

# Academic Programs

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***\*Please know all schedules are tentative pending the satisfactory completion of academic coursework at the end of the 4th quarter. For courses that require prerequisites, students must maintain the prerequisite grade by the end of 4th quarter.***

## ENGLISH DEPARTMENT

### **College Prep English I**

**Credits 5**

This first year course begins with a concentration in basic language skills areas: note taking and outlining; study skills and test taking skills; library skills; vocabulary development and word usage; principles of composition, including narrative, descriptive and expository forms; and basic skills in grammar, mechanics and sentence structure. In literature the student is introduced to four literary genres (drama, poetry, short story, and the novel) and to literary terms needed to begin analysis of selected reading passages.

### **Honors English I**

**Credits 5**

During the course, students are introduced to four literary genres by studying both classic and contemporary world authors. Communication skills are developed through the study and practice of writing expository, descriptive, and narrative papers. A component of research writing is also done in conjunction with becoming familiar with all facets of a library. Grammar

study reinforces the development of the student's prose style. Vocabulary development is addressed both within the context of the literature and through a supplemental text.

**PREREQUISITES:** Candidates will be invited to sit for a timed writing test if they have earned standardized test scores at or above the 93rd percentile, and an "A" in English/Language Arts in grades 6, 7 and 8. Students' timed writing will be assessed by three readers, and students whose writing meets the required assessment level will be invited to enroll in Honors English I.

### **College Prep English II**

**Credits 5**

In this course the student develops the necessary writing skills for narrative, descriptive, expository and argumentative forms in both oral and written communications, with special emphasis on proofreading, diction, and research techniques. Grammar, word usage, mechanics and sentence structure are stressed as part of the student's developing style in oral and written presentations. In literature the students study the literary heritage of America as it has developed from the Colonial Period to the Twentieth Century. Outstanding American writers and their contributions to the development of literature are studied within a chronological framework. Vocabulary development is addressed through both the literature and supplemental texts.

**PREREQUISITES:** Successful completion of College Prep or Honors English I.

**Honors English II****Credits 5**

In this second year course the student is introduced to the literary heritage of America. Language development and communication skills are addressed. Grammar and vocabulary development are addressed both within the context of the literature and through supplemental text.

**PREREQUISITES:** A final grade of 85% or higher in Honors English I. Alternately, students will be invited to sit for a timed writing if they have earned a 93% or above in College Prep English I and received a recommendation from their freshman year English teacher; students' timed writing will be assessed by three readers, and students will be invited to enroll in Honors English II if their writing meets the required assessment level.

**College Prep English III****Credits 5**

This course traces the origin and development of the British literary tradition through an understanding of the various literary and historical eras, along with the contributions of major authors to the development of each genre and the historical development of language. The course also emphasizes the development of the student's organizational skills in formal speech, classroom interaction, essay compositions, and research projects with special attention given to the expository forms of analysis and argumentation. Grammar, mechanics, word usage and research techniques are reviewed as part of the writing process.

**PREREQUISITES:** Successful completion of College Prep or Honors English II.

**Honors English III****Credits 5**

The course traces the origins and development of the British literary tradition. The course also emphasizes the development of the student's organizational skills with special attention given to the expository forms of analysis and argumentation. Special emphasis is placed on critical reading and explication skills.

**PREREQUISITES:** A final grade of 85% or higher in Honors English II. Alternately, students will be invited to sit for a timed writing if they have earned a 93% or above in College Prep English II and received a recommendation from their sophomore year English teacher; students' timed writing will be assessed by three readers, and students will be invited to enroll in Honors English II if their writing meets the required assessment level.

**AP English Language and Composition  
Credits 6**

The primary focus of the course is rhetoric (the art or study of using language effectively and persuasively). The course is designed to develop critical thinking and composition skills. Students are expected to read a variety of literature including non-fiction, speeches, dramatic monologues, and newspaper articles. Students will be asked to deconstruct and analyze these literary works. Students will produce essays that fall into three categories: analysis, argument, and

synthesis. Class interaction is an integral part of the instruction. During the second semester attention is given to the preparation for the Advanced Placement Test in Language and Composition given in May.

