

**1766**



**RUTGERS PREPARATORY SCHOOL**

UPPER SCHOOL CURRICULUM  
GUIDE FOR 2019/2020

## **TABLE OF CONTENTS**

Table of Contents.....	1
Graduation Requirements.....	2
Academic Information.....	3-8
Required Courses by Grade.....	9-10
Humanities Department Courses.....	11-23
Mathematics Department Courses.....	24-30
Science Department Courses.....	31-40
World Languages Department Courses.....	41-52
Computer Education Department Courses.....	53-55
Theater & Dance Department Courses.....	56-57
Music Department Courses.....	58-61
Visual Arts Department Courses.....	62-66
Health Department Courses.....	67
Physical Education Department Courses.....	68
College Counseling Courses & Special Programs.....	69

**RUTGERS PREPARATORY SCHOOL**  
**Graduation Requirements**

**Full year courses receive 1 credit; semester courses receive 0.5 credits. A minimum of 20 credits are required for graduation.**

**HUMANITIES:** A full year of English is required in grades 9-12. Students are required to take a full year of History in grades 9, 11, and 12. Foundations of Civilizations is required in 9th grade, U.S. History is required for 11th graders, and 12th graders must elect a year of History. 10th Grade History study, although not required, is strongly advised.

**MATHEMATICS:** Students are required to take at least one full-year math course during grades 9, 10, and 11 through Algebra 2 and, at least, one elective course (either semester or full year) during grade 12. Introduction to Computer Science and AP Computer Science may be considered mathematics electives.

**SCIENCE:** Students are required to take two years of a laboratory Science. One year must be a life science (Biology) and one year must be a physical science (Chemistry or Physics). Advanced study is strongly advised.

**WORLD LANGUAGES:** All students are required to take two consecutive years of the same World Language. Advanced study is strongly advised. Beginning in the sophomore year, students may elect to take two World Languages. International students who start at Rutgers Prep in 9th grade are required to fulfill this graduation requirement, but may delay the start of World Language study until 10th grade, if necessary.

**VISUAL ARTS, THEATER & DANCE, MUSIC, COMPUTER EDUCATION:** All students must take two credits in Visual Arts, Theater & Dance, Music, or Computer Education. Computer Design and Multimedia Design, courses offered in the Computer Education Department, may be considered art electives.

**HEALTH:** All students are required to take one semester of Health in 9th (spring semester), 10th (fall semester - Drivers Education), and 11th grade (fall semester), as well as participate in the College Bound program in 12th Grade.

**PHYSICAL EDUCATION:** All students are required to take one semester of Physical Education in 9th and 10th Grade. Semester electives are available for 10th, 11th and 12th graders.

**JUNIOR SEMINAR/SENIOR SEMINAR:** All students are required to take Junior Seminar during the spring semester of 11th Grade and Senior Seminar during the fall semester of 12th grade.

**COMMUNITY SERVICE:** All students are required to complete a minimum of 10 hours of community service in each grade level, with at least 5 hours of service taking place outside of Rutgers Preparatory School. Honors (50 hours or more) and Honors 250 (250 hours or more) are possible. Honors 250 is denoted with special designation on the transcript.

## ACADEMIC INFORMATION

### Advancement Placement (AP) and Honors level courses

Honors level and AP level courses are available by departmental approval. 10th graders may take up to 2 AP courses, 11th graders up to 3 AP courses, and 12th graders up to 4 AP courses. Students with a strong academic history who wish to enroll in one additional AP course beyond the grade level maximum may appeal to the Upper School Dean of Academics through application. Course Recommendation appeals for honors or AP level courses must be made through application to departments. Underclassmen enrollment in an AP course requires taking the corresponding AP exam in May. Seniors may elect to be exempt from AP exams by submitting an application to the Upper School Principal. Honors level courses earn a one-third grade bump (GPA Points +0.333) when calculating GPA and AP level courses earn a two-thirds grade bump (GPA Points +0.667) when calculating GPA.

### **GRADE SYSTEM (based on a 4.0 scale)**

<b>Grade</b>	<b>Numerical Percentage</b>	<b>GPA Points</b>	<b>Honors GPA Bump</b>	<b>AP GPA Bump</b>
A+	100 - 97	4.333	4.666	5.0
A	96 - 93	4.0	4.333	4.667
A-	92 - 90	3.667	4.0	4.334
B+	89 - 87	3.333	3.666	4.0
B	86 - 83	3.0	3.333	3.667
B-	82 - 80	2.667	3.0	3.334
C+	79 - 77	2.333	2.666	3.0
C	76 - 73	2.0	2.333	2.667
C-	72 - 70	1.667	2.0	2.334
D+	69 - 67	1.333	1.666	2.0
D	66 - 63	1.0	1.333	1.667
D-	62 - 60	0.667	1.0	1.334
F	59 - 0	0	0	0

## **Courses**

A minimum of 5 courses per semester are required within the 8-period, rotating schedule, including a minimum of 4 courses from the Humanities, Mathematics, Science, and World Languages Departments, as well as fulfilling all grade level course requirements. Choir, Orchestra, Band, or Dance may be scheduled during “9th period” (2:25-3:05 pm band on Monday, Tuesday, Thursday, Friday) in addition to the minimum five courses.

As a maximum, students are allowed to schedule 7 courses in the schedule, with a maximum of 6 core academic courses. In addition, Study Hall and one course within the PE/Health/Driver’s Education/Junior Seminar/Senior Seminar sequence are also required each year as part of a student’s schedule.

**NOTE:** Students signing up for AP courses and all students signing up for senior electives - Enrollment requires permission of the department, and for some courses a writing sample or placement test.

## **Academic Evaluation**

A grade of D- represents the minimum level of achievement for academic credit and is required to meet prerequisite requirements for advancement into the next level course. Departmental approval may also be required for advancement. In Mathematics and World Languages where subsequent study depends substantially upon the mastery of fundamental material, a grade of C- is considered the minimum level of achievement. Grades below the minimum must be reinforced with a successful summer review program and minimum achievement on a placement test before moving on to the next level.

As you work to design your academic program, please consult with your advisor or with members of the Upper School administration if there are any questions about requirements or course sequencing not addressed in this document.

### **Adding/Dropping/Changing Levels of Courses**

Below is a description of the procedures to add a course, drop a course, or change levels of a course for each school year. Exact dates will vary annually based on the Upper School calendar.

The add/drop period for courses will occur to start both the fall and spring semesters. “Course Change” forms are available in the Upper School office and the ArgoNet Resource Board “US Curriculum & Scheduling”, and require signatures from parents, teachers, advisors, and administrators before any change of schedule shall take place.

Please check in with the Upper School Dean of Academics to see if there is space in a course and can be placed in your schedule before completing the required paperwork.

Adding and/or dropping a course must preserve the minimum number of courses required (5), the maximum number of courses (7), must preserve at least one study hall period either during the Periods 1-8 rotation or 9th period, and must preserve any required courses for your grade level.

#### **Adding a Course**

The deadline to add a fall semester course is within the first three class meetings of the course. There must be space available in the course and it must fit into your schedule to be considered.

The deadline to add a yearlong course is within the first six class meetings of the course. There must be space available in the course and it must fit into your schedule to be considered.

The deadline to add a spring semester course is within the first three class meetings of the course. There must be space available in the course and it must fit into your schedule to be considered.

#### **Dropping a Course**

The deadline to drop a fall semester course without any record on your transcript is within the first month of courses (exact dates will be provided from year to year). Between the first month and the fall mid-semester point for Grades 9-11, you may drop a fall semester course with a WP (Withdrawn Passing) or WF (Withdrawn Failing) on your transcript. Seniors are not allowed to have a WP or WF on a transcript. No drops will be allowed for fall semester courses after the fall mid-semester point.

The deadline to drop a yearlong course without any record on your transcript is fall mid-semester point. Between the fall mid-semester point and approximately the beginning of December (exact dates will be provided from year to year), you may drop a yearlong course with a WP or WF on your transcript. Seniors are not allowed to have a WP or WF on a transcript. No drops will be allowed for yearlong courses after the beginning of December (exact dates will be provided from year to year) .

The deadline to drop a spring semester course without any record on your transcript is within the first month of courses for the spring semester (exact dates will be provided from year to year). Between the first month of spring semester courses and the spring interim point for Grades 9-11, you may drop a fall semester course with a WP (Withdrawn Passing) or WF (Withdrawn Failing) on your transcript. Seniors are not allowed to have a WP or WF on a transcript. No drops will be allowed for fall semester courses after the spring interim point.

### **Changing Levels of a Course (AP to Honors OR Honors to Regular)**

The deadline to change levels of a course with no record on your transcript is the Fall Mid-Semester point (typically the beginning of November; exact dates will be provided from year to year). After this point, no level changes will be permitted.

### **Grading Periods**

Below is a description of the grading periods for each school year. Exact dates vary based on the annual master schedule.

#### **Fall Mid-Semester**

The Fall Mid-Semester grade is a snapshot of progress during the first half of the fall semester. This marking period occurs from the first day of school to approximately the first week of November. A Fall Mid-Semester grade will be assigned in early November which is a grade for the course at that point of the semester.

#### **Fall Semester**

The Fall Semester grade is assigned following the end of the fall semester. This marking period occurs from the first day of school to approximately mid-January. A Fall Semester grade will be assigned following the end of this marking period which is a grade for the course for the fall semester.

#### **Spring Mid-Semester**

The Spring Mid-Semester grade is a snapshot of progress during the first half of the spring semester. This marking period occurs from approximately mid-January until just prior to Spring Break. A Spring Mid-Semester grade will be assigned following Spring Break which is a grade for the course at that point of the semester.

#### **Spring Semester**

The Spring Semester grade is assigned following the end of the spring semester. This marking period occurs from approximately mid-January to the end of the school year. A Spring Semester grade will be assigned following the end of this marking period which is a grade for the course for the spring semester.

## **Grades/Honors on the Report Card**

### **Fall Mid-Semester / Spring Mid-Semester**

Assigned at the midpoint of both the fall and spring semesters representing a grade in the course at that point. This is a grade in progress and will continue until the end of the semester to determine the semester grade.

### **Fall Semester / Spring Semester**

Assigned at the end of both the fall and spring semesters representing the overall grade for the course for the entire semester.

### **Fall Exam / Spring Exam**

Fall Semester exams and Final exams will also be reported on the report card, if applicable. Many courses administer both Fall Semester and Final exams while other courses may only administer a Fall Semester exam. There are also courses, based on the nature of the content, that do not administer exams.

### **Fall Final Grade / Spring Final Grade**

A Fall Final grade and Spring Final grade will be assigned in a full year course following the fall and spring semesters. The Fall Final grade is derived from the Fall Semester grade and Fall Semester exam, if applicable. The Spring Final grade is derived from the Spring Semester grade and Spring Semester exam, if applicable.

### **Final Grade**

A final grade will be assigned whenever a course ends. This includes a fall semester course, a spring semester course, or a full year course.

### **Honors and Honors With Distinction on the Report Card**

Honors or Honors with Distinction may be noted on the report card following semesters based on achievement. Honors will be noted for a student that achieves a B or higher in all courses during a semester and/or for the school year. Honors With Distinction will be noted for a student that achieves an A- or higher in all courses during a semester and/or the school year.

## **Grades on the Transcript**

The only grades that appear on a transcript are Final Grades for courses taken for credit (either during the academic year or summer). Final Grades in summer courses are not factored into GPA calculations but will appear on the transcript.

## **Grade Point Average (GPA) Calculations**

Cumulative grade point average (GPA) is calculated for all students following final grades for classes and credits earned. 12th grade students will have their GPA calculated twice per year, once following the fall semester for college application purposes and again at the end of the academic year.

