished sketch from a still life. The culmination of this course is a self-portrait, an eighth-grade tradition. In addition, students think about and discuss how art is relevant today and to their own lives.

FIA-032 Effective Performance and Public Speaking

Theatrical arts for eighth-grade students explores the craft of acting through improvisational exercises, scene work, and theater games to develop effective performance techniques and improve public speaking and presentational skills. The course emphasizes effective storytelling and individual work in the form of monologues. It also helps students understand how vocal inflection and body language can affect meaning to make them more effective communicators and public speakers.

FIA-033 Middle School Chorus

Open to all interested students who enjoy group singing, this course emphasizes and applies basic vocal techniques, music skills, and principles of presentation through musical repertory. The chorale prepares varied literature and performs at such events as Vespers, the Winter Concert, and the Fine Arts Festival.

FIA-036 Community, Character, and Leadership

This term course for students in Grade 8 focuses on what it means to be a productive member of the various communities of which they are and will be a part: Perkiomen, college, and the wider world. Good decision making, healthy relationships, peer leadership, and self-advocacy will be addressed. Discussions will include topics such as the transition from adolescence to adulthood as well as the impending move from the Perkiomen Middle School experience to the rigors and challenges of Upper School and competitive college preparation.

FIA-037 Design Laboratory

This project-based course introduces middle school students to the process of design thinking. Students are presented with parameters and work in groups to solve problems based upon the given criteria. Students empathize, define, ideate, prototype, and test in their quest for unique solutions. The focus is on collaboration, iteration, and communication. In this hands on course, students are given the opportunity to think and act as designers.

FIA-100 Studio Art

This upper school elective is for students with an interest in exploring visual art in a variety of materials and techniques, both two- and three-dimensional. The course accommodates students of various abilities and experience. Students learn vocabulary and concepts appropriate to different units of study, complete a series of nine materials-based projects, begin to develop a personal artistic vision, and learn the critiquing process.

FIA-101 Ceramics and Sculpture

This full-credit upper school elective in three-dimensional artwork is designed as an introductory-level studio course and has no prerequisite. Students of all abilities and experience are welcome. The majority of projects are completed in clay, although occasional forays into other 3-D forms and materials may be included. Students experience a variety of forming methods, are introduced to the work of well-known artists, and work both independently and collaboratively. Sensitivity to the materials and to aesthetic design and the imaginative use of materials are expected. Instruction is by lecture, critique, and demonstration of procedures and skills.

FIA-110 Chorale

This elective course is open to all interested students in grades nine through twelve who enjoy group singing. Chorale rehearsals focus on developing vocal technique, musical literacy, and styles and principles of presentation. The chorale prepares varied literature and performs at such events as Vespers, the Winter Concert, and the Spring Concert.

FIA-120 Band

This elective course is open to all interested students in grades nine through twelve who enjoy playing musical instruments. Rehearsals focus on developing and improving personal skills while learning to play with a group. The course culminates in several performances throughout the year.

FIA-130 Music Theory

This elective is open to students who have an interest in learning to read, write, and analyze the fundamentals of music. It begins by looking at rhythm and basic notations and covers scales, intervals, transposition, and harmony both visually and aurally. The course culminates with students writing their own songs.

FIA-200 Honors Advanced Studio Art

This upper school elective accommodates students who have spent significant time in the studio either here or at previous schools. It includes the preparation of a portfolio, which may be sent to colleges. Work is highly individualized to meet the needs of the student, and in some cases, projects may fulfill the admission requirements of a specific school. Most often, assignments "complete" the individual's portfolio in a more general way. A faculty member assists students in photographing and presenting their work.

FIA-201 Honors Advanced Ceramics and Sculpture

This upper school elective is taught in tandem with the introductory-level course. Continuing to develop and refine their skills, students have many opportunities for individual investigation of both form and materials. They develop a series of at least three related pieces, culminating in an opportunity to display their works in the Schumo Gallery.

FIA-300 Graphic Design and Marketing

This upper school elective explores the fundamentals of graphic design in print and digital media. Students learn how to use digital cameras; explore the many types of digital images and their uses; create and manipulate images working primarily with the Adobe Suite. Students are introduced to the elements of design; spatial relationships; typography; and materials and procedures employed in the communication arts industry. Assignments include logo creation; web design; and marketing materials. Students will

have the opportunity to create real marketing campaigns for existing businesses or for their own endeavors. This is a project-structured course, with lectures, demonstrations, projects assignments, quizzes, and critiques. *Please Note: This course qualifies for both graduation requirements and the Entrepreneurship program.*

FIA-350 Introduction to Acting, Scene Study and Improvisation

This full year class is made up of three elective term courses:

Term 1: Introduction to Acting uses open scenes, theater games, and exercises to introduce the beginning actor to basic techniques and the vocabulary of acting. The emphasis is on physical movement and the use of voice in the development of characterization. The course focuses on the development of character relationships through the principles of objective, circumstance, habit, activity, age, and emotion. Introduction to Acting frees students from self-consciousness, fear, and pretense, enhancing their powers of concentration and imagination.

Term 2: Scene Study designed for students who have taken FIA-350: Introduction to Acting or have teacher approval, builds on the skills learned in the introductory class. It continues to develop the actor's tools of voice and physicality to create character through scene study. Students learn the fundamentals of text analysis and how to apply various modern acting techniques, read and dissect excerpts by major acting theorists (Adler, Hagen, Spolin, Stanislavski, Strasberg, etc.), and explore the crafting of a character, rehearsal techniques, and scene study utilizing contemporary plays. This course is very hands-on and requires regular meetings with scene partners outside of class time.

Term 3: Improvisation, designed to introduces students to the building blocks of improvisation and the techniques of successful improvised scene work: commitment, energy, physical characterization, building conflict, etc. Both long- and short-form comedy improvisation and non-comedic improvisation are studied. Students develop their skills through rehearsal and performance games and connect these techniques back to text-based acting.

FIA-353 Music Production (Term 3 only)

Students become familiar with digital audio workstations, beginning with Garage Band on the iPad and including a 32-channel tactile mixing console and professional audio sequencers like Sonar and Pro Tools. Students learn beat making, form and arrangement, microphone application, placement, and technique. Students also learn mixing EQ methodology and mastering, and take with them a finished media project.

FIA - 354 Additive Manufacturing

Additive manufacturing is much more than simply 3D printing. It plays a massive role in global product development and innovation. In this course students will engage with a broad range of 3D printing applications, aerospace, aquatic, biomedical, consumer products, and artistry, to build the skills necessary for a culminating capstone project. Students will conduct industry research, prototype, and then manufacture a product designed to meet a specific market need, or to improve on an existing design. *Please Note: This course qualifies for both graduation requirements and the Entrepreneurship program.*

FIA-400 Honors Advanced Graphic Design and Marketing

This is an upper school elective for students who have taken the introductory level or have teacher approval and wish to advance their graphic design and marketing skills. Students learn about the theory, history, and practice of graphic design and marketing campaigns. This project-based course meets the individual interests of students and culminates in a student designed project or set of projects. *Please Note: This course qualifies for both graduation requirements and the Entrepreneurship program.*

FIA-490/491 Advanced Placement Studio Art

This course in two-dimensional design or drawing is an elective for advanced art students who have completed at least two years of art classes and/or present a portfolio for review to be admitted. Students attend class daily but spend additional time in the studio to complete the assigned projects, refining and improving their skills over the year. They begin to develop a personal vision and style that is evidenced in their work, consider this work in the context of a larger art community, and examine and discuss the art of both contemporary and historical artists. To prepare for their Advanced Placement assessment, students are informed of the process used by Advanced Placement readers, practice this method in their own critiques, and view examples of student artwork from previous portfolios received by the College Board. After submitting their work to the College Board, students exhibit their artwork in the school gallery.