**PREREQUISITES:** Students will be invited to sit for a timed writing at the end of their sophomore year if they have earned an 85% or above in Honors English II, or a 93% or above in College Prep English II; and if they have received a recommendation from their sophomore year English teacher. Students' timed writing will be assessed by three readers, and students will be invited to enroll in AP English Language and Composition if their writing meets the required assessment level.

### **AP English Literature and Composition Credits 6**

The focus of the course is on a variety of writing forms (college essay, critical and comparative essays, creative writing and a research paper) to complement the thematic approach of the course. Classroom interaction is an integral part of the instruction. During the second semester attention is given to preparation for the Advanced Placement Test in English Literature. Students who enroll in this course may also select College Prep English IV With Film as an elective.

**PREREQUISITES:** A final grade of 85% or higher in Honors English III or AP English Language and Composition. Alternately, students will be invited to sit for a timed writing if they

have earned a 93% or above in College Prep English III and received a recommendation from their junior year English teacher; students' timed writing will be assessed by three readers, and students will be invited to enroll in AP English Literature and Composition if their writing meets the required assessment level.

### **College Prep English IV Credits 5**

This course explores the diverse attitudes toward the same human tendencies through a thematic approach. Individual works covering the four genres (short story, poetry, drama, and novel) as well as a general exploration of each theme will be emphasized. In addition, the course is supplemented by skill areas including SAT preparation, the writing of college essays, analytical papers and a research paper, as well as oral presentation.

**PREREQUISITES:** Successful completion of College Prep or Honors English III, or AP English Language and Composition.

### **College Prep English IV with Film Credits 5**

In this course the basic curriculum for World Literature is supplemented by extension of the thematic units into cinema. Outside work includes the reading of current periodicals and the writing of personal critiques. Major essays include both critical and research topics. An oral presentation is also required. Students also have the opportunity to plan and create their own video productions.

**NOTE:** The NCAA Eligibility Center has determined that this course does not satisfy the senior year English requirement for prospective student athletes. A prospective student-athlete is someone who is looking to participate in intercollegiate athletics at an NCAA Division I or Division II institution in the future.

**PREREQUISITES:** Successful completion of College Prep or Honors English III; or AP English Language and Composition.

## HEALTH AND PHYSICAL EDUCATION

### Health & P.E.

**Credits 2.5**

The freshman program includes one quarter of Drug and Alcohol Health Education as the Health component. During the other quarters, the students will be assigned to different activities from the following: Physical Fitness, Volleyball, Weight Training, Lacrosse, Flag Football and Team Handball.

### P.E./Driver's Education

**Credits 2.5**

The sophomore program includes one quarter of classroom Driver Education that is fully sanctioned by the State of New Jersey and meets all State mandated guidelines for certification. During the remaining quarters, the student will be assigned to different activities from the following: Volleyball, Softball, Physical Fitness, Lacrosse, Ultimate Frisbee, Badminton, Frisbee, Golf and Indoor Games.

### Health III

**Credits 2.5**

This is a one semester course required for all juniors. The student will be introduced to

social and biological foundations of human sexuality. Included is the study of human anatomy, endocrine and reproductive health, the beginning of the life cycle including heredity and genetics, stages of birth, stages of development from birth to late adulthood, and sexually transmitted diseases, all within the context of the teachings of the Roman Catholic Church.

### Health IV

**Credits 2.5**

This one semester course is required of all seniors. This American Red Cross Training Program instructs students in the skills necessary to prevent, recognize, and provide basic care for injuries and sudden illnesses until medical personnel arrive. The American Red Cross issues an adult CPR/AED certificate for the successful completion of this class. It is valid for two years.

## HISTORY AND SOCIAL SCIENCES DEPARTMENT

### World History

**Credits 5**

World History is a full-year course for freshmen. It presents a chronological history of world civilizations (with an emphasis on western civilization) and their impact on one another. Major movements in social, economic, and political systems will be discussed. Geography, map skills, writing skills and research are interwoven throughout the course.

### AP Human Geography

**Credits 6**

AP Human Geography is a full-year course for freshmen. This course introduces students to the systematic study of patterns and

processes that have shaped human understanding, use, and alternation of Earth's surface. Students employ spatial concepts and landscape analysis to examine socio economic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications.

**Prerequisite:** Entrance into the course is by invitation and is based on grades, standardized and entrance test scores. Students should be able to read college level texts and write grammatically correct, complete sentences.