## **Course Requests Procedure**

Course Requests for the subsequent academic year will take place in the spring of the current academic year. Prior to Course requests, teachers will enter Course Recommendations into ArgoNet based on performance in the current year courses and most appropriate placement for the following year. Students have the opportunity to appeal Course Recommendations for reconsideration by the Department. Course Requests then require parental approval before entered by Advisors and students into ArgoNet.

## **Communication**

Starting with the 2018/2019 academic year, Rutgers Prep utilizes ArgoNet to communicate with families. ArgoNet can be found on the Rutgers Prep website ([rutgersprep.org](http://rutgersprep.org)) and will allow for communication between the school and families.



Using a login, families will be able to inquire about Rutgers Prep, apply, enroll, re-enroll, pay tuition, schedule courses, manage coursework, view communication from teachers/administration (Official Notes), view report cards and transcripts, and much more.

For assistance with ArgoNet, please contact our Director of Technical Services, Mr. Mark Nastus via email ([nastus@rutgersprep.org](mailto:nastus@rutgersprep.org)) or 732-545-5600.

## Required Courses By Grade: 2019/2020

### **9TH GRADE:**

English 1  
Foundations of Civilizations  
Mathematics  
World Language  
Environmental Science OR Chemistry OR Honors Chemistry  
Visual Arts, Theater & Dance, Music, or Computer Design Elective  
Physical Education/Health  
Study Hall

#### **Electives:**

Introduction to Acting  
Topics in Dance  
International Dance & Choreography  
Music Electives  
Drawing and Design  
Ceramics 1  
Architecture 1  
Computer Education Electives

### **10TH GRADE:**

English 2 (Regular OR Honors)  
Mathematics  
Biology OR Honors Biology OR AP Biology  
World Language  
Visual Arts, Theater & Dance, Music, or Computer Design Elective  
Driver's Education/Physical Education  
Study Hall

#### **Electives:**

World History (Regular or AP) OR History Elective  
Music Electives  
Theater & Dance Electives  
Visual Arts Electives  
Computer Education Electives  
World Language

## **Required Courses By Grade: 2018/2019**

### **11TH GRADE:**

English 3, Honors English 3 OR AP English Language & Composition  
Mathematics  
U.S. History OR AP U.S. History  
Health/Junior Seminar  
Study Hall

### **12TH GRADE:**

English elective (full year OR 1 fall semester & 1 spring semester course)  
Math elective (full year OR 1 fall semester course OR 1 fall semester & 1 spring semester course)  
History elective (full year OR 1 fall semester & 1 spring semester course)  
Senior Seminar  
Study Hall

### **Junior and Senior Electives:**

Mathematics Electives  
Science Electives  
Humanities Electives  
World Language Electives  
Theater & Dance Electives  
Music Electives  
Visual Arts Electives  
Computer Education Electives  
Physical Education Electives

## **THE HUMANITIES**

### **ENGLISH 1**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

English I encompasses the appreciation of literature, foundation of research skills and continued emphasis on writing skills including vocabulary, review of basic elements of grammar, review of paragraph structure and basic literary analysis. Major projects include oral presentations of summer reading, periodic essays analyzing the literature, and introduction to the research paper. Works might include *Romeo and Juliet* or *A Midsummer Night's Dream*, *The Catcher in the Rye*, *Jane Eyre*, *The Odyssey* and units of short stories, poetry, non-fiction, and mythology.

**PREREQUISITE: None**

### **ENGLISH 2**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

In this course, students will continue to explore four literary genres: short story, novel, drama, and poetry. In addition to selections from Kennedy's *Introduction to Fiction* and Kennedy/Gioia's *Introduction to Poetry*, they will read works such as *The Theban Plays*, *The Great Gatsby*, *Macbeth*, *Things Fall Apart*, and other works of European and World Literature. Writing will be emphasized, with review of grammar, syntax, and sentence structure as needed, as students work to construct analytical essays with clear, well-supported thesis statements.

**PREREQUISITE: English 1**

### **HONORS ENGLISH 2**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

In this course, students will deepen and expand their understanding of the four literary genres and the literary elements and poetic devices pertinent to each. In addition to units on the short story and poetry, they will read such works as *Pride and Prejudice*, *The Theban Plays*, *The Great Gatsby*, *A Doll House*, *Macbeth* and other works of European and World Literature. Close reading of texts will be accompanied by critical analysis in both writing and discussion. Clear, forceful exposition of literary criticism and other purposes will be the goal of the writing component.

**PREREQUISITE: A in English 1 and departmental approval**

### **ENGLISH 3**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This full-year course concentrates primarily on American writers, but also includes a unit on Shakespeare's *Hamlet*. The class develops skills in literary analysis by reading the text closely and responding to the material through informal writing, periodic quizzes, class discussion, and essay tests. The class will cover the fundamentals of writing good expository essays using logic, evidence and style. Works might include Miller's *The Crucible*, Shakespeare's *Hamlet*, Hurston's *Their Eyes Were Watching God*, and Hansberry's *A Raisin in the Sun*, as well as poetry selections and short works of American fiction and nonfiction.

**PREREQUISITE: English 2 or Honors English 2**

### **HONORS ENGLISH 3**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This full-year course concentrates primarily on American writers, but also includes a unit on Shakespeare's *Hamlet*. Like English 3, Honors English 3 develops skills in literary analysis by reading the text closely and responding to the material through informal writing, periodic quizzes, class discussion, and essay tests. The pace of Honors English 3 is faster than that of English 3, however, and some of the texts covered in the course are more challenging. The class will cover the fundamentals of writing good expository essays using logic, evidence and style. Works might include Hawthorne's *The Scarlet Letter*, Shakespeare's *Hamlet*, Hurston's *Their Eyes Were Watching God*, and Hansberry's *A Raisin in the Sun*, as well as poetry selections and short works of American fiction and nonfiction.

**PREREQUISITE: A- in English 2 or B+ in Honors English 2 and departmental approval**

## **AP ENGLISH LANGUAGE AND COMPOSITION**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

An AP course in English Language and Composition should train students to become skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts. Examples of these writers include Mark Twain, William Shakespeare, Henry David Thoreau, and George Orwell. The course should also give them the practice and helpful criticism necessary to make them flexible writers who can compose in a variety of modes and for a variety of purposes. AP Composition will emphasize the expository, analytical, and argumentative writing that forms the basis of academic and professional communication. Interested students must be recommended by their English II teacher and must submit a sample of their expository writing. This course is also known as “AP Writing”.

**PREREQUISITE: A in English 2 or A- in Honors English 2 and submission of an in-class writing sample for department approval**

## **ADVANCED PLACEMENT ENGLISH LITERATURE**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

In this rigorous Advanced Placement course, reading is varied and challenging. The course asks students to examine the techniques of various writers closely. Admission by permission of the department; a writing sample is required. It is assumed that applicants have facility expressing themselves on paper. Typical works might include: *Beloved*, Toni Morrison; *Far From the Madding Crowd*, Thomas Hardy; *The Awakening*, Kate Chopin; *Othello*, Shakespeare; and many poems, both modern and classical.

**PREREQUISITE: A in English 3, A- in Honors English 3, or B+ in AP English Language and Composition, and submission of an in-class writing sample for department approval**

## **CREATIVE WRITING**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This class will be a year-long commitment in which students will study poetry, personal essay, and novel writing. All students will be required to complete a poetry portfolio and a final draft of a personal essay. Participants will also submit a working draft of a novel to Scholastic’s Art and Writing Awards in late January. This course will culminate in a tour and “pitch session” at Scholastic’s SoHo office.

**PREREQUISITE: Open to Juniors and Seniors**

## **THE WORKS AND WORLDS OF J.R.R. Tolkien**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This class examines the writings and legacy of one of the most important authors of the twentieth century. Exploring Tolkien's fiction is worthwhile in its own right, due to its masterful craftsmanship and its massive influence on the Fantasy genre. But analyzing the ways in which Tolkien crafted his stories and set them in a wider universe can also be immensely interesting and useful, especially to aspiring writers. Analysis of Tolkien's many influences, such as Norse and Anglo-Saxon myth, Christianity, environmentalism, and his experiences in World War I will help inform students' essays and class discussions. Texts for this course may include Tolkien's essay "On Fairy Stories," the short stories "Leaf by Niggle" and "Smith of Wootton Major," extended excerpts from *The Silmarillion*, and *The Hobbit* and *The Lord of the Rings* in their entirety. Assessments will include a student centered independent project, analytical essays, tests, several shorter writing assignments and quizzes, and possibly a final exam. Participation in daily discussions will be central to students' success in this class.

**PREREQUISITE: Open to Juniors and Seniors**

## **COMEDY**

*Credits: 0.5*

*Length: Fall semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

We will explore the structure of comedy as it is employed in plays, film scripts, short stories, novels, and poetry. An emphasis will be placed on how language is utilized to generate humor and how the various elements of a piece of art guide the comic experience. The course will challenge students to create their own theories as to the structure of comedy, and the final exam will include the opportunity for students to present their theories and analyze the theories of their peers. Works to be read might include Aristophanes's *The Frogs*, Shakespeare's *The Tempest*, Swift's *A Modest Proposal*, television scripts for *Seinfeld*, and selections by Mark Twain, Lewis Carroll, and Garrison Keillor from the *Oxford Book of Humorous Prose*.

**PREREQUISITE: Open to Seniors**

## **DYSTOPIAN LITERATURE**

*Credits: 0.5*

*Length: Fall semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course explores the concepts of Utopia and Dystopia. Sir Thomas More coined the term “utopia” as a combination of Greek words meaning happy place and no place/nowhere. Far from describing a never-never land, utopias often represent cultural protest against unjust institutions or policies and propose political or social reforms. In recent years, there has been increasing attention to dystopian visions representing oppressive totalitarian regimes, environmental degradation, and/or technological oppression. Works may include *Utopia*, *Herland, 1984*, *Brave New World*, *The Time Machine*, *The Running Man*, *Do Androids Dream of Electric Sheep*, *The Handmaid’s Tale*.

**PREREQUISITE: Open to Juniors and Seniors**

## **LITERATURE OF WAR**

*Credits: 0.5*

*Length: Fall semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

In this course we will read and analyze poetry, short stories, and novels that examine the impact of war on the human psyche. As we explore war literature from different time periods and cultures, we will uncover the relationships between courage and fear, love and loss, and beauty and suffering. Texts may include Erich Maria Remarque’s *All Quiet on the Western Front*, Tim O’Brien’s *The Things They Carried*, and excerpts from Phil Klay’s *Redeployment*, winner of the 2014 National Book Award.

**PREREQUISITE: Open to Seniors**

## **ADAPTATION: LITERATURE AND FILM**

*Credits: 0.5*

*Length: Fall semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

In this semester-long senior elective course, students will read and study a selection of novels and analyze the film adaptations of these works. Students will prepare analytical essays and response papers based both on the novels read and on the film interpretations of those works, studying how to effectively dissect both literature and film in writing. Although a handful of films will be required viewing as part of this course, students should be advised that this is an English course, and as such, extensive reading and analytical writing will be the major focus of the class. Possible authors the course will cover include: Charles Dickens, P.D. James, Jane Austen, Ira Levin, William Shakespeare, Kazuo Ishiguro, Alice Walker, Michael Ondaatje, Solomon Northup, and Margaret Atwood.

**PREREQUISITE: Open to Seniors**

## **MYSTERY AND DETECTIVE FICTION**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course will investigate some of the best-known literary detectives from around the world and analyze both the character of the detective and the structure of the mystery. Students will read nightly and be involved in several major projects.

**PREREQUISITE: Open to Seniors**

## **MONSTERS**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course will investigate the way “monsters” have been used in literature to explore societies’ greatest social fears and taboos. Using Stephen T. Asma’s *On Monsters: An Unnatural History of our Worst Fears* as a guide, we will read texts such as Mary Shelley’s *Frankenstein*, Robert Louis Stevenson’s *The Strange Case of Dr. Jekyll and Mr. Hyde*, and *Beowulf*, as well as examine contemporary representations of monsters in cinema and television.