FIA-492 Advanced Placement Music Theory

This upper school course explores musicianship, theory, musical materials, and procedures. Students learn to integrate harmony, melody, texture, rhythm, and form; develop skills such as diction, sight-singing, and keyboard harmony; and learn musical analysis, elementary composition, and introduction to music history and style. To prepare for the spring Advanced Placement assessment, which tests understanding of musical structure and compositional procedures, students hear about the process used by Advanced Placement graders and practice the appropriate methods.

History

HIS-010 Global History

This course aims to get the students thinking globally about why nations have become shaped the way they are and why they interact with each other in the way that they do. Starting with an examination of the meaning of civilization and the early civilizations humans constructed, the course will focus on some of the first attempts to create empires that have a global sense. Exploring the role geography has to play in this process, we will look at case studies from around the world highlighting geography's power to shape culture, the way people live and organize their institutions, and consider questions as elemental as: What resources are available and how are they used? What are the external barriers protecting and unifying a nation, or the internal barriers isolating and dividing them? How do large unified regions promote strength and how may physically arbitrary boundaries promote strife? The great story of human civilization bends towards creating a world that is more connected, and our studies here intend to provide a far better understanding of the 21st Century in which we live.

HIS-020 Foundations of U.S. History

This course addresses essential questions arising from America's birth documents, the Declaration of Independence, and the Constitution of the United States: What is sovereignty of the people? What is an inalienable right? What is the practical definition of equality? What is the true meaning of liberty and justice for all? The focus of this course is on the theory and practice of a democratic republic throughout America's history. Students will examine the evolution of America's national identity and its political and constitutional heritage. They will assess the practical application of its democratic ideals in the defining moments of the American experience. An important sub-theme is the issue of tolerance in a complex and multi-cultural society. Students will also make connections from the historical topics to contemporary events and issues. Document analysis and interpretation will be emphasized as students work to build their reasoning skills. Map skills, study habits, note-taking and organizing, public speaking and information literacy will also be highlighted throughout the year.

HIS-030**American Government and Global Issues**

This course focuses on post-World War II history and the United States' central role in international affairs. Beginning with discussions about the United States today, students will explore current affairs as a means to connect to historical events. As the year progresses, our examination will shift to the rise of the United Nations and many of the challenges which that organization has faced. Throughout the year, students will research other members-states of the UN's Security Council. Through their research, students will be better able to situate the United States within the global community. As a final project, students will participate in a Model United Nations Security Council simulation using geography and history as a tool to view, analyze, and understand global issues and world politics. Possible global issues facing the United Nations may include urbanization, human rights, poverty, climate change, nuclear proliferation, terrorism, economic development, and the role of groups such as NATO and the EU. This class will emphasize map skills, study habits, note taking, public speaking, and information literacy through daily work and projects.

HIS-100**Foundations of the Modern World**

This is the first part of a two year-scope and sequence of global history and humanities from its prehistoric origins through the Middle Ages, when the cornerstones of the modern world were fashioned and placed. The great story of history is built on the idea that civilization was a choice; historian Marvin Perry explains that civilization "was not inevitable; it was an act of human creativity." This course addresses the major developments as people struggled to define themselves, shape their environments and societies, and decide – or have decided for them – their relations with nature and each other. Emphasis is placed on three broad ideas: first, on the primary role geography played and continues to play in shaping civilization and historical choices; secondly, on the causes, consequences and human costs of the choices made by and for people; lastly, students will consider what it is, precisely, that is learned from the study of the past and an understanding of the complexities of the human experience. Students will become familiar with the use of documentary evidence in addressing conflicting historical interpretations to reflect upon the ways that the present is shaped by the past. Projects, research, writing, and presentations are also significant components of this course.

HIS-200 Modern World History

Examining global studies from the fourteenth century through the present day, this course focuses on the various cultural, political, and technological revolutions that ushered in the modern age. Modern World History is the second component of a two-year Global History program. This course is divided into four broad topics: 1.) Revolutions prior to 1900, including the Renaissance, Protestant Reformation, Scientific Revolution, Enlightenment, French Revolution, the Haitian Revolution, and the Industrial Revolution. 2.) Imperialism: including case studies addressing the lasting impacts of this practice that are present today. 3.) The Great Wars with regard to both cause and impact, and 4.) the Cold War and Contemporary World, one profoundly shaped by the collapse of the former Soviet Union and current challenges of geopolitics and international economics. The emphasis on a global understanding of history shifts the study of history from a record of facts and chronology to the meaning of that record as we understand – or fail to understand – our place in the world, one that is connected in ways unimaginable by the people who gave birth to the modern world. Primary sources and current events are utilized to understand our world's past and present. This course requires a research project allowing students to pursue topics of individual interest.

Qualified 200-level students have the option to take either HIS-200: Modern World History or HIS-490: Advanced Placement World History, but not in succession.

HIS-300 United States History

This course begins with a portrait of contemporary America, continuing with a study of modern America from roughly the mid-point of the Cold War (1960) and to the early 21st century. History is, first and foremost, a story of people, and the story of the United States is told through analyzing documentary evidence within a narrative framework to understand the impact of the major political, social, economic, and cultural aspects of America's past on the lives of ordinary, and some not so ordinary people. The course of study will center on four broad themes: the growth of the United States as a major world power, confronting question of the limits of power during and after the Cold War; the development of a constitutional republic that asks what freedom and equality for all really mean; the process of nation-building out of competing sectional socio-economic interests and a tragic civil war; and finally, the response to industrialism and development of modern American society and culture.

Qualified 300-level students have the option to take either HIS-300: United States History or HIS-491: Advanced Placement United States History, but not in succession.

HIS-400 Art History

This upper school elective is for students with an interest in history and art. The teacher uses visual aids and multimedia presentations to present significant works of art and architecture from the prehistoric age through the current era. Emphasis is given to introducing students to the vocabulary and language used to discuss works of art, and writing assignments are geared towards this end. The course utilizes traditional pedagogical teaching methods with emphasis on class discussion. Regular quizzes and tests are given, and a research paper (or project) is completed in the spring term. All course materials are available online through the school website.

Qualified students have the option to take either HIS-400 or HIS-495: Advanced Placement Art History, but not in succession.

HIS-496 Advanced Placement Human Geography *(offered in alternating years with AP World History – scheduled to be offered in 2018-19)*

The AP Human Geography course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications.