#### **United States History I Credits 5**

United States History 1 is a full-year survey course that examines the historical development of the United States from the Age of Exploration to the Reconstruction period. The political, social and economic foundations of America, which led to the development of our country, are examined. Quarterly research papers comprise an integral part of the course.

#### **Honors United States History I Credits 5**

This full-year course is designed for the highly motivated student who has the ability to handle challenging course work. The period from the Age of Exploration through the Reconstruction period is examined. Major components of the course include writing and analysis. Emphasis is placed on historical research using primary sources.

**PREREQUISITE:** An 85 or above average in AP Human Geography, a 93 average or above in World History AND an 85 semester average or above in English.

#### **United States History II Credits 5**

This full-year course is a survey of the history of the United States from the period beginning with the Second Industrial Revolution to present events in American history. The course is designed to familiarize students with domestic United States History; it's important social, political and economic issues, while exploring the role of the United States in world affairs. A research paper in each quarter is an important and integral part of the entire course.

#### **AP United States History 2 Credits 6**

This full-year course is for those students who have successfully completed United States History 1. The period from the Gilded Age through recent American history is examined, focusing on social economic, cultural and intellectual history. Classes are conducted in a seminar format, and emphasis is placed on writing, the evolution of a hypothesis and historical research. Supplemental readings and primary source documents are used in conjunction with the required text. Each semester a research paper is presented by the student to department members.

**PREREQUISITE:** An 85 or above average in Honors United States History 1 OR a 93 or above average in United States History 1 AND an 85 or above average in English II.

**Law & Criminal Justice****Credits 5**

This full-year elective course addresses the causes and consequences of crime in America. In addition, it examines in detail the Constitutional basis for criminal law, as well as the impact of American history on the development of the law. The following topics are also included: (1) the types of crime; (2) law enforcement and police procedures; (3) Supreme Court cases and their impact upon the law and law enforcement; (4) trial procedures; (5) theories of punishment and the law enforcement; (6) capital punishment; (7) juvenile justice; (8) possible solutions to crime and criminal justice problems.

**PREREQUISITE:** This is an elective for grade 12 students only.

**AP European History****Credits 6**

This full-year senior elective course is an introductory college course in European History from approximately 1450 through 1990. It is designed to prepare the student to sit for the Advanced Placement Examination in European History. Students will be expected to participate in group cooperative learning experiences, make oral and audio-visual presentations and analyze primary source documents.

*Satisfies the senior humanities requirement if enrolled in grade 12.*

**PREREQUISITE:** An 85 or above average in AP United States History 2 OR a 93 or above average in United States History 2 AND an 85 or above in all other courses.

**AP Macroeconomics****Credits 6**

This full-year elective AP course is designed to give junior and senior students a thorough understanding of the principles of economics that apply to an economic system as a whole. The reading, writing and analytical skills of the student in this course must be of a high level. Some of the topics included are basic economic concepts, economic indicators, the business cycle, open economy, national income and price determination, the financial sector, stabilization policies, and international trade and finance.

**PREREQUISITE:** All students must have an 85 semester average in English, Math and Social Studies in order to participate and have completed United States History 2 with an 85 semester average.

**AP Psychology****Credits 6**

This full-year elective AP Psychology course provides junior and senior students with the opportunity to examine the systematic and scientific study of the behavior and mental processes of human beings and other animals. Included is a consideration of the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. Students also will learn about the ethics and methods psychologists use in their science and practice.

**PREREQUISITE:** All students must have an 85 semester average in both English and Social Studies. Both seniors and juniors are eligible.

**General Psychology****Credits 5**

This full year course for juniors and seniors introduces the students to the subject of psychology. The course includes an overview of major psychological approaches, theories, concepts and is designed to help students gain a better understanding of themselves and of other people

**AP United States Government & Politics****Credits 6**

This course is designed to give senior students a critical perspective on government and politics in the United States. It involves both the study of general concepts used to interpret American politics and the analysis of specific case studies. It also requires a familiarity with the various institutions, groups, beliefs, and ideas that make up the American political reality. The course will focus on the constitutional underpinnings of American Government, political beliefs and behavior, political parties and interest groups, institutions and policy decisions. In order that students are fully prepared to meet the rigors of college level studies, AP United States Government students will be expected to complete a research paper designed to examine and explain specific aspects of the course.