**PREREQUISITE: Open to Seniors**

## **ON THE ROAD: TRAVEL NARRATIVES**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

In this semester-long elective, students will read travel narratives from the 18<sup>th</sup>, 19<sup>th</sup>, and 20<sup>th</sup> centuries as well as discuss contemporary travel writers. We will discuss the issues of ethnicity, gender, and race and their role in the fiction and non-fiction travel narratives we read. In addition to writing analytical essays, students will begin working on their own personal travel narratives. □ Possible authors the course will cover include: Ernest Hemingway, Zora Neale Hurston, Jamaica Kincaid, Jhumpa Lahiri, Jack Kerouac, V.S. Naipaul, Paul Theroux, Mark Twain, Anthony Bourdain, Cheryl Strayed, and Jon Krakauer.

**PREREQUISITE: Open to Seniors**

## **CONTEMPORARY LITERARY GENRES**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

The objective of this course is to develop life-long readers by exposing them to a variety of literary genres. This course will focus on a selection of contemporary works written during the past fifteen years. We will look at each literary work as a social document and consider the ways in which contemporary fiction reflects and is reflected by the customs and values of contemporary society. Literary genres may include: Contemporary, Historical, Memoir, Non-Fiction, Suspense, Horror, Crime, and/or Science Fiction. Works may include: *Orphan Train, Before We Were Yours, The Life We Bury, and The Double Bind.*

**PREREQUISITE: Open to Juniors and Seniors**

## **FOUNDATIONS OF CIVILIZATIONS**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course covers the development of early peoples in four river valley civilizations: Egypt, India, Mesopotamia, and China, as well as Greece, Rome, the Byzantine Empire and early Islam. A major research paper is written in the second semester.

**PREREQUISITE: None**

## **WORLD HISTORY**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course is an exploration of World History from ancient times to the modern era, working extensively with primary sources. We'll look at Western history, but also at the civilizations of other regions such as southern and eastern Asia, the Americas, and Africa. We will examine global themes such as contact and conflict between civilizations, changes in religion, art, and culture over time, and the origins and development of the modern world. Come join us for a discussion of our world, where it's been, and where it might be headed!

**PREREQUISITE: Foundations of Civilizations**

## **ADVANCED PLACEMENT WORLD HISTORY**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

AP World History content is similar to the regular World History courses described above. Students will study more challenging sources and do more critical analysis of history in preparation for the required AP exam in the spring.

**PREREQUISITE: A- in Foundations of Civilizations and departmental approval**

## **HUMAN GEOGRAPHY**

**(Offered on rotation -- Next offering in 2019/2020)**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This interdisciplinary course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. We will cover topics that include: Population and Migration, Political Organization of Space, Industrialization and Economic Development, Cities and Urban Land Use, Geography and Mapmaking, Agriculture, Food Production, and Rural Land Use. If you enjoy learning about timely topics that exist at the intersection of psychology, environmental studies, economics, and history, this may be the perfect course for you.

**PREREQUISITE: Foundations of Civilizations**

## **HISTORY OF AMERICAN MEDICINE & SCIENCE (HAMS)**

**(Offered on rotation -- Next offering in 2020/2021)**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course will examine roughly three hundred years of biology, medicine, health, and disease in the United States. Science and medicine are human endeavors that must be understood in the appropriate historical context. We will consider how changing ideas about bacteriology, evolution, and medical care reshaped American society. Throughout the year we will use both primary and secondary sources to trace medicine's changing relationship to laboratory science. We will investigate the fascinating individuals who engaged in scientific research and provided medical care. By the end of the course, we will have learned how to conduct our own explorations in the history of science and medicine.

**PREREQUISITE: Foundations of Civilizations**

## **UNITED STATES HISTORY**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This is a survey course, which begins with the Age of Exploration and concludes with a study of domestic and foreign policy through the late 20th century. The course uses a variety of methods to develop analytical skills, and emphasizes the use of primary and secondary sources. All students develop a research project.

**PREREQUISITE: Open to Juniors**

## **ADVANCED PLACEMENT UNITED STATES HISTORY**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

This course covers the same chronological period as the regular US course but covers the material in greater depth and uses more primary sources in preparation for the required AP exam in the spring.

**PREREQUISITE: A- in World History/HAMS or B+ in AP World History, and departmental approval**

## **AMERICAN GOVERNMENT**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course will introduce many of the core concepts of political science as applied to American government and politics. Students will study the federal system and the institutions of American political life, ranging from Congress, the president and the Supreme Court to the popular press, political interest groups, and citizens/voters. Students will also examine the development of political identity, current political issues, patterns of voting behavior, and upcoming Congressional and/or presidential elections.

**PREREQUISITE: US History or AP US History**

## **ADVANCED PLACEMENT AMERICAN GOVERNMENT**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

This course is similar to the American Govt. course but emphasizes primary sources and the development of necessary skills to prepare for the required AP exam in the spring.

**PREREQUISITE: A- in US History, B+ in AP US History, and departmental approval**

## **MODERN EUROPEAN HISTORY**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course seeks to understand the history of Europe through critical examination of important social, political, cultural, and economic developments. Topics of study include the Renaissance, Reformation, French Revolution, Industrial Revolution, the rise of nationalism, the world wars, and the challenges Europe faces in the 21st century. The course investigates why and how new institutions, new ideas and new activities flourish or perish.

**PREREQUISITE: Open to Juniors and Seniors**

## **ADVANCED PLACEMENT MODERN EUROPEAN HISTORY**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

The AP Modern European History course emphasizes in-depth treatment of the regular course content and uses a great deal of primary source material to prepare for the required AP exam in the spring.

**PREREQUISITE: A- in US History or B+ in AP US History and departmental approval**

## **ECONOMICS**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course is an introduction to such core economic concepts as unemployment, inflation, output, fiscal policy, monetary policy, elasticity, competition, monopoly, the labor market, public choice theory, utility, Keynesian economics, classical economics and oligopoly. Through the study of theory and economic models students will gain a greater appreciation for the way economists think, and will gain an insight into the public policy process. We will examine history and current events through the lens of the economic models and theories that we learn in class.

**PREREQUISITE: US History or AP US History**

## **ADVANCED PLACEMENT ECONOMICS**

*Credits: 1 (AP Macroeconomics, Fall, 0.5 credits / AP Microeconomics, Spring, 0.5 credits)*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

This course is similar to the regular Economics course listed above, but will prepare students for the AP Exams in Economics, both Macro and Micro. Students will be exposed to more models and theories than the students in regular economics, and the pace of the course is significantly faster. If approved, students will register for AP Macroeconomics for the fall semester and AP Microeconomics for the spring semester -- both courses are required to enroll.

**PREREQUISITE: US History or AP US History and departmental approval**

## **HISTORY OF AMERICAN DEMOCRACY**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

History of American Democracy will be a full year elective course that uses Harvard Business School's high school case methodology to deepen students' understanding of American democracy. Based on the experience of Harvard Business School and other graduate and professional programs that use case-based teaching, the course will survey key episodes in the development of American democracy from the drafting of the Constitution up through the 2010 *Citizens United* debate. Each case is a concentrated story about a specific episode in history. Students are asked what they would have decided based on the facts they are given. The goal is for students to go beyond historical skills and factual content and aims to hone decision-making skills.

**PREREQUISITE: US History or AP US History**

## **THE HISTORY OF THE UNITED STATES THROUGH SPORTS**

*Credits: 0.5*

*Length: Fall semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course will explore the history of the United States through famous sports events or personages. Topics examined will be the Cold War, Women's Rights Movement, Civil Rights Movement, Anti-Semitism, and Nationalism among others. Students will read newspaper articles, scholarly works and will view documentaries and movies to examine these subjects. This course will conclude with a research project carried by each student on a topic of his or her own interest within this subject matter.

**PREREQUISITE: Open to Juniors and Seniors**

### **THE POLITICAL LEADERSHIP OF CHURCHILL, LINCOLN, and REAGAN**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course purports to examine the role of leadership in political history, and we will try to isolate the characteristics that made people successful in the face of incredibly traumatic historical events like Winston Churchill, Abraham Lincoln and Ronald Reagan so successful. Students will learn about how British Parliament works, and the role that Churchill's leadership played in fighting against Hitler's Nazi Empire. Additionally, we will look at the state of the United States at the time of Lincoln's election as President, and we will examine how he successfully navigated the country through the Civil War. Finally, we will examine the way that Ronald Reagan battled the Soviet Union in the Cold War, and the prominent role he played in winning the Cold War. What made these leaders similar, and what were some different techniques that each used? How did each of these leaders use the English language to gain support for their respective visions? Texts for this course will include speeches by Churchill, Lincoln, and Reagan, as well as secondary sources such as "The Churchill Factor: How One Man Made History" by Boris Johnson, "Lincoln on Leadership" by Donald T. Phillips, and "Greatness: Reagan, Churchill, and the Making of Extraordinary Leaders" by Steven Hayward.

**PREREQUISITE: US History or AP US History**

### **THE AMERICAN CIVIL WAR**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

The American Civil War will be a half-year elective course that uses primary sources, scholarly works and films to examine why this important event occurred, and how it continues to impact us to this day. There is a chance that this course will include trips to the battlefields at Antietam and Gettysburg, and a visit to Harper's Ferry. The course will conclude with a research project carried out by each student on a topic of his or her own interest. Students will read speeches by Abraham Lincoln, famous abolitionists and scholarly works by Professor Jim McPherson and Stephen Sears.

**PREREQUISITE: Open to Juniors and Seniors**

### **ADVANCED PLACEMENT PSYCHOLOGY**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

AP Psychology is the study of human behavior and mental processes. Students in this course explore how people learn, solve problems, and perceive the world. They gain new perspectives on how humans form self-images, work with others, and fall in love. Additionally, they develop an understanding of the anatomical and chemical phenomena that govern these processes. AP Psychology prepares students for the National AP exam in May. By the end of the year, students will cover the same material as a college Introduction to Psychology course.

**PREREQUISITE: Open to Seniors with departmental approval. Juniors may submit a request form for possible placement after Senior course requests have been satisfied. Approval for Juniors is also subject to departmental approval**

## MATHEMATICS

### ALGEBRA 1

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course consists of the study of the structure and essentials of algebra. The emphasis is on teaching a variety of skills as an aid to problem solving.

**PREREQUISITE: None**

### GEOMETRY

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course develops ideas from Euclidean plane and solid geometry and then integrates these ideas with those from analytic geometry. Use of constructions throughout the course will enable the students to discover the properties, postulates, and theorems that will be needed in order to solve the applications associated with the rules of geometry.

**PREREQUISITE: Algebra 1**

### HONORS GEOMETRY

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

This course is available to students only with departmental approval with their current teacher recommendation as the most important factor. Students currently enrolled in Algebra 1 or Algebra 1B will need departmental approval as well as taking a placement test to be considered for placement in Honors Geometry.

**PREREQUISITE: Algebra 1 and departmental approval**

## **ALGEBRA 2**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Algebra 2 completes the study of algebra begun in Algebra 1 and prepares the students for the study of advanced mathematics. The course presents a comprehensive investigation of linear, quadratic, and radical functions. The students will utilize graphical and numerical methods, as well as the graphing calculator to examine each function. Trigonometric ratios, radians, and the unit circle are introduced. Skills in multiple algebraic techniques and the ability to present a thorough and well-organized solution are emphasized in each unit.