AP Human Geography presents high school students with the curricular equivalent of an introductory college-level course in human geography or cultural geography. Content is presented thematically rather than regionally and is organized around the discipline's main subfields: economic geography, cultural geography, political geography, and urban geography. The approach is spatial and problem oriented. Case studies are drawn from all world regions, with an emphasis on understanding the world in which we live today. Historical information serves to enrich analysis of the impacts of phenomena such as globalization, colonialism, and human– environment relationships on places, regions, cultural landscapes, and patterns of interaction.

HIS – 497**Advanced Placement Psychology**

The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice. *Please Note: This course qualifies for both graduation requirements and the Entrepreneurship program.*

HIS-490**Advanced Placement World History**

(offered in alternating years with AP Human Geography – scheduled to be offered in 2017-18)

This course is open to qualified students by recommendation of the History Department and prepares them to take the Advanced Placement World History exam in May.

Emphasizing global history rather than any one state or region, this course focuses on change and continuity within societies as well as comparisons between them. It surveys global economic, social, and political trends from the earliest civilizations to the present and requires students to research and write a formal term paper, allowing them to pursue topics of individual interest.

Qualified 200-level students have the option to take either HIS-200: Modern World History or HIS-490: Advanced Placement World History, but not in succession.

HIS-491**Advanced Placement United States History**

This course is open to qualified students by recommendation of the History Department and prepares them to take the Advanced Placement U.S. History exam.

This rigorous survey course covers the period from European exploration and colonization through the 1980s. It is expected that students will learn most of the factual knowledge through their own reading, review, and completion of assignments. A significant amount of class time is spent in discussion and doing

exercises to gain a better understanding of analytical and interpretive issues in American history. In other words, students learn the “what happened” on their own so the class can focus on how and why history followed the path it did. Students should expect to do a minimum of 45 minutes of homework and/or class preparation per night.

Qualified 300-level students have the option to take either HIS-300: United States History or HIS-491: Advanced Placement United States History, but not in succession.

HIS-492 Advanced Placement Economics

This course is open to qualified students by recommendation of the History Department and prepares them to take both the Advanced Placement Microeconomics and Macroeconomics exams.

The course’s microeconomics component gives students a thorough understanding of the economic principles that apply to the functions of individual decision makers, both consumers and producers, within the economic system. It places primary emphasis on the nature and functions of product markets and includes the study of factor markets and the role of government in promoting greater efficiency and equity in the economy.

The macroeconomics component introduces students to fundamental economic concepts such as scarcity and opportunity costs. Students understand the distinction between absolute and comparative advantage and apply the principle of comparative advantage to determine the basis on which mutually advantageous trade can take place between individuals and/or countries and to identify comparative advantage from differences in opportunity costs. Other basic concepts include the functions performed by an economic system and the way the tools of supply and demand are used to analyze the workings of a free-market economy. The course also introduces the concept of the business cycle to give students an overview of economic fluctuations and to highlight the dynamics of unemployment, inflation, and economic growth. *Please Note: This course qualifies for both graduation requirements and the Entrepreneurship program.*

HIS-493 Advanced Placement United States Government and Politics

This course is open to qualified students by recommendation of the History Department and prepares them to take the Advanced Placement U.S. Government and Politics exam.

This demanding college-level course teaches students to understand and critically analyze important concepts in U.S. politics through the in-depth study of American government, its foundations, and contemporary discourse. Daily reading assignments, regular persuasive writing assignments, and periodic objective assessments using Advanced Placement multiple-choice questions are required. Success in this course demands more than reading nightly assignments. It requires that students immerse themselves in national politics. As a result, students are expected to read, listen to, and watch the news on a daily basis and to be prepared to discuss political events at the start of every class.

HIS-494 Advanced Placement European History

This course is open to qualified students by recommendation of the History Department and prepares them to take the Advanced Placement European History exam.

This course examines the themes of European history (intellectual-cultural, political-diplomatic, and social-economic) and teaches students how to apply these themes as they examine the effects of the past on the present and the future. Students learn about various aspects of European culture from the High Renaissance to the present day, including geography, art, music, and literature, in order to make intercultural connections between the people of yesterday and today. In addition to the basic narrative of people and events in European history from the High Middle Ages and Renaissance through contemporary Europe and its recent struggles with the ideas and institutions of the European Union – this course also seeks to develop an understanding of the complexities of the European cultural and social experience. The course will start looking at the First World War, as that is the hinge around which the history of Europe pivots. Then the impact of this upon the Twentieth Century will be examined, looking at not just the wars and the establishment of the European Union, but also the philosophical, social and cultural changes that have occurred as well. After that, the course looks back at what led to Europe forming into antagonistic nation states. Starting back at 1450 going through the renaissance, and the various

revolutions: Cultural, agricultural, industrial and French. Looking at how this changed Europe from its medieval feudalism into the global centre of power. The emphasis will be on the ability to analyze, evaluate, and express an understanding of documentary evidence, literature, films and conflicting historical interpretations of the major topics.

HIS-495 Advanced Placement Art History

This course is open to qualified students by recommendation of the History Department and prepares them to take the Advanced Placement Art History exam.

This course is for students with an interest in history and art and is taught in tandem with Art History (HIS-400) with differentiated assessments. The teacher uses visual aids and multimedia presentations to present significant works of art and architecture from the prehistoric age through the current era. Emphasis is given to introducing students to the vocabulary and language used to discuss works of art, and writing assignments are geared towards this end. The course utilizes traditional pedagogical teaching methods with emphasis on class discussion. Regular quizzes and tests are given, and a research paper (or project) is completed in the spring term. All course materials are available online through the school website. Students following the AP track are expected to do additional homework and exam preparation throughout the year.

Qualified 300-level students have the option to take either HIS-400: Art History or HIS-495: Advanced Placement Art History, but not in succession.

History Electives

We encourage students to enroll in a combination of three (3) electives that will carry a full year course title and grade. However, students wishing to take single electives may submit that as a course request. Students should understand priority will be given to those students choosing full year courses combinations of electives. Below are the combinations of electives being offered for the 2017-2018 school year.

HIS-501 Advanced Global Studies: Area Studies

Term 1: Africa

Why is Africa the least developed continent, and is Europe to blame? This course takes a look at all the potential factors ranging from geography, the Romans, European colonization and de-colonization, Modern African countries governments and economies. Present day international interventions are discussed in order to answer the key question of why the continent is the least developed and who is to blame. Students will conduct their own research, take part in group work and class debates, as well as presenting considered views on the key question.

Term 2: South America

Why has South America not established a world power? The course will begin by exploring the impact of the continent's geography before then looking at the history of the continent from the ancient Mayan and Inca civilizations, through The Conquistador invasions and resulting policies of colonialism, to the eventual decolonization and nation states established. By looking at the history of the continent, we can conclude where the issues lie and what the way forward is for this giant continent. Students will conduct their own research, take part in group work and class debates, as well as presenting considered views on the key question.