**PREREQUISITE:** All students must have an 85 semester average in both English and Social Studies in order to participate and have completed United States History 2 with an 85 semester average.

**History of Art****Credits 5**

This full-year, in-depth course for seniors examines art history (painting, sculpture and architecture) from antiquity to the present. Students analyze relationships of works of art in terms of history, aesthetics and culture. Emphasis is placed upon how art conveys people's attitudes at a particular time and how it reflects society at large. Occasionally drawing assignments are given. Senior level students may register for this course. Completion of this course will satisfy the senior humanities requirement.

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| <b>MATHEMATICS DEPARTMENT</b> |
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**Algebra I****Credits 5**

This is the first course in the College Prep mathematics curriculum. It is full-year course and covers topics including simplifying algebraic expressions, solving linear equations and inequalities, graphing linear and quadratic functions, graphing linear inequalities, writing equations of lines, solving systems of equations and inequalities, using the laws of exponents, solving quadratic equations, and factoring quadratic equations. Application problems are solved throughout the course.

**Honors Algebra I****Credits 5**

This rigorous full-year course is for students of high ability and motivation in mathematics. Although it covers the same topics as College Prep Algebra 1, the treatment of the topics is more extensive and the pace is more rapid with a greater emphasis on theory, in-depth understanding and complex applications. Additional topics



included at the honors level are exponential functions, polynomials, rational equations and functions, and radical functions. Application problems are solved throughout the course.

**PREREQUISITE:** Placement is based on results of the Mathematics Placement Exam.

### **Geometry**

**Credits 5**

This full-year course is the third course in the College Prep mathematics curriculum. It is a course in traditional geometry, emphasizing the underlying axiomatic structure of mathematics. The course is a systematic investigation and modeling of the properties of local space. As such, the early focus is on definitions, symbols, postulates, theorems and reasoning. The study progresses through points, lines, planes, angles, parallelism, congruent figures, triangles, quadrilaterals, similarity, polygons, Pythagorean theorem, circles, area of planes and solid figures and volumes.

**PREREQUISITE:** Successful completion of Algebra 2 or Honors Algebra 2.

### **Honors Geometry**

**Credits 5**

This rigorous full-year course is the third course in the Honors mathematics curriculum. Although it covers the same topics as College Prep Geometry, the treatment of the topics is more extensive and the pace is more rapid with a greater emphasis on theory, in-depth understanding and complex applications. Additional topics included at the honors level are an

introduction to trigonometry, coordinate geometry and transformational geometry.

**PREREQUISITE:** Honors Algebra 2 with a minimum first semester grade and a minimum quarter 3 grade of 85 or College Prep Algebra 2 with a minimum first semester grade and a minimum quarter 3 grade of 95. Note: Freshmen whose middle school transcript shows a completed Geometry course may exempt this course based on their results on an Honors Geometry exemption exam.

### **Algebra II**

**Credits 5**

This full-year course is the second course in the College Prep mathematics curriculum. It extends the topics of Algebra 1 with increasing complexity and emphasis on applications. In addition, Algebra 2 includes the study of functions and function notation, matrices and their application, irrational numbers, radical expressions and equations, complex numbers, quadratic functions and their graphs, exponential and logarithmic functions, and polynomial functions.

**PREREQUISITE:** Successful completion of Algebra 1 or Honors Algebra 1.

### **Honors Algebra II**

**Credits 5**

This rigorous course is the second Honors mathematics course. Although it covers the same topics as Algebra 2, the treatment of topics is more extensive and the pace is more rapid with a greater emphasis on theory, in-depth understanding, complex applications, and mathematical modeling. Additional honors level topics are



exponential and power functions, rational functions, inverse functions, analysis of polynomial functions and their graphs, translations of graphs, introduction to conic sections, and quadratic systems.

**PREREQUISITE:** Honors Algebra I with a minimum first semester grade and a minimum quarter 3 grade of 85 or Algebra I with a minimum first semester grade and a minimum quarter 3 grade of 95. Note: Freshmen whose middle school transcript shows an Algebra I course may be placed in this course based on the results of the Mathematics Placement Exam.

### **Introduction to Statistics** **Credit 5**

This course provides an introduction to statistics and statistical practices. The course addresses methods of gathering, organizing, analyzing, presenting and interpreting data. Additional topics include correlation, regression, probability, binomial and normal distributions, sampling, estimation, hypothesis testing and confidence intervals. Applications of probability and statistics are stressed throughout the course.