**PREREQUISITE: Geometry**

## **HONORS ALGEBRA 2**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

Honors Algebra 2 completes the study of algebra begun in Algebra 1 and prepares the students for the study of advanced mathematics at the Honors level. The course presents a comprehensive and in-depth investigation of linear, quadratic, and radical functions. The students will utilize graphical, numerical, and analytical methods, as well as the graphing calculator, to examine each function. Trigonometric ratios, radians, and the unit circle are thoroughly investigated. Proficiency in multiple algebraic techniques, the ability to present a thorough and well-organized solution, and the skill to connect concepts in order to solve multi-step problems are emphasized in each unit.

**PREREQUISITE: Geometry or Honors Geometry and departmental approval**

## **HONORS ALGEBRA 2 WITH APPLICATIONS**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

Honors Algebra 2 with Applications completes the study of algebra begun in Algebra 1 and prepares the students for the study of advanced mathematics at the Honors level. The course presents a comprehensive and in-depth investigation of linear, quadratic, and radical functions. The students will utilize graphical, numerical, and analytical methods, as well as the graphing calculator, to examine each function. Trigonometric ratios, radians, and the unit circle are thoroughly investigated. Proficiency in multiple algebraic techniques, the ability to present a thorough and well-organized solution, and the skill to connect several concepts into a comprehensive unit are goals emphasized in each unit. Mathematical modeling and real world applications will also be studied throughout the course.

**PREREQUISITE: Honors Geometry and departmental approval**

## **PRECALCULUS**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course is designed to be the preparation for non-AP Calculus, but supports other upper-level mathematics courses such as Statistics. Precalculus is the study of basic functions; identity, quadratic, cubic, rational, square root, exponential, logarithmic, trigonometric, absolute value, and piecewise. Each function is studied from both an analytical approach and also a graphical approach. Solving real-world problems gives students a context for the uses of each function.

**PREREQUISITE: Algebra 2**

## **HONORS PRECALCULUS AB**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

This course is designed for students who intend to take AP Calculus for the following year. This is a fast-paced course designed to introduce the type of experience that students will encounter in an AP Calculus class. The course builds on the foundation laid in Honors Algebra II related to the various classes of functions such as linear, quadratic exponential functions. In addition, the course will give a thorough treatment of trigonometry and circular functions, as well as such diverse topics as complex numbers, and sequences and series. A student must earn a B or higher to be considered for a placement in AP Calculus AB. A student with an A and the department's approval may be considered for a placement in AP Calculus BC.

**PREREQUISITE: Algebra 2 or Honors Algebra 2 and departmental approval**

## **HONORS PRECALCULUS BC**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

This course provides further and more intensive study of the elementary functions of one variable and plane trigonometry, including extensive investigation into the algebra, properties, graphs, and applications of these functions. Considered preparation for AP Calculus BC, this fast-paced course presents and analyzes the material in a more theoretical approach through graphical, numerical, analytical, and verbal methods and the appropriate use of technology. A student must earn a B+ or higher to be considered for a placement in the AP Calculus BC class.

**PREREQUISITE: Honors Algebra 2 or Honors Algebra 2 with Applications and departmental approval**

### **CALCULUS - DIFFERENTIAL**

*Credits: 0.5*

*Length: Fall semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This fundamental course stresses the application of derivatives rather than rigorous theoretical concepts. The course covers concepts including limits, functions, slope, and differentiation. These concepts along with algebraic, numerical, and calculator-based methods will be used to solve equations, plot and analyze graphs, and model situations found in science, business, and economics. Emphasis will be placed on gaining mastery of the calculus concepts and use of the graphing calculator. Where appropriate, cooperative learning will be used to encourage development of communication, reasoning, and problem-solving skills.

**PREREQUISITE: Precalculus**

### **CALCULUS - INTEGRAL**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This fundamental course stresses the application of integrals rather than rigorous theoretical concepts. The course covers concepts including anti-derivatives, indefinite and definite integrals, fundamental theorem of calculus, and techniques of integration. These concepts along with algebraic, numerical, and calculator-based methods will be used to solve equations, plot and analyze graphs, and model situations found in science, business, and economics. Emphasis will be placed on gaining mastery of the calculus concepts and use of the graphing calculator. Where appropriate, cooperative learning will be used to encourage development of communication, reasoning, and problem-solving skills.

**PREREQUISITE: Calculus - Differential**

### **ADVANCED PLACEMENT CALCULUS (AB or BC)**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

AP Calculus is a college-level course in differential and integral calculus for students who intend to achieve advanced standing in college calculus.

**PREREQUISITE:**

**AB Calculus- Precalculus or Precalculus AB or BC and departmental approval**

**BC Calculus- Precalculus AB or BC and departmental approval**

## **STATISTICS - DESCRIPTIVE**

*Credits: 0.5*

*Length: Fall semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course provides an introduction to statistics. The emphasis is on collecting data and tabulating results using tables, charts or graphs to make the data more manageable and meaningful. The course will cover descriptive statistics including creating and interpreting different visual displays of data such as Stem and Leaf Plots, Box Plots, Frequency Distributions and Scatter Plots. In addition, some of the basic ideas and rules of probability are introduced along with important probability distributions.

**PREREQUISITE: Algebra 2**

## **STATISTICS - INFERENTIAL**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course is an introduction to the basic concepts and applications of probability and statistics. Topics in this course will include: data collection methods, descriptive statistics, permutations and combinations, probability spaces, normal distributions, and rudimentary statistical inference. Special emphasis will be placed on critically analyzing the many ways in which probability and statistics are used to convey information in business, government, research, and marketing. This course is recommended for students who wish to prepare for a college-level statistics course or for those who wish to learn how quantitative measures are used in other academic disciplines, such as the social sciences.

**PREREQUISITE: Algebra 2**

## **ADVANCED PLACEMENT STATISTICS**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

This is a college-level course in descriptive and inferential statistics. In the first semester, the course focuses on producing and analyzing data, relationships among variables, probability laws, simulation, and probability distributions. In the second semester, the course focuses on formal methods for drawing conclusions about one or more populations using confidence intervals and significance tests. Emphasis is placed on understanding the process of statistical inference, which includes the foundational reasoning for statistical inference and determining the value and credibility of the conclusions made from the data.

**PREREQUISITE: Precalculus; minimum grade of a B and departmental approval**

## **MATHEMATICS OF FINANCE**

*Credits: 0.5*

*Length: Fall semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Finance is the application of a number of financial and economic principles to maximize the wealth or overall value of a business. Finance is among the most dynamic and evolving subjects in applied business disciplines and for persons engaged in the practical conduct of businesses, an understanding of finance is essential. Finance is a highly technical discipline so the purpose of the course will be to provide the student with a sound understanding of the fundamentals of the mathematics of finance.

*Topics:*

- 1) Savings Accounts and Interest
- 2) Future Value of an Annuity
- 3) Present Value of an Annuity
- 4) Amortization

**PREREQUISITE: Algebra 2**

## **MANAGERIAL FINANCE**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Finance is the application of a number of financial and economic principles to maximize the wealth or overall value of a business. Finance is among the most dynamic and evolving subjects in applied business disciplines and for persons engaged in the practical conduct of businesses, an understanding of finance is essential. Finance is a highly technical discipline so the purpose of the course will be to provide the student with a sound understanding of the fundamentals of the mathematics of finance.

*Topics:*

- 1) Federal Income Tax for Individuals
- 2) Principles of Accounting
- 3) Investing

**PREREQUISITE: Algebra 2**

## **MULTIVARIABLE CALCULUS**

*Credits: 1*

*Length: Academic year*

*Level: Post-AP*

*Meeting Times: Periods 1-8 Rotation*

This course, for students who have completed either AP Calculus AB or AP Calculus BC, students will study the calculus of functions that depend on more than one variable. The first half of the course studies three-dimensional space, vectors, and vector-valued functions. The second half covers the calculus of the vector functions and the three central theorems of multivariable calculus

**PREREQUISITE: AP Calculus AB or AP Calculus BC**

## **LINEAR ALGEBRA**

*Credits: 1*

*Length: Academic year*

*Level: Post-AP*

*Meeting Times: Periods 1-8 Rotation*

This course, open to Seniors who have completed Multivariable Calculus, covers topics normally found in a college Linear Algebra course. With guidance from a supervising faculty member, students will independently explore vectors, matrices and Markov Chains. Topics such as determinants, characteristics of invertible matrices, linear systems, eigenvalues and eigenvectors, orthogonality, and Cramer's Rule will also be covered.

**PREREQUISITE: Available only to Seniors who have completed Multivariable Calculus**

## SCIENCE

### ENVIRONMENTAL SCIENCE

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course will survey a variety of contemporary environmental issues such as sustainability, ecology, evolution, photosynthesis/respiration, radioactivity, weather, precipitation, climate, global warming, pollution and deforestation. It will examine problems at the local, national and international levels, and will search for solutions relating to science, politics and economics. (Laboratory course)

**PREREQUISITE: None**

### CHEMISTRY

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course is designed to prepare students to take Chemistry in college by providing them with strong foundations. The course covers topics such as the structure of the atom, nuclear chemistry, the formation of simple compounds and their reactions, stoichiometry, the chemistry of solutions and gases, and the structure of crystalline solids. This class places more emphasis on the connections between theoretical knowledge and the application of Chemistry to everyday life. Hands-on learning is provided by in the laboratory where students will generally work individually on qualitative Chemistry problems. (Laboratory course)

**PREREQUISITE: Completion of Algebra 1 (minimum grade B), performing satisfactorily on a placement test, and departmental approval**

## **HONORS CHEMISTRY**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

This course prepares students to take Chemistry in college. It uses a traditional approach, which requires a solid base in mathematics. Topics include atomic theory, electronic structure, classification of compounds and reactions, stoichiometry, solution and gas chemistry, kinetic theory, equilibrium system, nuclear chemistry, and organic chemistry. There is a strong emphasis on quantitative problem solving and reaction prediction. Hands-on learning is provided in the laboratory where students work individually and complete question sheets or lab reports from week to week. (Laboratory course)

**PREREQUISITE: Grades 10-12 -- Completion of Geometry (minimum grade B) and departmental approval. Grade 9 -- Completion of Math (Algebra 1 or higher) with a minimum grade of A, Science courses with a minimum grade of A, performing satisfactorily on a placement test, and departmental approval**

## **BIOLOGY**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Biology prepares students for college level Biology by selecting a limited number of topics in Biology in order to provide an opportunity to explore these topics in depth. This course takes a very structured approach to help students make connections, develop analytical skills, and compare a variety of topics to build models to understand the world of life. Opportunities for hands on laboratory work will support classroom studies. (Laboratory course)

**PREREQUISITE: None**

## **HONORS BIOLOGY**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

Honors Biology prepares students for college level biology by examining a broad range of topics in depth. The course builds the basic foundation of biology knowledge while emphasizing higher order skills such as comparative analysis, evaluation of evidence and applying information to novel situations. Students are expected to be able to learn independently from reading the textbook and other sources. The course is designed to help them improve their technical writing and study skills. Laboratory exercises include both traditional and open-ended inquiry labs. (Laboratory course)

**PREREQUISITE: Completion of Environmental Science (minimum grade A-) or Chemistry (minimum grade B+) or Honors Chemistry (minimum grade B), and departmental approval**

## **ADVANCED PLACEMENT BIOLOGY (2 periods)**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

AP Biology is a fast-paced demanding college level course using a college text. The curriculum is organized around four Big Ideas and emphasizes understanding, analysis and application over traditional memorization. Students must have strong graphing and mathematical skills, be highly motivated and capable of learning independently from reading the textbook and other sources. Students will have to learn some required topics outside of class. Sophomores may take the course only if they have excellent records from their previous science course (see prerequisites below). Besides success in a previous science course, students must perform satisfactorily on a placement test in order to be considered for AP Biology. Juniors and seniors may take this course if they had strong grades (B or better) in their prior Biology course. (Laboratory course)