Term 3: Russia, Asia, and the United States For Russia, the twentieth century was violent and turbulent, characteristics that may continue. This course explores the history and culture of what is still the largest country in the world, profoundly affected by its geography and climate. Among the questions addressed are: How did the Romanov dynasty end in civil war in less than a decade?

How did Tsarist Russia shape communism in the Soviet era? How has the relationship between the ruling elites and peasant populace changed? How has the growth of a Russian culture impacted social values and national identity? What is the final result of the Russian Revolution? And what does the future hold for Russia and the world? In addition to Soviet history, students learn about Russian arts, including examples of literature, music, and cinema, as well as its culture and traditions, from ideas about community and family to customs and food.

HIS-502 Advanced Global Studies: Ethics and Culture (*successful completion of this course fulfills the religion requirement)

Term 1: Colonization and Independence in Africa

In the late nineteenth century, Europe's great powers claimed the vast African continent for themselves. In the guise of a humanitarian mission, European leaders and businesses exploited African natural resources and people to fuel European economic growth. Africans did not submit to outside control willingly, and African resistance continued throughout the colonial period, culminating in the independence movements of the mid-twentieth century. Experiences of colonialism were diverse, as Africa comprises more than 50 countries and thousands of ethnic groups and societies. Nevertheless, there are common themes within its colonial history and legacies. This course explores the themes of colonialism both generally and specifically through four case studies: Ghana, Algeria, Kenya, and the Democratic Republic of the Congo. Readings and activities help students consider the perspectives of Africans and the ways in which they responded to European colonialism. Brown University's Choices Program is a key resource.

Term 2: Genocide and Public Memory

While the twentieth century was filled with great progress and achievements, it was also rife with suffering and exploitation, much of which is often overlooked. These events are vital to understanding the history of the last half-century and demonstrate the relevance of historical events to today's world. This course examines genocides of the 20th and 21st centuries, responses to genocide, and efforts to prevent future atrocities to develop

students' communication and critical thinking skills. Most class periods involve a careful consideration of daily assigned readings through group discussions, debates, film clips, and presentations. Furthermore students will conduct their own research as well as work together to raise awareness for genocide prevention within the Perkiomen community.

Term 3: Plague and Societies This course will analyze the rise of globalization through the lens of some of history's most devastating diseases. The first portion of our exploration will focus on topics such as Mongol expansion and the introduction of the black plague into Europe, the devastating diseases brought over to the new world by Spanish conquistadors, and the often overlooked outbreak of Spanish flu in 1918 that killed more American soldiers than World War I. We will then investigate more recent outbreaks of SARS and Ebola and their impact on international relations in a time period where people and diseases can reach anywhere in the world in a matter of hours. Lastly, students will investigate how American perceptions of diseases such as tuberculosis, AIDs, and cancer have changed over the last century and how those changes were reflected in American society. Most class periods will involve a careful consideration of daily assigned readings through group discussions, debates, film clips, and presentations. Furthermore students will conduct their own research in order to develop a final, culminating project.

Religion Term Courses

**Please note that religion term courses may be offered online depending on interest. Please see Course Request Form for details for 2017-18 school year.*

HIS-354 Three Faiths One God: Comparative Religions

Judaism, Christianity, and Islam all claim Abraham, the Biblical patriarch, as their “father in faith.” If Jews, Christians, and Muslims all are “children of Abraham,” why do they follow three different religious traditions? This term elective examines this question through historical and cultural analysis of the three “religions of the book.” Exploring the three Abrahamic traditions, students will develop an understanding of each tradition’s unique history as well as giving context to modern issues and improve religious literacy. *Available as an online course. Please note: Successful completion of this course fulfills the religion requirement.*

HIS-355 World Religions

This term elective takes a global studies approach to the development and practice of various expressions of religious and spiritual life, exploring the similarities and differences that exist between different religious groups throughout the world. Particular attention is paid to religious traditions originating in India: Hinduism, Jainism, Buddhism, and Sikhism. Comparative discussions serve as a foundation for building mutual respect, understanding, and tolerance, as well as a better understanding of the diversity of religious expression throughout the world. *Available as an online course. Please note: Successful completion of this course fulfills the religion requirement.*

HIS-356 Ethics

This term elective focuses on the problems of moral philosophy, also known as ethics. It begins by examining problems that arise when people try to make moral judgments. Cultural relativism, subjectivism, and the role of religion in morality serve as a foundation for examining a wide variety of controversial moral issues such as abortion, the death penalty, euthanasia, human cloning, war and torture, drug policies, and animal rights. This course does not seek to form judgments about specific moral issues, but looks to improve students’ critical thinking and analysis of considerations that may count as reasons for, as well as possible objections to, moral judgments. *Available as an online course. Please note: Successful completion of this course fulfills the religion requirement.*

HIS-361

Modern Middle East

This term course explores the Middle East, from the Ottoman Empire to current events in Syria, Egypt, Israel, and the Persian Gulf. Special attention is paid to the British legacy, oil, population growth, religion, U.S. interventions, and long-term prospects. Case studies include Iraq, Iran, Saudi Arabia, Egypt, Israel, the United Arab Emirates, and Afghanistan. Students write multiple papers relating to articles and topics covered. *Available as an online course. Please note: Successful completion of this course fulfills the religion requirement.*

Mathematics

MAT-021 Introduction to Algebra

This course focuses primarily on developing a strong foundation for future algebraic concepts. Students learn to use variables, rational numbers, and functions to represent patterns and relationships. In addition, they continue to write and solve equations and inequalities as well as graphing these functional relationships. Students practice real-world application of these skills through problem solving and projects using current data. Basic concepts of probability, statistics, and geometry are integrated into the course.

MAT-100 Algebra 1

In this course, students learn fundamental algebraic skills, relationships, and applications. They use variables and functions to represent patterns and relationships; gain experience with quadratics, geometry, and trigonometry; focus on setting up and solving equations; and work with polynomials and graphing concepts. The course ends with an introduction to solving general quadratic equations.

MAT-101 Advanced Algebra 1

This course takes the core of Algebra One, reviews that material and then solidifies the concepts through hands on activities, projects and calculator lessons. A more in depth look at the structure and properties of real numbers while using problem solving strategies will give the students the confidence to move forward in his/her mathematical career.

MAT-200 Geometry

This course not only focuses on deductive reasoning and proofs, but also emphasizes skills in visualization, pictorial representation, and the application of geometric ideas to the world around us, as well as some trigonometry. Topics include segments, angles, deductive reasoning, parallel and perpendicular lines,

coordinate geometry, congruent and similar triangles, quadrilaterals, right triangle trigonometry, circles, and area and volume. Learning is enhanced through the use of GeoGebra and DESMOS. Students develop mathematical reasoning and organizational skills needed for future mathematics courses.

MAT-201 Honors Geometry

Qualified students with strong algebraic understanding may enter an honors section of geometry with the recommendation of the Math Department. This class covers material designed for a standard geometry class and also additional topics. The emphasis is a problem-based, constructive curriculum with applications. The course not only focuses on basic geometric properties of lines, planes and angles but also emphasizes visualization, understanding of enclosed spaces, reasoning with large and small solutions, volume occupancy and proportional area. Topics include algebraic proof, lines, segments, angles, parallel and perpendicular lines, ratios and proportions, congruence and similarity, special properties of right and non-right triangles, trigonometry, circles and volume and surface area. Learning is enhanced through the use of GeoGebra and DESMOS, designed for an emphasis in coordinate geometry, which is a main focus throughout the course. Students develop mathematical reasoning and problem solving skills needed for future mathematics courses.