**PREREQUISITE:** Completion of Honors/College Prep Algebra 2 and Honors/College Prep Geometry.

### **Finite Math** **Credits 5**

This course serves as a preparation for college mathematics and is intended for those students who will not qualify to take PreCalculus. The course extends the topics of Algebra 2 and introduces trigonometric functions and their applications. It

concentrates on applications with additional topics including matrices, optimization through linear programming, financial applications, logic, combinatorics, probability and an introduction to statistics.

**PREREQUISITE:** Completion of Honors/College Prep Algebra 2 and Geometry.

### **Pre Calculus** **Credits 5**

This full-year course is the fourth in the college prep mathematics curriculum. It serves as a preparation for the first course in college calculus. The course requires a strong basis in Algebra 2. The major topics include absolute value, polynomial, rational, exponential, logarithmic and trigonometric functions, their graphs and applications.

**PREREQUISITE:** CP Algebra 2 with a minimum first semester and quarter 3 grade of 85 and CP Geometry with a minimum first semester and quarter 3 grade of 85, or Honors Algebra 2 with a minimum first semester and quarter 3 grade of 83 and a minimum first semester and quarter 3 grade of 83 in Honors Geometry.

### **Honors Pre Calculus** **Credits 5**

This rigorous full-year is the fourth in the Honors mathematics curriculum. Although it covers the same topics as College Prep Pre Calculus, the treatment of the topics is more extensive and the pace is more rapid with a greater emphasis on theory, in-depth understanding and complex applications. Conic Sections and systems of equations is

an additional topic to the PreCalculus curriculum.

**PREREQUISITE:** Honors Algebra 2 with minimum semester grades of 85, and Honors Geometry or Geometry with first semester and quarter 3 grades of 85 and 93 respectively. Note: A student is unable to accelerate to Honors PreCalculus from College Prep Algebra 2, regardless of semester grades in the course.

### **Calculus Credits 5**

This full-year course is intended as an introduction to Calculus for those students who have a strong knowledge of mathematics at the college prep level in the areas of algebra, geometry and Precalculus. The course extends the topics of Precalculus. Additional topics include continuity, limits, the derivative, integration and applications.

**PREREQUISITE:** Precalculus with a minimum first semester grade and quarter 3 grade of 85 or Honors Precalculus with a minimum first semester grade and quarter 3 grade of 83.

### **AP Calculus AB Credits 6**

This rigorous course is a college level Advanced Placement (AP) course. The course is intended for highly motivated students who have a strong knowledge of mathematics at an honors level in the areas of algebra, geometry, trigonometry, and especially an in-depth understanding of functions and their graphs. The course topics include limits, continuity, differentiation, and integration with an emphasis on

applications of the derivative and the definite integral. This course is the equivalent of one semester of college level calculus.

**PREREQUISITE:** Honors Pre Calculus with a minimum first semester and third quarter grade of 93.

### **AP Calculus BC Credits 6**

This rigorous course is a college level Advanced Placement (AP) course. The course is intended for highly motivated students who have a strong knowledge of mathematics at an honors level in the areas of algebra, geometry, trigonometry and especially an in-depth understanding of functions and their graphs. The course topics include limits, continuity, differentiation, and integration with emphasis on applications of the derivative and the definite integral. This course is the equivalent of one semester of college calculus.

**PREREQUISITE:** AP Calculus AB with a minimum first semester and quarter 3 grade of 85.

### **AP Statistics Credit 6**

This rigorous course is a college level Advanced Placement (AP) course and carries the honors weighting. The course introduces students to the major concepts and tools for collecting, analyzing and interpreting data. These concepts and tools include graphical and numerical techniques for studying, analyzing and interpreting patterns and departures from patterns and the significance of such. It also includes formulating data collection plans to

produce models from which valid inferences can be drawn and using probability and simulation to create models. Applications in the social sciences, business, economics and medicine are integrated throughout the course.

**PREREQUISITES:** Honors Algebra 2 with a minimum first semester and quarter 3 grade of 85, or Honors PreCalculus or PreCalculus with a minimum first semester and quarter 3 grade of 85 and 93 respectively.