**PREREQUISITE: Completion of Geometry (minimum grade B), High School level Chemistry (minimum grade A) or High School level Honors Chemistry (minimum grade B+), performing satisfactorily on a placement test, and departmental approval**

### **ADVANCED PLACEMENT CHEMISTRY (2 periods)**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

AP Chemistry is demanding college level Chemistry course that uses a college text. The course covers a variety of aspects of general chemistry, including descriptive chemistry, chemical reactions, stoichiometry, atomic and molecular structure, thermodynamics, kinetics, equilibria, electrochemistry, and nuclear chemistry. The work is extremely rigorous and moves at a rapid pace. Most of the work is quantitative and should only be taken by those juniors or seniors who have strong quantitative skills or who have already taken chemistry. (Laboratory course)

**PREREQUISITE: Completion of Honors Algebra 2 (minimum grade B) or Algebra 2 (minimum grade A), and departmental approval**

### **STUDENT RESEARCH - MOLECULAR BIOLOGY**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

This is a research-based course where students will meet in lab, learning basic laboratory techniques in molecular biology. Students will learn to analyze and interpret data and use internet-based programs to analyze DNA sequences. Students will each keep a journal and complete a final poster project for presentation to scientists at Waksman Institute at Rutgers University and GE Healthcare at the end of the year. (Laboratory course)

**PREREQUISITE: Completion of Honors or AP Biology or the Biotechnology course and departmental approval**

### **ADVANCED STUDENT RESEARCH - MOLECULAR BIOLOGY**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

This course is open to students who have completed the first year of Student Research—Molecular Biology. Students will work in the laboratory doing advanced studies of gene sequences identified in their work in Student Research. Their work can include sub-cloning techniques, transformation, protein purification and protein modeling as well as genetic/environmental studies of their model organism. (Laboratory course)

**PREREQUISITE: Completion of Student Research - Molecular Biology and departmental approval**

## **MATERIAL SCIENCE**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

This course is intended to introduce students to the laboratory and classroom experiences that they would encounter in the exciting field of material science and engineering (MSE). Material science and engineering is one of the most highly interdisciplinary and dynamic engineering disciplines. Material scientists and material engineers seek to understand the fundamental relationships between the structure, properties, processing and performance of materials so that we can synthesize new materials, develop improved processes for making materials and understand the role of materials in the changing environment of tomorrow. This course encompasses the broad disciplines of physics, chemistry, biology and engineering by integrating the role of research and education to develop and prepare students for today's challenges. Students will study different materials such as *metals, ceramics, polymers, semiconductors & composites*. Students will also complete inter-graded modules on *Material Structure, Smart Sensors, Material Performance, Biodegradable Materials, Biosensors & Sustainable Energy!* (Laboratory course)

**Prerequisite: Successful completion of Honors Biology (B), Honors Chemistry (B) and Honors Physics (B), and departmental approval**

## **ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

This course surveys a variety of contemporary environmental issues (food, population, biodiversity, pollution, energy, etc.). It examines problems at the local, national, and international level and searches for solutions relating to science, politics and economics. (Laboratory course)

**PREREQUISITE: Successful completion of Chemistry and Biology, and departmental approval**

## **PHYSICS**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This is an introductory, algebra-based course, designed for students to appreciate and understand the fundamental laws of physics that govern our world. Topics will include: motion of objects, forces, Newton's Laws, conservation of momentum and energy, fluid mechanics and electricity and magnetism. The best way to ensure learning that lasts is through a sound understanding of concepts and practical application of concrete examples that students can relate to and appreciate. Class lectures are supplemented with ample demonstrations. There is typically one lab per chapter, designed to reinforce material we discussed in class. Ample homework problems will be assigned online. The student is expected to complete homework nightly in order to understand the material. With a sound foundation in these topics, students should feel comfortable taking an introductory physics course in college. This course is different from Honor Physics in that we do not cover the material as much depth. (Laboratory course)

**PREREQUISITE: Completion of Algebra 1 (minimum grade B) and Geometry (minimum grade B) and departmental approval**

## **HONORS PHYSICS**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Period 1-8 Rotation*

This is an enhanced, algebra-based course, designed mostly for science students to appreciate and recognize the fundamental laws of physics that govern our world. We use one of the most popular college-level physics textbooks in this course. We will cover topics in: one and two dimensional motion, acceleration, forces, Newton's Laws of Motion, work and energy, momentum and collisions, rotational motion and moment of inertia, gravity and circular motion, and electricity and magnetism. The best way to ensure learning that lasts is through a sound understanding of concepts and practical application of concrete examples that students can relate to and appreciate. Lectures are supplemented with classroom demonstrations. Ample homework problems will be assigned on line. The student is expected to complete homework nightly in order to understand the material. There is typically one lab per chapter, designed to reinforce the subject matter. With a sound foundation in these topics, students should feel comfortable taking more advanced physics courses in college. This course is different from Physics in that we move more quickly and cover the subject matter in much more detail. Exams are much more challenging in this course. (Laboratory course)

**PREREQUISITE: Completion of Algebra 1 (minimum grade B) and Geometry (minimum grade B) and departmental approval**

## **ADVANCED PLACEMENT PHYSICS C: MECHANICS**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

This is a very challenging, calculus-based course, which takes a rigorous approach to understanding many fundamental topics important in the world we live in. All the areas covered in this course are detailed on the College Board website. We use one of the most popular college-level textbooks. The course is conceptual in nature, where memorization of equations is discouraged and is to be replaced by fundamental understanding. With this approach, a student's scientific reasoning skills, problem solving skills and data analysis skills are developed. A principal goal for the course is to have students well prepared for the AP Mechanics C exam in May. This course will serve as a foundation for students interested in college majors involving the sciences and engineering. Classroom demonstrations and extensive labs will help improve a student's understanding of the material. Students will be expected to use Microsoft Excel to graph and analyze lab results. We do simple linear regression and model building of lab results. (Laboratory course)

**PREREQUISITE: Completion of Calculus or concurrently taking calculus, and departmental approval**

## **ADVANCED PLACEMENT PHYSICS C: ELECTRICITY & MAGNETISM**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

AP Physics C Electricity and Magnetism (E&M) is a year long, calculus-based, college-level physics course, especially appropriate for students planning to specialize or major in physical science or engineering. All the areas covered in this course are detailed on the College Board website. We use one of the most popular college-level textbooks. The course builds upon the AP Physics C Mechanics course and employs introductory differential and integral calculus throughout the school year. It is recommended that students take AP Physics C Mechanics first, however, if a student has not previously taken AP Physics C Mechanics, then they will have to study several Chapters in Halliday, Resnick and Walker (10th Edition) prior to being accepted in this course. A solid understanding of the material in these chapters will be necessary for a sound understanding of E&M. A placement test will be given to make sure the student understands the material. A passing grade (as determined by the science department) will be required to enroll in E&M. It is envisioned that only RPS seniors would be taking the course, as they would have already studied the appropriate prerequisite material. (Laboratory course)

**PREREQUISITE: Completion of Calculus and AP Physics C: Mechanics or showing mastery of AP Physics C Mechanics by performing satisfactorily on a placement test and departmental approval**

## **TOPICS IN SCIENCE**

The courses listed below are full year Topics classes. These courses are open to juniors and seniors who have completed their basic two-year science graduation requirement. See specific course description for Prerequisites.

## **TOPICS IN HUMAN DISEASES**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

This course is designed for students who want a basic understanding of major diseases affecting Americans today. This course will provide an understanding of diseases through a multidisciplinary approach with a heavy focus on biology, genetics, evolution, and epidemiology. This course will also address the socioeconomic, political, psychological and cultural impact of these diseases. The problem of antibiotic resistance and obesity will be addressed along with cardiovascular diseases, diabetes, and cancer. Students will study organ system involved in cardiovascular disease and Diabetes. During the second part of the year, cancer biology will be presented in a simple manner to provide students with a broad understanding of what cancer is and how it affects the human body. The approach will be to educate students on various genetic and molecular changes that a normal cell undergoes when it transforms into a malignant cell. Students will learn basic vocabulary related to most common types of cancer and treatment. They will have an opportunity to survey the prevalence of various cancers in America as compared to the world.

We will discuss the history of cancer research, along with more current approaches to therapy, with a discussion on some cutting-edge therapy that will be available in the near future. Ethical issue related to research, treatment and clinical trials will be discussed as well.

**PREREQUISITE: Successful completion of AP Biology, Honors Biology (B+) or Biology (A) and completion of Chemistry or concurrently taking Chemistry and departmental approval**

## **ANATOMY & PHYSIOLOGY**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Anatomy and physiology is a course that will allow students to gain an understanding of the relationships between the structures and functions of the human body. Students will learn the mechanisms for maintaining homeostasis within the human body. This course will involve projects, laboratory activities, models, diagrams, journal writings, and clinical studies. The laboratory portion will allow students to analyze data procured by measuring their own physiology. It is recommended that only students serious and passionate about the subject matter take this course

**PREREQUISITE: Successful completion of Biology (B) and Chemistry (B-) and departmental approval**

## **TOPICS IN FORENSIC SCIENCE**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This class provides an introduction to the diverse fields known collectively as “Forensic Science”. It will focus on the collection of evidence, the techniques used to analyze evidence and the interpretation of evidence. Some discussion of how evidence is presented and used in court will be included. The students will spend time in lab applying various Forensics techniques to cases. Readings on landmark cases will be from handouts and web sites provided.

**PREREQUISITE: Successful completion of a High School Biology course and completion of Chemistry or concurrently taking Chemistry**

## **TOPICS IN SCIENCE**

These are semester courses (some are rotated over a two year period) and are open to juniors and seniors who have completed their basic two-year science graduation requirement. Courses in bold will be offered in the upcoming academic year with descriptions below. See specific course description for Prerequisites. The choices are:

An Introduction to Pharmaceutical Science (not offered in 2019/2020)

Topics in Organic Chemistry (not offered in 2019/2020)

Topics in Astronomy (not offered in 2019/2020)

**Topics in Meteorology** (spring semester)

Topics in Immunology (not offered in 2019/2020)

Topics in Microbiology (not offered in 2019/2020)

Biotechnology (not offered in 2019/2020)

## **TOPICS IN METEOROLOGY**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Provides a basic foundation in the concepts of Meteorology. This is done by understanding the atmosphere, pressure systems, fronts and major storms through lecture and class discussions. The students will be required to research topics and to present their information to the class.

**PREREQUISITE: None**

## WORLD LANGUAGES

### LEVEL 1 FRENCH AND SPANISH

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

In French and Spanish, students will begin to develop communicative competence in the target language. They will participate in listening, reading, speaking and writing activities that engage them in the three modes of communication: interpretive, interpersonal, and presentational. Additionally, students will gain exposure to different facets of cultural life throughout the world of the target language through culturally authentic materials such as advertisements, music, newspapers, television broadcasts, and websites from various countries. Students will demonstrate what they can do with the target language through active participation in performance-based tasks like dialogues, emails, role-plays, and discussion that simulate real-life situations.

**PREREQUISITE: None**

### LEVEL 2 FRENCH AND SPANISH

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

In French and Spanish students expand upon and strengthen the basic language skills learned in level 1. Through themed chapters, they continue to acquire new vocabulary and grammatical structures in the context of real-life situations, and they continue to develop their skills in the interpretive, interpersonal and presentational modes of communications. With more emphasis given to self-expression, students continue to negotiate meaning while developing confidence and linguistic competence through performance-based tasks. Multimedia resources provide access to culturally authentic materials that promote understanding of the world of the target language.

**PREREQUISITE: Successful completion of the Level 1 class**

## **HONORS LEVEL 2 FRENCH AND SPANISH**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

The honors level courses are available for the most able language student. The courses follow the same curriculum as the regular level but at a faster pace, with greater depth and greater emphasis on more rigorous student performance. Students in the honors level should be self-motivated, diligent, and willing to take risks with the target language as they develop their skills in the three modes of communication.