MAT-300 Algebra 2/Trigonometry

This course begins with a review of Algebra 1 fundamentals, incorporating the use of calculator lessons, and standardized test practice questions. It also includes the solving of linear equations, inequalities, systems of equations, polynomials, quadratic equations, and conics. To end the year, the class dives into trigonometry and trigonometric identities. Algebra 2 prepares students for MAT-400: Pre-Calculus, and MAT 320 Math Analysis.

MAT-301 Honors Algebra 2/Trigonometry

This course is open to qualified students based on a recommendation by the Math Department.

This course begins with a review of Algebra 1 fundamentals, incorporating the use of calculator lessons, and standardized test practice questions. It also includes the

solving of linear equations, inequalities, systems of equations, polynomials, quadratic equations, and conics. Students end the year by completing the study of trigonometry and then proceeding to polynomial functions, rational polynomial expressions, logarithmic functions, series and sequences, and probability and statistics. This course prepares students for Pre-Calculus and for other future high school math study.

MAT-303 Computer Programming

This course emphasizes the discipline of computer science, focusing on techniques and strategies to use the computer as a problem-solving tool. Students will learn how to break problems down into smaller parts, craft careful solutions, and turn those solutions into working computer programs. The course assumes no prior programming experience or technical knowledge. Students will learn Python programming language in this course. Students who successfully complete this course may have the skills to move on to the AP Computer Science course. This course exposes students to the basics of computer programming: variables, control structures, stepwise refinement, testing, and debugging.

MAT-310 Advanced Algebra with Financial Application (Full year)

This course was designed to inform student's about their role as a citizen, student, family member, consumer, and active participant in the business world. This course is intended to provide opportunities for self-awareness, expression, and satisfaction in a highly technical and competitive society. Students will learn applications of multivariate statistics and their use in market research. Students will review and learn to understand: financial statements, how to measure cash flow, valuing a company, raising additional debt and equity capital. Students will get an introduction to basic accounting concepts and gain practice on the following topics: debits, credits, the chart of accounts, the ledger, inventory measurement, net realizable value, recovery of bad debts, and methods for computing interest. The course also includes fixed assets, depreciation and scrap value, methods of depreciation, payroll and payroll taxes.

This course is composed of MAT-311: Statistics in Market Research, MAT-312: Entrepreneurial Finance, and MAT-313: Accounting which can also be taken individually. *Please Note: This course qualifies for both graduation requirements and the Entrepreneurship program.*

MAT-320 **Math Analysis** (Full year)

This yearlong course builds on the mathematics covered in Algebra 2 and prepares students to be successful in Pre-Calculus. It treats all major topics in trigonometry, including right triangle trigonometry, trigonometric functions and inverses, and identities and proofs. Other topics include polynomials, radical functions, probability, and exponential and logarithmic relationships and a more in-depth study of conic sections. Finally, this course introduces statistical thinking, focusing on statistical ideas and reasoning and relevance to such fields as medicine, education, environmental science, business, and sports. Activities, applications, and number theory give students opportunities to investigate and discuss ideas and methods used in statistics. A TI-84 Plus graphing calculator is required.

MAT-400 **Pre-Calculus**

This course is open to students who have successfully completed MAT-300: Algebra 2, MAT-301: Honors Algebra 2/Trigonometry, or MAT-320: Math Analysis, and have the recommendation of the Math Department.

The goal of this course is to prepare students for MAT-402: Calculus while developing analytical thinking skills. The course covers functions, domain, range, graphing, and problem solving of trigonometric, logarithmic, exponential, polynomial, and rational functions. The concept of a limit is introduced for sequences and then for more general functions.

MAT-401 **Honors Pre-Calculus**

This course is open to students who have successfully completed MAT-301: Honors Algebra 2/Trigonometry and have the recommendation of the Math Department.

The goal of this course is to prepare students for MAT-402: Calculus or MAT-492: AP Calculus AB while developing analytical thinking skills. The course covers functions, domain, range, graphing, and problem solving of trigonometric, logarithmic, exponential, polynomial, and rational functions. The concept of a limit is introduced for sequences and then for more general functions. This course moves at a faster pace and covers additional topics in greater depth than MAT-400: Pre-Calculus.

MAT-402 Calculus

This course is open to students who have successfully completed MAT-400: Pre-Calculus or MAT-401: Honors Pre-Calculus and desire exposure to calculus on a non-Advanced Placement level. It focuses on the study of change using fundamental calculus concepts. The class begins with the limits before exploring differential and integral calculus of a single variable.

MAT-494 Advanced Placement Computer Science Principles

AP Computer Science Principles introduces students to the central ideas of computer science, inviting students to develop the computational thinking vital for success across multiple disciplines. The course is unique in its focus on fostering students to be creative and encouraging students to apply creative processes when developing computational artifacts. Students' design and implement innovative solutions using an iterative process similar to what artists, writers, computer scientists, and engineers use to bring ideas to life.

AP Computer Science Principles course is complementary to AP Computer Science A. Students can take these courses in any order or at the same time, as schedules permit. Both courses include rigorous computer science content and skills that can be built on to complete further science, technology, engineering, and mathematics (STEM) and computing studies. It is important to note that the AP Computer Science Principles course does not have a designated programming language. *Please Note: This course qualifies for both graduation requirements and the Entrepreneurship program.*

MAT-490 Advanced Placement Computer Science A

This course is designed for students who are serious about programming. Students will learn the JAVA programming language in this course, which requires a good mathematical background and strong program-solving skills. The course is designed to prepare a student for the Advanced Placement Computer Science exam, level A. Topics include simple, use-defined and structured data types, algorithm development, decisions and loops, arrays, recursion, searches and sorts, data abstraction, and classes.
Prerequisite:

MAT-491 Advanced Placement Statistics

This course is open to qualified students who have completed MAT-301: Honors Algebra 2/Trigonometry, MAT-400: Pre-Calculus, or MAT-401: Honors Pre-Calculus with an average of B+ or higher and have the recommendation of the Math Department. It prepares students to take the Advanced Placement Statistics exam.

This course introduces students to ideas and methods for collecting, analyzing, and drawing conclusions from data. Four major concepts are covered: exploring data, sampling and experimentation, anticipating patterns, and inference. The use of the TI-84 Plus graphing calculator and other software enables students to perform involved computations, gather samples, and create graphs with ease. *Please Note: This course qualifies for both graduation requirements and the Entrepreneurship program.*

MAT-492 Advanced Placement Calculus AB

This course is open to qualified students by recommendation of the Math Department and prepares them to take the AP Calculus AB exam.

The class helps students prepare for the AP exam by giving them a strong conceptual understanding of calculus. A college-level course, it moves at a very fast pace and requires thorough preparation in pre-calculus and strong mathematical skills. A TI-84 Plus calculator is needed.

MAT-493 Advanced Placement Calculus BC

This course is open to students who have completed MAT-492: Advanced Placement Calculus AB with an average of B+ or higher and have the recommendation of the Math Department. Scores on the Advanced Placement Calculus AB exam may be taken into consideration. This course prepares students to take the AP Calculus BC exam.

Leading to a deeper understanding of fundamental concepts of differential and integral calculus of a single variable, this course begins with a review of Calculus AB topics before tackling applications of integration, infinite series, differential equations, and polar and parametric equations. Students gain experience with applications and methods through weekly quizzes and practice with Advanced Placement exams. The use of the TI-84 Plus or TI-89 calculator is required.

Science

SCI-010 Sixth Grade Science

This course seeks to increase students' curiosity and knowledge of their world by investigating topics in areas of physical and life sciences. The topics covered include, but are not limited to, forces & motion, space, matter, energy, atoms, genetics & heredity, and ecology. Students interact with the course content through guided discussion, hands-on activities, and inquiry-based projects. The classroom experience is often enhanced by targeted activities at the Franklin Institute and the Da Vinci Science Center.

SCI-020 Seventh Grade Science

This course is designed to develop critical and scientific thought processes while teaching the elements of life science, earth science, and physics. Students learn to think analytically and express their thoughts and observations in concise terms. Course work begins at the microscopic level with an investigation of disease, cells, and microbes. Organism growth and reproduction will help students understand how living things develop and survive. From there students explore electricity & magnetism in the winter term. The second half of the year moves through the history of the Earth and geology and into weather, climate, and finally develops an understanding of environmental science as the spring brings renewed life to our campus. Laboratory skills and protocols are developed throughout the course through direct instruction as well as a variety of hands-on experiences.

SCI-030 Eighth Grade Science

Topics in Chemistry, Physics, and Life Science will be explored during the 8th grade year. Students will learn the basics of chemical reactions during a lab intensive period of investigation during this course. Wave motion, sound, and light will be explored in physical science during a multitude of hands-on procedures and demonstrations. Natural Selection will be studied to deepen students understanding of Darwinian Evolution and the mechanisms of selection will be discovered through an investigation of adaptations throughout nature. Students will also study human body systems in this course and have the opportunity to dissect numerous organs in the process to deepen their understanding and teach appropriate and safe laboratory procedures.

SCI-110 Physics

This differentiated physics course will facilitate the transition to a Physics First curriculum. Freshman will have a developmentally and mathematically appropriate experience, while others will have increased expectations and rigor. Students will take a step-by-step approach to problem solving, providing mathematical models and real-world examples to prepare students to understand the world around them. Classes include hands-on labs that require student involvement in creating procedures and determining how to analyze data to find a desired result. The following topics are covered: kinematics, projectile motion, forces, momentum, circular motion, and energy. *Please note: This course will be offered in the two year transition to Physics First to allow all students to take Physics as part of their lab science sequence.*

SCI-200 Chemistry

This course presents a basic introduction to the major principles of chemistry. Students complete class work, homework, and lab work to build knowledge, conceptual understanding, and problem-solving skills. The course is designed to impart the skills and knowledge necessary for further study in either Advanced Placement or college-level chemistry. Students enrolled in the course are expected to have achieved competency in mathematics through the Algebra 1 level. *This course may be taken concurrently with Biology with a recommendation of the science department.*

SCI-310 Biology

This course explores the major areas of biology and is designed to give students an understanding of how biology relates to their lives. The areas of study include evolution, ecology, molecular biology, botany, zoology and body systems. These will all be based on a hands-on curriculum, inquiry based learning with an emphasis of real-world applications and a lab curriculum focused on analyzing and evaluating information. This course is designed to prepare students for Advanced Placement or college-level biology. *This course may be taken concurrently with Chemistry with a recommendation of the science department.*

SCI-320 Engineering and Applied Sciences

This yearlong course introduces students to engineering disciplines, concentrating on analytical problem solving and the creation of functional products. (Engineering and applied sciences are strongly connected to industry and real-world applications.) Each term focuses on a different, popular discipline within Engineering. The engineering skills and processes that students acquire can be customized to fit their individual needs developing unique designs. *Please Note: This course qualifies for both graduation requirements and the Entrepreneurship program.*

Note: Completed or concurrently enrolled in Physics.

SCI-330 Anatomy and Physiology

Providing an understanding of the human body as a true machine with integrated tissues and systems, this yearlong course focuses on different areas in each term. Topics include bony landmarks, fine motor skills development and function, enhanced and modified movement, and the healing process. The course is ideal for students interested in exploring the structure, systems, and repair of the human body, specifically those interested in preparing for medical studies.

Prerequisite: Completed or concurrently enrolled in Biology.

SCI-350 Forensic Science

This course is lab intensive, employing techniques used in basic forensic science investigations to analyze physical and biological evidence. Experimental methods and analysis of data introduce students to the ways a forensic scientist must think and reveal the pure science that forms the basis for forensic science. Basic forensic anthropology and the identification of unknown skeletal remains are discussed, and technology, procedures, and the limitations of the modern crime laboratory are examined by simulating crime scene investigations.

Prerequisite: Chemistry and completed or concurrently enrolled in Biology

SCI- 370 Biotechnology: Applications of Research

This course will consist of an aspect of Scientific Research and Design but will focus on the principles, techniques, and applications of biotechnology. This will be a lab-intensive course with techniques in DNA extraction, DNA analysis, Gel electrophoresis, Restriction Enzymes, Recombinant DNA technology, Bacterial Transformation, Biomolecule purification (chromatography techniques), ELISA, Proteomics, DNA purification, PCR and DNA Sequencing (barcoding). In addition to these applications the course will discuss current research topics and

students will research and design their own experiment which will culminate in a research paper and presentation.

Prerequisite: Biology

Please note: this course qualifies for both graduation requirements and the Entrepreneurship program.

SCI-490 Advanced Placement Biology

AP Biology is a rigorous and demanding course, which is the equivalent of an introductory college Biology course. Content will be covered in more depth and greater expectations will be placed on interpretation and analysis of information than previous Biology courses. In addition, statistical analysis of data, evaluating information, and modelling of concepts will be expected. A significant amount of studying must be completed outside of the classroom to allow time for discussion, labs, and inquiry during class time. Students are expected to apply their knowledge of biology, therefore must have an excellent foundation in biology. You will be expected to be able to explain themes in Biology using illustrative examples that can be found throughout the text.

Prerequisite: Biology and recommendation of the Science Department.

SCI-491 Advanced Placement Chemistry

The AP Chemistry course provides students with a college-level foundation to support future advanced course work in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore topics such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium.

Students complete class work, homework and lab work to build their skills and knowledge, and learn test-taking techniques.