**PREREQUISITE: A- or above in a Level 1 class and recommendation from the Department and the previous year's teacher**

## **FRENCH 3**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

French 3 builds on the knowledge and skills acquired in the previous two years of study with a move from memorized phrases and expressions to the use of more spontaneous communication in both written and oral French. Themed units provide a meaningful context for daily lessons that provide relevant vocabulary and targeted grammatical structures, allowing students to examine different facets of cultural life throughout the French-speaking world and to engage in the three modes of communication. Students will demonstrate what they can do with the target language through active participation in performance-based tasks like dialogues, emails, role-plays, class discussion, and skits. Such open-ended scenarios simulate real-life situations, while enabling students to negotiate meaning and further develop their communicative competence in French.

**PREREQUISITE: Successful completion of the Level 2 class**

### **HONORS FRENCH 3**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

This course, for the more adept language learner, emphasizes more spontaneous communication in French and progresses at an accelerated pace. Themed units continue to provide a meaningful context for daily lessons, as students learn targeted grammatical structures and relevant vocabulary. However, students are encouraged to put a more personal touch on their expression, increasing their ability to communicate by using more complex sentence structure and expanded vocabulary. The focus of this course is for students to be increasingly creative in their use of written and spoken French. They will be challenged to determine the main idea of a listening or reading passage and to make inferences, despite the presence of some unfamiliar vocabulary words. They will hone their interpretive, interpersonal and presentational skills over the course of the year through the study of authentic resources including (literary excerpts, articles, magazines, film, websites and music) and through compositions, creative projects, and open-ended discussions.

**PREREQUISITE: A- or above in a Level 2 Regular class, or B+ or above in an Honors class and recommendation from the Department and the previous year's teacher**

### **FRENCH CONVERSATION AND CULTURE (C&C)**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

In French C&C, students will strengthen their communicative competence in the target language, with an emphasis on conversational ease. They engage in three distinct modes of communication: interpretive, interpersonal, and presentational. In the process, they participate in listening, reading, speaking, and writing activities. By examining different facets of cultural life throughout the French-speaking world, students gain exposure to a selection of culturally authentic materials, such as advertisements, magazines, music, newspapers, podcasts, television broadcasts, and websites from various Francophone countries. Finally, students will demonstrate what they can do with the target language through active participation in performance-based tasks (discussions, dialogues, emails, letters, role-plays, skits) that simulate real-life situations, while enabling students to negotiate meaning and further develop their communicative competence in French.

**PREREQUISITE: Successful completion of the Level 3 class**

## **HONORS FRENCH LANGUAGE AND LITERATURE (L&L)**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

This course emphasizes the study of literature as the springboard to class discussions. Grammar will be reviewed and presented in the context of the texts read in class. It is expected that students are independent learners and already have a fairly solid grammar foundation from previous years of study. By reading works of literature and by discussing content, plot, characters and themes, student will further their knowledge of the intricacies of the French language and culture, be exposed to various French and Francophone authors and improve their critical thinking skills.

**PREREQUISITE: A- or above in a regular class, or B+ or above in an Honors class and recommendation from the Department and the previous year's teacher**

## **ADVANCED PLACEMENT FRENCH LANGUAGE AND CULTURE**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

AP French Language and Culture is a college-level course designed to refine students' interpretive, interpersonal and presentational skills through a variety of activities and assessments. The primary learning objective is to expand students' knowledge of the Francophone world, in a global context. The six themes outlined by the AP College Board (Families & Communities, Personal & Public Identities, Global Challenges, Beauty & Aesthetics and Science & Technology) will provide the framework and real-life setting for the course. Students will practice and apply the three modes of communication in order to process, analyze, compare/contrast, and develop a more profound understanding of course material. Emphasis is placed on functional use of the language in real-life situations and the study of authentic resources.

**PREREQUISITE: A- or above in a regular class, or B+ or above in an Honors class and recommendation from the Department and the previous year's teacher**

### **SPANISH 3**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

In Spanish 3, students will review and expand on the vocabulary and structures learned in Spanish 2. Students move from memorized phrases and expressions to the use of more spontaneous language in written and oral Spanish. Working with the themed units, students will continue to communicate and negotiate meaning through listening, speaking, reading and writing while learning about the cultures of the Spanish-speaking world. Increased emphasis is placed on the student's ability to demonstrate what they can do with the language, and to show increased proficiency in the interpretive, interpersonal and presentational modes of communication. Authentic multimedia resources bring the students in contact with many aspects of cultural life of the Spanish-speaking world that serve as prompts for compositions, emails, discussions, and projects.

**PREREQUISITE: Successful completion of a Level 2 class**

### **SPANISH CULTURE AND CONVERSATION (C&C)**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotating Schedule*

In Spanish Culture and Conversation students will review and expand vocabulary and structures from their previous years of study. As in previous classes, there is continued emphasis on student performance – what they can **do** with the language structures that they have already learned, but with greater emphasis on more spontaneous language, often in open-ended situations that require them to create with the language both orally and in writing. Through exposure to multimedia resources, articles, literary selections, and videos, students continue to learn to communicate and to negotiate meaning while learning about the cultures of the Spanish-speaking world.

**PREREQUISITE: Successful completion of the previous level class**

## **HONORS SPANISH LANGUAGE AND LITERATURE 1 (L&L 1)**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

The Honors Spanish Language & Literature 1 course is for independent and motivated Spanish students with a strong foundation. Students review and expand vocabulary and structures from their previous years of study, but with greater emphasis on creativity in both written and oral performance. At the same time, through exposure to a variety of authentic literary selections, students develop reading strategies to capture the main ideas, to make inferences, and to discuss character development. By engaging in integrated performance assessments (compositions, discussions, debates, and projects), students continue to develop their ability to communicate and to negotiate meaning through listening, speaking, reading and writing and through learning about the cultures of the Spanish-speaking world.

**PREREQUISITE: A- or above in a regular class, or B+ or above in an Honors class and recommendation from the Department and the previous year's teacher**

## **HONORS SPANISH LANGUAGE AND LITERATURE 2 (L&L 2)**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

Spanish Language and Literature 2 is a continuation of L&L 1. Students continue to review and expand vocabulary and structures from their previous years of study. Emphasis continues to be on student performance, both orally and in writing, and on the reading and interpretation of literary texts in a variety of genres. Students continue to engage in integrated performance assessments and to develop their ability to communicate and to negotiate meaning through listening, speaking, reading and writing and through learning about the cultures of the Spanish-speaking world.

**PREREQUISITE: A- or above in a regular class, or B+ or above in an Honors class and recommendation from the Department and the previous year's teacher**

### **HONORS SPANISH CONTEMPORARY CULTURE (SCC)**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

This course is for those who, on the approval of their teacher and upon successful completion of Conversation and Culture or Language and Literature, are looking to increase and perfect the ability to express themselves in spoken and written language. The emphasis is on precision, variety, and vocabulary acquisition through discussion of authentic cultural materials such as contemporary film, printed matter and the web. There is some grammar review. (The curriculum could be adapted for those who have completed AP Language.)

**PREREQUISITE: A- or above in a regular class, or B+ or above in an Honors class and recommendation from the Department and the previous year's teacher**

### **SPANISH CONTEMPORARY CULTURE (SCC)**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course is for those who, on the approval of their teacher and upon successful completion of Spanish Conversation and Culture, or Spanish Language and Literature 2, are looking to increase and perfect the ability to express themselves in spoken and written language. While precision in conversation is important, it is not the goal of this class. Non-scripted conversation skills, understanding another person's point of view and asking and responding to questions is expected to be acquired thorough discussion of authentic cultural materials such as contemporary film, printed material and the web. There is some grammar review. (The curriculum could be adapted for those who have completed AP Language.)

**PREREQUISITE: B+ or above in a regular class, or B or above in an Honors class and recommendation from the Department and the previous year's teacher**

## **AP SPANISH LANGUAGE & CULTURE**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

The AP Spanish Language and Culture course emphasizes communication by applying the interpersonal, interpretive, and presentational modes of communication in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The course strives not to overemphasize grammatical accuracy at the expense of communication. To best facilitate the study of language and culture, the course is taught almost exclusively in Spanish and is structured around six themes:

- Beauty and Aesthetics
- Contemporary Life
- Families and Communities
- Global Challenges
- Personal and Public Identities
- Science and Technology

The themes facilitate the integration of language, content, and culture and promote the use of the language in a variety of contexts. It engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions).

**PREREQUISITE: A- or above in a regular class, or B+ or above in an Honors class and recommendation from the Department and the previous year's teacher**

## **LATIN 1**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

In Latin 1, students build a solid foundation in Latin vocabulary, grammar, and syntax. The focus is on both the practical value and the aesthetic appreciation of the language. We explore topics in such fields as ancient history, classical mythology, art, theater, and popular entertainment through readings in elementary Latin. Students, additionally, improve English language skills through study of the Latin roots of English words.

**PREREQUISITE: None**

## **LATIN 2**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Latin 2 builds upon the foundation of the language by developing concepts acquired in Latin 1. Students expand their understanding of grammar and syntax, develop their vocabulary, and refine their translation skills via extensive readings in Latin, creating a Latin newsletter, and presenting a one-act play in Latin.

**PREREQUISITE: Successful completion of the previous year's class**

## **LATIN 3**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Latin 3 is a transitional course bridging the gap between elementary and advanced Latin. Students complete their study in Latin grammar and syntax, begin reading longer passages, and undertake the art and craft of translation, while being introduced to the writings of such authors as Caesar and Cicero.

**PREREQUISITE: Successful completion of the previous year's class**

## **HONORS LATIN 3**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

Honors Latin 3 bridges the gap between elementary and advanced Latin. Students not only complete their study in Latin grammar and syntax, but also undertake explorations in Latin composition. The art and craft of translation is explored in greater detail via an introduction to the writings of such authors as Caesar and Cicero, and foundations are prepared for interpretational analysis and criticism.

**PREREQUISITE: A- or above in a regular class, or B+ or above in an Honors class and recommendation from the Department and the previous year's teacher**

#### **HONORS LATIN 4**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

Honors Latin 4 offers an introduction to the poetry of Catullus and Vergil. We discuss the art and craft of poetry; undertake an analysis and interpretation of the works; discuss the technical terms of poetry; and write about and discuss themes central to the poems.

**PREREQUISITE: A- or above in a regular class, or B+ or above in an Honors class and recommendation from the Department and the previous year's teacher**

#### **HONORS LATIN LITERATURE: AN ANTHOLOGY OF AUTHORS**

*Credits: 1*

*Length: Academic year*

*Level: Honors*

*Meeting Times: Periods 1-8 Rotation*

Honors Latin Literature presents a detailed study of a wide range of Latin classical prose and poetry by such authors as Lucretius, Cicero, Horace, Ovid, Livy, Augustus, Martial, Pliny, Seneca, Tacitus, and others. We explore a variety of themes and styles, discussing and writing about the art and craft of both prose writing and poetry; undertaking an analysis of the works; exploring current academic interpretation and criticism; and studying technical terms, including scansion and the use of rhetorical devices.

**PREREQUISITE: A- or above in a regular class, or B+ or above in an Honors class and recommendation from the Department and the previous year's teacher**

## **ADVANCED PLACEMENT LATIN - VERGIL AND CAESAR**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

Advanced Placement Latin is a fifth year course offered, upon approval of the teacher and World Language Chairperson, to students who have either begun their study of Latin in middle school, and who have advanced successfully to the highest levels in upper school, having read selections from the core anthology of authors; or to those who are able to demonstrate mastery of Latin at the advanced level, and who have read selections from a number of authors in original Latin, while at upper school, having prepared advanced work the previous summer on their own.