Prerequisite: Chemistry and recommendation of the Science Department

SCI-492 Advanced Placement Environmental Science

This class provides students with a foundation of understanding, knowledge, and skills to analyze environmental problems such as global warming, acid rain, endangered species, and invasive plants and animals. Students learn a variety of basic laboratory and field techniques, including soil and water sampling. The course incorporates both academic and applied studies, which include fieldwork in the local watershed and on-site field trips. Topics include the structure and

function of natural ecosystems, the history of the environmental movement, and the impact of legal, economic, and political systems on environmental concerns.

Prerequisite: Completed or concurrently enrolled in Biology and recommendation of the Science Department.

SCI-493 Advanced Placement Physics 1

AP Physics I is an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through inquiry-based investigations as they explore topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. This course requires that 25% of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply science practices.

Prerequisites: Geometry but may take concurrently with Algebra II. This course requires a recommendation from the Science Department.

SCI-494 Advanced Placement Physics 2

AP Physics 2 is an algebra-based, introductory college-level physics course that explores topics such as fluid statics and dynamics; thermodynamics with kinetic theory; PV diagrams and probability; electrostatics; electrical circuits with capacitors; magnetic fields; electromagnetism; physical and geometric optics; and quantum, atomic, and nuclear physics. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. This course requires that 25% of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply science practices.

Prerequisites: AP Physics I, Co-requisite of Pre-Calculus. This course requires a recommendation from the Science Department.

SCI-495 Advanced Placement Physics C: Mechanics

AP Physics C: Mechanics is equivalent to a one-semester, calculus-based, college-level physics course, especially appropriate for students planning to specialize or major in physical science or engineering. The course explores topics such as Newton's laws of motion; work, energy, and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation.

Introductory differential and integral calculus is used throughout the course. Students spend 20% of instructional time engaged in hands-on laboratory work. Students ask questions, make observations and predictions, design experiments, analyze data, and construct arguments in a collaborative setting, where they direct and monitor their progress.

Corequisite: Calculus, AP Calculus AB, or AP Calculus BC and recommendation of the Science Department.

SCI-496 Advanced Placement Physics C: Electricity and Magnetism

AP Physics C: Electricity and Magnetism is a calculus-based, college-level physics course, especially appropriate for students planning to specialize or major in physical science or engineering. The course explores topics such as electrostatics; conductors, capacitors, and dielectrics; electric circuits; magnetic fields; and electromagnetism. Introductory differential and integral calculus is used throughout the course. Students spend 20 % of instructional time engaged in hands-on laboratory work. Students ask questions, make observations and predictions, design experiments, analyze data, and construct arguments in a collaborative setting, where they direct and monitor their progress.

Prerequisite: AP Calculus AB or AP Calculus BC and AP Physics I or AP Physics C Mechanics and recommendation of the Science Department.

The Learning Center

TLC-100
TLC-101

TLC—Full Time
TLC ½ Time

The Learning Center (TLC-Full Time) is a major academic subject that meets five times a week for a full class period. Class size is limited to four or five students per class.

The Learning Center (TLC-1/2 Time) class meets twice per week for a full class period so it is not designated as a major academic subject. Class size is still limited to four or five students per class.

The class may be taken in multiple years based on need as recommended by the Director of Learning Services and Assistant Headmaster for Academic Affairs.

Each student's class is designed to strengthen areas through coping skills and remediation. A structured multi-sensory, discovery approach is utilized to maximize teacher effectiveness. Topics covered may include executive functioning, study skills, test-taking strategies, task attention skills, organization skills, reading (decoding), spelling (encoding), handwriting, comprehension, oral reading, vocabulary, composition, and various coping skills.

A major emphasis is placed on the “how to” of learning. Students are lead to discover a personal “formula for academic success” based on strengths and strategies for managing weaknesses. Subject area course work is used when it is relevant to strengthening skill areas and extra help with content areas from classroom teachers is often utilized. Self-advocacy skills are a primary goal for all TLC students since the ultimate objective for every TLC student is to eventually achieve learning independence.

World Languages

WOL-010 Introduction to Latin

This course teaches young students that Latin is alive! Students explore how Latin has influenced the English language and that people truly use Latin every day. A derivative tree project at the beginning reinforces these ideas. The course also illustrates the importance of the Roman gods and goddesses in the ancient world and devotes a significant amount of time to the study of mythology, both Greek and Roman. Although it is an introductory course, students still learn a significant amount of vocabulary and are able to read and create simple sentences with the grammar covered. The course closes with a study of the Roman Empire with a focus on the Roman army.

WOL-020 Introduction to Chinese

This course introduces Mandarin Chinese and Chinese culture to young learners. Students learn to speak and understand basic Mandarin Chinese and become familiar with modern Chinese culture through pop songs and cartoons. Students will learn how to participate in the target language, Chinese, through the comprehensible input method as well as tell and read stories.

WOL-100 Latin I

Focusing primarily on the grammatical aspects of the Latin languages, Latin I helps students build their vocabulary, master simple sentence constructions, use colloquial Latin phrases, and understand the influence that Latin has had on the English language, through a derivative tree project. The course also introduces students to the ancient Romans who spoke the language and to the history of ancient Rome, from the monarchy through the fall of the Empire. During the project *Iam Aedificemus Romam* (Now Let Us Build Rome), students learn about not only the geography of ancient Rome, but also significant monuments that the Romans created, such as the Coliseum and the Pantheon.

WOL-110 **Spanish I**

This course develops foundational language skills through reading, writing, listening, speaking, studying grammar, and engaging in a variety of interactive activities and exercises. In addition to learning the language, students begin to learn about the cultural habits, geography, and history of Spanish-speaking countries.

WOL-120 **German I**

This course introduces students to the German language and develops a foundation for advanced study. Students are presented with basic verb conjugations, a wide range of vocabulary, simple expressions, and cultural aspects of the German-speaking world. The geography of three European countries – Germany, Austria, and Switzerland – is covered. Students develop their knowledge of German through extensive repetition and through reading and developing class stories. The course will feature German music, videos and novels.

WOL-130 **Chinese I**

This class introduces the language and culture of China. Studying Mandarin Chinese and learning simplified characters enable students to communicate with the greatest number of Chinese. Students also gain insight into the growing importance of the Chinese language in today's rapidly changing world, the violent and profound effects of the movement of Chinese people around the globe, and China's new position as an economic and military power. New vocabulary and structures are primarily mastered through games and activities involving movement. Hard work and memorization skills are essential, as students often learn 30 or more difficult Chinese characters a week.

WOL-200 **Latin II**

This course is a continuation of Latin I, covering the rest of the basic grammar (the fourth and fifth declensions of nouns and all tenses in the passive voice for all conjugations), excluding the subjunctive mood. At the completion of the course, students are capable of reading simple Latin prose. While they expand their knowledge of Latin, students also increase their knowledge of English through the study of derivatives and sentence structure, and the content of passages they translate helps them better understand Roman history and civilization.

WOL-210 Spanish II

This class gives students the tools to succeed in upper-level Spanish study by improving their written and spoken Spanish skills through independent and collaborative work. The course expands grammar and vocabulary, which students use to describe aspects of their experience and compare them with the traditions and culture of the Spanish-speaking world.

WOL-220 German II

While reading and discussing intermediate-level passages and dialogues referring to German history, geography, culture, and everyday life, students acquire a wide range of new vocabulary and idioms. Furthermore, correct pronunciation and conversational skills are emphasized. Similarities between German and English—in cognates and principal parts of irregular verbs—are pointed out in order to make language acquisition easier and more interesting. Students develop their knowledge of German through extensive repetition and through reading and developing class stories. The course will feature German music, videos, and novels.

WOL-230 Chinese II

Students must show they have mastered the basics of Chinese I before entering Chinese II, in which they dive deeper into the language and develop the ability to communicate at a basic level through both spoken and written Chinese. Board games are often used to facilitate the enjoyment of learning this difficult language as well as the retention of a large base set of characters. Once most character radicals are learned, students practice calligraphy.

WOL-300 Latin III

This course completes the study of Latin grammar. The passages that students read and translate provide material for detailed analysis of the subjunctive mood and its application, as well as gerund and gerundive. At the completion of the course, students are able to read Latin literature with a special focus on prose. While expanding their knowledge of Latin, students increase their knowledge of English. They are also able to extract historical and cultural information from primary Latin texts, increasing their knowledge of Western civilization.

WOL-310 Spanish III

Spanish III prepares students to excel in upper-level high school Spanish courses through engaging reading, writing, listening, and speaking activities. The focus of the course is divided between grammar and vocabulary, and exploring culture. Students explore aspects of modern and ancient cultures from Spanish-speaking countries and territories.

WOL-320 German III

While reading/translating advanced passages and dialogues that refer to German history, geography, culture, and everyday life, students further enrich their grasp of vocabulary and idioms. During intensive and extensive drills and simulated situations, students acquire superior conversational skills. Similarities between German and English—in cognates and principal parts of irregular verbs—are pointed out in order to make language acquisition easier and more interesting. Students develop their knowledge of German through extensive repetition and through reading and developing class stories. The course will feature German music, films, and novels.

WOL-330 Chinese III

Students must show they have mastered the material in Chinese II before entering Chinese III, in which they broaden their ability to communicate by mastering language related to a large number of practical settings. Chinese idiomatic expressions are studied. It is required that students take the SAT Subject Test in Chinese while taking this course.

WOL-400 Honors Latin IV

This course is offered to those students who either are interested in continuing Latin (beyond three years) without taking the AP course or want to get better prepared for the AP course. After reviewing advanced grammar—the subjunctive mood (both active and passive) and its multiple applications, gerund, and gerundive—students get acquainted with the meter and poetic devices used by Vergil and begin the study of the original form of the *Aeneid*. In addition to translating excerpts from books I, II, IV, and VI and learning new vocabulary, they analyze the story line from a historical point of view as well as the roles of gods in the fate of human beings. The students also read and translate selected sections from Julius Caesar’s “Gallic Wars.”

WOL-410 Honors Spanish IV

This class prepares students for college-level Spanish courses by helping them develop higher-level proficiency in all language-related skill areas, while increasing their knowledge of and appreciation for the cultures of the Spanish-speaking world. This course reviews and expands upon major grammar concepts and increases vocabulary through creative independent and collaborative projects and creative writing.

WOL-420 Honors German IV

This course focuses on reading authentic materials from original German resources, ranging from newspaper and magazine articles to poems and short stories by German authors. Critical analysis of these written texts is carried out in both written and spoken form. Students continue to increase their ability to comprehend and produce written work, improve their spoken and conversational skills, and expand their vocabulary and knowledge of German culture and history. The class will experience the German language through a variety of media, including news articles, videos/movies, plays, novels, and fairy tales. Students are expected to produce cohesive essays, short stories, and other types of formal and informal written work.

WOL-430 Honors Chinese IV

This course is taken in preparation for WOL-493: Advanced Placement Chinese Language and Culture. As such, students are required to take the November Chinese with Listening SAT Subject Test in order to accustom themselves to a similar testing format and environment. Lessons introduce a wide range of cultural and societal issues, which are explored in more depth during the AP course. Students use interpersonal and presentational skills to explore Chinese culture while developing a lexicon.

WOL-490 Advanced Placement Latin

This course is open to qualified students by recommendation of the World Languages Department and prepares them to take the Advanced Placement Latin exam.

In this course students spend most of their time translating the required lines of Vergil's *Aeneid*, constituting excerpts from books I, II, IV, and VI, as well as sections of books I, IV, V, and VI of Caesar's *De Bello Gallico*. In addition to examining the *Aeneid* story, from both a historical and mythological point of view, and learning new vocabulary and phrases, which must be memorized for the AP exam, students analyze Vergil's meter, structure, grammar (especially his famous irregularities), and poetic devices. They also search for parallels between the *Aeneid* and Homer's *Iliad* and *Odyssey*. Considering the enormous number of lines that need to be translated and mastered, taking WOL-400: Latin IV Honors prior to this course is highly recommended, though it is not a prerequisite.

WOL-491 Advanced Placement Spanish Language and Culture

This course is open to students who have completed Spanish IV, who have performed well in previous Spanish courses, and who receive permission from their current Spanish teacher and the head of the World Languages Department. The class provides comprehensive preparation for the AP Spanish Language and Culture exam as well as for intermediate-level college Spanish courses.

In this course, students develop written and oral proficiency in order to compare and make connections with the language, cultures, and communities of the Spanish-speaking world. Speaking and writing focus on interpersonal, interpretive, and presentational forms of communication. The course also aims to improve students' awareness and appreciation of cultural aspects of the Spanish-speaking world with authentic readings and audio/video programs.

WOL- 492 Advanced Placement German Language and Culture

This course prepares students to take the AP German Language exam, which covers six thematic areas that form the backbone of the course: Family and Society, Personal and Public Identity, Beauty and Aesthetics, Globalization, Science and Technology, and Daily Life. The course explores these themes through authentic materials from original German resources, ranging from

newspaper and magazine articles to poems and short stories by German authors. Critical analysis of these written texts is carried out in both written and spoken form. Students continue to increase their ability to comprehend and produce written work, improve their spoken and conversational skills, and expand their vocabulary and knowledge of German culture and history. The class will experience the German language through a variety of media, including news articles, videos/movies, plays, novels and fairy tales. Students are expected to produce cohesive essays, short stories, and other types of formal and informal written work.

WOL- 493 Advanced Placement Chinese Language and Culture

This course is open to qualified students by recommendation of the World Languages Department and prepares them to take the Advanced Placement Chinese Language and Culture exam.

The goal of this course is to continue to develop the interpretive, interpersonal, and presentational skills of intermediate Chinese learners. Extensive readings and media exploration in Chinese prepare students for communication-based assessments. In order to meet standards set by the College Board, lessons are based on cultural, societal, or historical discussion topics. Relevant television and film screenings and interaction with native speakers on campus reinforce the relevance and importance of these cultural topics while helping to prepare students for the required AP exam.

WOL- 520 Honors German V

This course is designed for students who have successfully completed AP German and want to continue the study of German by providing opportunities to demonstrate proficiency in interpersonal, interpretive and presentational modes of communication. Students will be co-enrolled with students taking AP German.