Students must be capable of intense, rigorous work, and they must adhere to a strict curriculum timetable, whether they intend to take the exam in May, or to opt out. Students who take AP Latin complete two thousand lines of poetry and prose in the course of the school year which prepares them to write compare / contrast essays in English about the selections on Part II of the exam. Part I of the exam consists of 60 multiple-choice grammar and comprehension questions based on various authors assumed to have been read in previous years. Advanced Placement Latin is offered presently only as Vergil / Caesar curriculum by the College Board.

**PREREQUISITE: Honors Latin 4 or Honors Latin Literature class and recommendation from the Department and the previous year's teacher**

## **CHINESE 1**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Chinese I is for students who are completely new to Chinese or those who have had limited experience with the language. The course provides students with Chinese learning from the introduction of Chinese language and dialects, syllabic structure and pronunciation of Hanyu Pinyin, basic writing system and daily expressions. After taking this class, students will be able to understand and communicate from the word level to the basic sentence level for simple conversations of daily life encounters, while gaining an understanding of the perspectives of Chinese cultures.

**PREREQUISITE: None**

## **CHINESE 2**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Chinese II provides students with tasks to further progress in words and phrases, and to engage in meaningful conversation to communicate at the sentence level. By using strings of simple sentences, students ask and answer questions, exchange information and ideas to handle simple transactions related to everyday life such as talking about Chinese study, school life, shopping, transportation, weather and dining, using culturally authentic materials and contents.

**PREREQUISITE: Successful completion of the previous year's class**

## COMPUTER EDUCATION

### COMPUTER DESIGN for PRINT and WEB

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Computer Design for Print and Web will give students a beginning look into Graphic Design. The class will explore basic concepts and techniques on methods of graphic communications. Projects will help develop a foundation for computed design. Creative problem solving and experimentation is encouraged. Students will work through the design process with each project and complete the project using computer applications.

**PREREQUISITE: None**

### MULTIMEDIA DESIGN

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Multimedia Design combines different content types; text, images, audio, video, etc, to allow students to communicate concepts and ideas. Creative problem solving, experimentation, and refinement of technical skills will be emphasized. Through certain projects students will become aware of design concept, storyboarding, filming, editing, and creating relevant content.

**PREREQUISITE: None**

### INTRODUCTION TO COMPUTER SCIENCE

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This introductory course in computer science focuses on the basic concepts in computing using Java. The course comprises classroom instruction and lab exercises. The instructional portion of the course will demonstrate key concepts using a “live-code” and “hands-on” approach. Students will use these concepts in order to develop interactive applications.

**PREREQUISITE: Algebra 1**

## **ADVANCED PLACEMENT COMPUTER SCIENCE**

*Credits: 1*

*Length: Academic year*

*Level: AP*

*Meeting Times: Periods 1-8 Rotation*

AP Computer Science provides students with a foundation in object-oriented programming to prepare students for the AP exam. The class comprises classroom instruction and lab exercises. Topics include data structures, control structures, algorithms, arrays, and recursion. The class is based on the Java programming language.

**PREREQUISITE: Introduction to Computer Science**

## **ADVANCED SOFTWARE DESIGN**

*Credits: 1*

*Length: Academic year*

*Level: Post-AP*

*Meeting Times: Periods 1-8 Rotation*

This elective course focuses primarily on developing iPhone applications (apps) for the Rutgers Prep's PK-12 community: Lower, Middle, and Upper School students, parents, and prospective families. This serves as a form of School pride and is a great way to give back to our community. Students will write new apps individually and in groups, and contribute to the development, maintenance, and improvement of existing apps on a year-to-year basis. Students will collaborate with the Art Department when designing user interfaces. If time permits, the goal will be to write these apps on the Android platform as well. All materials will be provided but students are strongly advised to have a Mac laptop.

**PREREQUISITE: AP Computer Science or Introduction to Computer Science and departmental approval**

## **UNITY GAME DEVELOPMENT**

*Credits: 1*

*Length: Academic year*

*Level: Post-AP*

*Meeting Times: Periods 1-8 Rotation*

This course is an advanced game design and development course. Students should be experienced programmers prior to enrolling in this course. They must have completed or enrolled in Advanced Software Design. This course will explore game design and development using the Unity Game Engine. Unity is a fully Integrated Development Environment (IDE) for developing games. This IDE provides an in-depth and advanced Application Programming Interface (API). The game development API includes prefab objects, many libraries, documentation, and video tutorials. Students will learn the game engine platform, the design and manipulation of game objects, and the various programming languages supported by Unity. There will be two-dimensional and three-dimensional objects used in two-dimensional and three-dimensional games. The various programming languages will allow students to manipulate and animate these objects for different platforms. The best part is that all materials are freely provided by Unity! In addition, Blender and Gimp (two free software) will allow students to experiment with creating and manipulating their own objects. This course is a Project-Based-Learning course with online tutorials and projects that promote creativity and design thinking.

**PREREQUISITE: Advanced Software Design**

**COREQUISITE: Advanced Software Design**

## THEATER & DANCE

### INTRODUCTION TO ACTING

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This class introduces students to the study of acting and is open to all students regardless of previous performing experience. Students begin the year focusing on individual performing and move to partner work in the second semester. Throughout the year the class works together during exercises, in rehearsals for assigned performances, and as they critique their own and each other's work. Major areas of emphasis include fundamental physical and vocal performing skills, specific techniques such as learning an accent and stage combat, improvisation, delivering monologues, and scene study. Some assignments involve writing, reading, and memorizing, but much of this work can be completed in class and the course is chiefly "hands-on," with students expected to participate daily.

**PREREQUISITE: None**

### ADVANCED ACTING: IMPROVISATION

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Although improvisation is spontaneous, artful improvisation is not unprepared, and through a variety of exercises students in this course will gain greater comfort with this kind of performing and learn how to work creatively and collaboratively with their classmates. The course will focus on improvisation as an end in itself, but may also use improvisation as a means to creating a more polished performance or piece. The class will work to create a performance ensemble as well as to improve each member's individual improvisation skills. Students will assess and critique their own work as well as that of professional performers. Several performances for an outside audience will be required for students in the course.

**PREREQUISITE: Introduction to Acting or instructor approval**

**ADVANCED ACTING: SOLO PERFORMANCE** (Will be offered in 2020/2021)

**ADVANCED ACTING: SCENE STUDY** (Will be offered in 2021/2022)

## **INTERNATIONAL DANCE & CHOREOGRAPHY**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Period 9*

New as well as experienced dancers explore international dance forms, including Indian dance, Chinese Dance, Tango, Hula, and much more. Dancers will be guided through diverse creative process methods so that they can choreograph their own international dances to be featured in our Spring Dance Concert.

**PREREQUISITE: None**

## **TOPICS IN DANCE**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course is open to new as well as experienced dancers. Students will learn about anatomy and how the body moves and functions as a foundation to explore multiple forms of dance technique, such as ballet, modern, jazz, hip hop, and contemporary. Students will expand on their artistry and performance quality which will lead to an end of year performance. Students will also be guided through movement explorations in improvisation and will learn the fundamentals of choreography. Artist-studies will explore the lives, work processes and repertory of prominent choreographers, with opportunities for guest-artists classes as well as field trips.

**PREREQUISITE: None**

## **ADVANCED DANCE: INQUIRIES IN DANCE**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Through cultural investigations of dance forms, students will illuminate the social, historical, and political reasons behind why people dance. Students will seek to answer essential questions: What is good dance? Whose story is being represented through dance? How have people defined the ideal dancer's body? Is there a hierarchy in dance techniques? Students will try to uncover existing beliefs on these big ideas through technique, choreography, improvisation, dance history, and anatomy and will begin to formulate their own informed perspectives. Students in this course will have opportunities to work with guest-artists as well as take field trips to connect with the wider dance world.

**PREREQUISITE: Topics in Dance or instructor approval**

**ADVANCED DANCE: CAREERS IN DANCE** (Will be offered in 2020/2021)

**ADVANCED DANCE: WELLNESS IN DANCE** (Will be offered in 2021/2022)

## MUSIC

### UPPER SCHOOL ORCHESTRA

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Period 9*

The Orchestra is open to string players who have developed necessary technical and sight-reading skills. The students perform repertoire that is selected from a variety of periods and styles. The orchestra meets four times a week, and performs in two orchestra concerts during the school year.

**PREREQUISITE: None**

### CHAMBER ORCHESTRA

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Chamber Orchestra is open to students who play a string instrument at an advanced level. A variety of Chamber and Orchestral music will be studied and performed, ranging from the Renaissance and Baroque period to the Twenty-First century. The orchestra meets three times per week.

**PREREQUISITE: Approval of the instructor via audition, and minimum of four years playing a string instrument**

### CONCERT BAND

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Period 9*

Concert Band is open to any student who plays a woodwind, brass, or percussion instrument. Guitar and bass are not suitable for this ensemble. The ensemble meets four times per week. The repertoire will consist of traditional concert band literature.

**PREREQUISITE: None**

### **BRASS ENSEMBLE**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Brass Ensemble consists of French horn, trumpet, trombone, euphonium, and tuba. This ensemble will explore the unique sounds of the brass family. There will be a variety of music studied and performed, ranging from classical to modern. Students will learn how to work within a smaller ensemble. This ensemble meets three times a week.

**PREREQUISITE: Approval of the instructor; student must demonstrate a high interest and basic proficiency on their instrument**

### **SAXOPHONE ENSEMBLE**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Saxophone Ensemble is open to students who presently play soprano, alto, tenor, or baritone saxophone. This course is performance based. Repertoire includes classical, jazz, and contemporary styles. Basic music theory and the history of wind instruments is included in this curriculum. This ensemble meets three times a week.

**PREREQUISITE: Approval of the instructor; student must demonstrate a high interest and basic proficiency on the saxophone**

### **WOODWIND ENSEMBLE**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Woodwind Ensemble consists of flute, oboe, clarinet, bass clarinet, bassoon, and french horn. This ensemble will explore the unique sounds of the woodwind family. There will be a variety of music studied and performed, ranging from classical to modern. Students will learn how to work within a smaller ensemble. This ensemble meets three times a week.

**PREREQUISITE: Approval of the instructor; student must demonstrate a high interest and basic proficiency on their instrument. Student is required to also sign up for Concert Band.**

## **CONCERT CHOIR**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Period 9*

This ensemble is for students who enjoy singing and can match pitch. The students learn and perform vocal music of many styles and periods. They learn and apply vocal technique to performance in order to develop tone quality and tonal memory. This ensemble meets four days a week during 9th period and performs in two concerts throughout the school year.

**PREREQUISITE: None**

## **MADRIGALS ENSEMBLE**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Madrigals is open through *audition ONLY* to students who sing at an advanced level. This group performs in two concerts during the school year as well as multiple events outside the school. The students perform repertoire that is selected from a variety of periods and styles. This ensemble meets three days a week during the 8-period rotation.

**PREREQUISITE: Approval of the instructor through audition ONLY and enrollment in an additional musical ensemble**

## **WOMEN'S VOCAL CHAMBER ENSEMBLE**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This group is open to any female singer with interest in singing in a chamber ensemble. The repertoire consists mostly of classical choral music along with some world, folk, and light contemporary pieces. During each class, students have the opportunity to enhance their vocal technique, performance, and musicianship skills with special emphasis placed on individual responsibility to the section during rehearsals and performances. This ensemble may provide both solo, as well as ensemble performance opportunities outside of the school day.

**PREREQUISITE: Admission into the class is by audition or with the approval of the instructor**

## **MUSIC THEORY**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Expanding upon elements of music-reading and writing first encountered in performance ensembles (Band, Choir and Orchestra), Music Theory will focus on strengthening the student's grasp of music notation. During the course, students will systematically work through writing basic intervals, scales, chords and harmony will also working to develop an understanding of ear-training, melodic dictation and composition.

**PREREQUISITE: Approval of the instructor**

## VISUAL ARTS

### DRAWING AND DESIGN

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This class introduces the students to basic concepts of design using a variety of media such as pencil, ink, conte crayon, pastel and charcoal. The focus of this course is placed on learning to "see" in order to accurately and realistically draw from observation. Course work will also emphasize learning the compositional elements that make up a successful work of art in addition to learning the purpose of critique as a tool.

**PREREQUISITE: None**

### INTERMEDIATE ART MAKING

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

A natural extension of Drawing & Design, Intermediate Art provides a greater opportunity for experimentation weaving together a variety of media, from drawing and painting disciplines. Students will continue to hone, through in-class exercises and formal assignments, skills and concepts relating to the elements of composition through fully rendered drawings; they will also continue to develop their visual understanding of the principles of design to develop a composition and their critical thinking skills. This course also focuses on introducing the student to painting through the use of acrylics, watercolors and mixed media, in both traditional and non-traditional formats. Still life, landscape and portraiture will be explored along with the concepts and painting styles of realism and abstraction, including mixed media collages. Students are encouraged to explore new modes of expression and will begin to develop a personal voice.

**PREREQUISITE: Drawing & Design or departmental approval**

### ARCHITECTURE 1

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Architecture 1 as a course looks into the fundamentals of design. The main focus will be on elements and principles of design, form, and architectural practice. Students will develop a design vocabulary that is both visual and oral. Processes in class will be completed in both a two and three-dimensional realm. After completion of this course, students will be able to understand and demonstrate designs fundamentals, process, and applications.

**PREREQUISITE: None**

### **ARCHITECTURE 2 / ARCHITECTURE 3**

*Credits: 0.5/0.5*

*Length: Fall semester/Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Architecture 2/3 shall extend on the fundamentals of design learned in Architecture 1. Students will review the core concepts with regards to Architecture. Students will learn architectural practices and the design process, and extend their design vocabulary. The class shall be studio driven, with students working through projects covering new architecture, interior design, landscape architecture, and adaptive reuse.

**PREREQUISITE: Architecture 1**

### **ARCHITECTURE 4 / ARCHITECTURE 5**

*Credits: 0.5/0.5*

*Length: Fall semester/Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

Architecture 4/5 will reiterate the core concepts of the previous architecture courses through various design projects. Students will continue to solidify their understanding of architectural practices and the design process, while extending their design vocabulary. The course will be split into two distinct semesters. The first will be hand graphic based, while the second will give the students their first experience of computed design.

**PREREQUISITE: Architecture 2 / 3**

### **PHOTOGRAPHY 1**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

**Non-Digital and Digital Camera Requirements: Digital Nikon SLR camera**

Students will learn all of the basic techniques involved in both camera usage and darkroom print production. Photo 1 students will shoot a variety of subject matters, develop negatives and print photographs from them. They will incorporate many traditional photographic techniques in order to create the best versions of the images. Study of the masters and reflection of classroom work are substantial components of this introductory course. Students will continue to practice fundamentals in the digital environment. Basic (digital) camera usage and post-production will reflect earlier lessons. Open to 10<sup>th</sup> – 12<sup>th</sup> grades.

**PREREQUISITE: None**

## **PHOTOGRAPHY 2**

*Credits: 0.5*

*Length: Fall semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

**Digital**

**Camera Requirements: Digital Nikon SLR camera**

Students will continue using the same camera techniques from Photo 1 as they explore concepts of design. Symmetry, balance and harmony are major topics discussed throughout the semester course. Study of the masters and reflection of classroom work are substantial components of this intermediate level course.

**PREREQUISITE: Photography 1**

## **PHOTOGRAPHY 3**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

**Digital**

**Camera Requirements: Digital Nikon SLR camera**

Students learn how to create diptychs, using the camera to manufacture two-panel artworks. Design lessons from Photo 2 are further explored, while conceptual art becomes a major focus. Study of the masters and reflection of classroom work are substantial components of this intermediate level course.

**Prerequisite: Photography 2**

## **PHOTOGRAPHY 4**

*Credits: 0.5*

*Length: Fall semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

**Digital**

**Camera Requirements: Digital Nikon SLR camera**

During this third year of creating provocative compositions, students learn how to compose a meaningful serial time-based photo essay. Students will explore traditional documentary as well as experimental recording. Study of the masters and reflection of classroom work are substantial components of this intermediate level course.

**PREREQUISITE: Photography 3**

## **PHOTOGRAPHY 5**

*Credits: 0.5*

*Length: Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

### **Digital**

### **Camera Requirements: Digital Nikon SLR camera**

Seasoned photography students weave together all the lessons learned in previous photo classes to create single frame 'masterpieces.' While working from identical written assignments, students enjoy an independent atmosphere and pace. They receive individual coaching and develop unique bodies of work. A group critique of each student's work is an important component, as is study of today's newest professional talent.

**PREREQUISITE: Photography 4**

## **CERAMICS 1**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This is an introductory course covering the basic methods of clay work such as coil pots, tiles and functional vessels created on the electric wheel. We will cover some of the history of ceramics along with technical information regarding glazing and firing processes.

**PREREQUISITE: None**

## **CERAMICS 2 / CERAMICS 3**

*Credits: 0.5/0.5*

*Length: Fall semester/Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

These courses further develop the techniques and concepts of the introductory course.

**PREREQUISITE: Ceramics 1 and departmental approval**

## **CERAMICS 4 / CERAMICS 5**

*Credits: 0.5/0.5*

*Length: Fall semester/Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

These courses provide an opportunity for students who have completed Ceramics 3 to use skills already learned and to develop independent projects. Students are introduced to basic glaze chemistry. As advanced students, they have the opportunity in this class to prepare slides for college applications.

**PREREQUISITE: Ceramics 3 and departmental approval**

## **SENIOR CERAMICS**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This is a class for advanced students to explore aspects of working with clay and glazes and to learn about different firing methods. A slide portfolio will be put together for college application. Students will develop independent projects in collaboration with the instructor.

**PREREQUISITE: Ceramics 5 and departmental approval**

## **CRITIQUE AND PRODUCTION 1**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course is for the advanced student interested in challenging both his/her skills and creative process. Building upon concepts introduced at the introductory level, students will push their creative self-expression to new levels. Work may be focused for college submission which is advantageous for both art and non-art majors. Course work will be developed in collaboration with instructor.

**PREREQUISITE: Drawing and Design and any other full year of art class**

## **CRITIQUE AND PRODUCTION 2**

*Credits: 1*

*Length: Academic year*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation*

This course is for the artist-student who has successfully completed Critique and Production 1 for advanced art students. Students will pursue and sustain individual projects with assistance from the instructor. Creative exploration is encouraged and fostered through a variety of self-directed independent work. Critical writing skills will be developed and honed over the course of the year in addition to further developing and honing critical speaking skills. Students are expected to independently visit museums and/or galleries. Work will be carried out in a variety of media and disciplines as determined by the individual student.

**PREREQUISITE: Critique and Production 1**

## HEALTH

### HEALTH GRADE 9: HUMAN SEXUALITY

*Length: Spring semester*

*Meeting Times: Periods 1-8 Rotation (NO WEDNESDAY MEETINGS)*

Grade 9 Health is a factual and informational class on the male and female anatomy. Subjects discussed are birth control, pregnancy, abortion, venereal disease and AIDS.

**PREREQUISITE: None**

### HEALTH GRADE 10: DRIVER EDUCATION

*Length: Fall semester*

*Meeting Times: Periods 1-8 Rotation*

Grade 10 Health Drivers Education is offered to all 10th graders. This course is designed specifically to prepare the student to take the New Jersey written test.

**PREREQUISITE: None**

### HEALTH GRADE 11: JUNIOR HEALTH

*Length: Fall semester*

*Meeting Times: Periods 1-8 Rotation (NO WEDNESDAY MEETINGS)*

Grade 11 Health is designed to provide students the opportunity to openly discuss and write about topics focusing predominantly upon one's, mental and emotional health. A major objective of this course is for students to identify their own value systems while recognizing and respecting the different values systems of others. Topics addressed include, but are not limited to: coping with stress, depression, sexual attitudes, suicide prevention and chemical dependence.

**PREREQUISITE: None**

### HEALTH GRADE 12: COLLEGE BOUND

*Length: Spring semester*

*Meeting Times: TBA*

This is a required series of meetings for second semester seniors. The focus will be on issues related to leaving home and entering college. Large-group meetings will be interspersed with smaller groups so students have the opportunity to raise issues that are important to them. Prep faculty, Prep alumni and outside speakers will be part of this series.

**PREREQUISITE: None**

## PHYSICAL EDUCATION

### PHYSICAL EDUCATION GRADE 9

*Length: Fall semester*

*Meeting Times: Periods 1-8 Rotation (NO WEDNESDAY MEETINGS)*

The Physical Education curriculum includes Introduction to Yoga & Pilates and Introduction to the Fitness Center. Each student participates in a quarter of each of these. Evaluation is pass/fail based on preparation (appropriate dress) for class and participation.

**PREREQUISITE: None**

### PHYSICAL EDUCATION GRADE 10

*Length: Spring semester*

*Meeting Times: Periods 1-8 Rotation (NO WEDNESDAY MEETINGS)*

The Physical Education curriculum includes Lifetime Activities, Team Sports and Conditioning. Evaluation is pass/fail based on preparation (appropriate dress) for class and participation.

**PREREQUISITE: None**

### HIIT (High Intensity Interval Training)

*Credits: 0.5/0.5*

*Length: Fall semester/Spring semester*

*Level: Regular*

*Meeting Times: Periods 1-8 Rotation (NO WEDNESDAY MEETINGS)*

This elective course is designed to improve a student's overall fitness. Through functional training students will develop strength and stability by using kettlebells, TRX bands and a variety of equipment. In a focused and fun approach, students will learn how to maximize their physical potential.

**PREREQUISITE: Open to Grades 10-12. Grade 10 students may enroll in this course to fulfill the Grade 10 Physical Education requirement. Grade 11 and 12 students may enroll in this course as an elective. Enrollment in this course is subject to departmental approval for all students**

## **COLLEGE COUNSELING COURSES & SPECIAL PROGRAMS**

### **SENIOR SEMINAR**

*Length: Fall semester*

*Meeting Times: Periods 1-8 Rotation (NO WEDNESDAY MEETINGS)*

The seminar is designed to provide guidance through the college application process. Through class activities students will be given broad and detailed information about college application procedures and strategies for a strong application. Students will receive advice and tips on how to write a college essay and tips on a college interview.

**PREREQUISITE: None**

### **SENIOR EXPLORATIONS (May 2020)**

This is the capstone experience to the senior year. Each senior selects from a menu of “Explorations” offered by RPS faculty members and participates in one between Senior Exams and Commencement. Explorations are varied in terms of time commitment, location, and cost, in order to provide a range of experiences to suit students’ particular needs and ambitions. Past offerings have included: exploring improvisation in art, math and poetry in New York City; working for the Nature Conservancy on Block Island; learning culinary arts at a local cooking school; exploring the business of Major League Baseball; learning to sail and race sailboats on Toms River; exploring the culture and history of Montreal, Canada; and teaching computer skills to orphaned children in Panama in partnership with the Orphaned Starfish Foundation.

**PREREQUISITE: None**

### **JUNIOR SEMINAR**

*Length: Spring semester*

*Meeting Times: Periods 1-8 Rotation (NO WEDNESDAY MEETINGS)*

The seminar provides an introduction to the college search and admission process. Students will develop preliminary college lists, design a resume of achievements and activities and begin to learn about the application process.

**PREREQUISITE: None**