### **Fine Arts DEPARTMENT**

#### **Concert Band**

**Credits 4**

This full year elective course is offered to students who play musical instruments and wish to be part of a musical ensemble. Through this course, students will develop their individual and group music skills through sight-reading, warm-up exercises, part playing and concert performance. Participation in all ensemble performances is mandatory. This course satisfies the senior humanities requirements if enrolled in grades 10 through 11.

#### **Concert Choir**

**Credits 4**

This course is offered to juniors and seniors. Proper choral technique and basic musicianship skills are presented and cultivated. Repertoire is taken from several musical periods throughout history as well as modern choral compositions. Students are responsible to attend all scheduled choral performances. All students enrolled in Vocal music are also eligible to audition for Select Choir. This course satisfies the senior year

humanities requirement if enrolled in grades 10 through 12.

#### **Instrumental Music**

**Credits 3**

This full-year elective course is offered to students who play musical instruments and wish to be part of a musical ensemble. Students meet as a large group during the school day, three periods a cycle for Symphonic Band. Students receiving credit for this course will be enrolled in the Symphonic Band and will have the opportunity to audition for Jazz Band and Full Orchestra. Through this course, students will develop their individual and group music skills through sight-reading, warm-up exercises, part playing and concert performance. Participation in all ensemble performances is mandatory. This course satisfies the senior humanities requirement if enrolled in grades 10, 11, 12.

#### **AP Music Theory**

**Credits 6**

This full year elective course is a more in-depth study of the principles of music. Topics covered include chords, scales, modes, harmonic function, cadences, phrase structure, four-part realization of figured-bass, composition of a bass line, harmonic analysis, sight-singing, melodic and rhythmic diction. Musicianship skills such as dictation, sight-singing and keyboard harmony will also be further developed. The ultimate goal is to develop a student's ability to recognize, understand and describe the basic materials and processes of music. Satisfies the senior year humanities requirement if enrolled in grade 12.

**PREREQUISITE:** Students will have completed two full years in a performance ensemble, either instrumental or vocal, with the intent of participating in those ensembles during the year they are taking this course.

### **String Orchestra**

**Credits 4**

This full year elective course is offered to all students who play violin, viola, cello, double bass, and piano and wish to be part of a musical ensemble. Students meet as a large group during the school day, four periods per cycle for String Orchestra. No audition is necessary and all students who have had any string experience are encouraged to participate. Students receiving credit for this course will be enrolled in the String Orchestra and will have the opportunity to audition for Full Orchestra. Through this course, students will develop their individual and group music skills through sight-reading, warm-up exercises, part playing and concert performances. Participation in all ensemble performances is mandatory. Satisfies the senior year humanities requirement if enrolled in grade 12.

### **Vocal Music**

**Credits 4**

This full-year elective course is offered to all male and junior/senior female students. Proper choral technique and basic musicianship skills are presented and cultivated in this ensemble. Repertoire is taken from several musical periods throughout history as well as modern choral compositions. Students are responsible to attend all scheduled choral performances. All students enrolled in Vocal Music are also eligible to audition for Select Choir. Satisfies

the senior year humanities requirement if enrolled in grade 10, 11, 12.

### **Choral Workshop**

**Credits 4**

This full year elective is offered to all freshmen/sophomores female students. Students will experience an introductory course on choral singing which will focus on basic musicianship skills and proper singing technique, including breath support, creating a proper vocal tone and singing as part of a large ensemble. Repertoire is taken from several musical periods throughout history as well as modern choral compositions. Students are responsible to attend all scheduled choral performances. All students enrolled in Choral Workshop are eligible to audition for Select Choir. Satisfies the senior year humanities requirement if enrolled in grade 10 followed by enrollment in vocal music in grades 11, 12.

### **History of Music**

**Credits 5**

This full-year elective course has limited enrollment and is offered to seniors. The objective is to provide students with a background in identifying, understanding and appreciating the different styles, genres and composers of music throughout history. Students will be taught the essential elements of music by listening to and analyzing musical compositions. They will engage in the historical study and research of major composers and musical movements. Satisfies the senior year humanities requirement if enrolled in grade 12.

**Piano****Credits 4**

This course is for beginner or intermediate students. This course will both allow students to learn piano in a group setting, while offering students the ability to receive individual instruction. If a student is an advanced pianist they may receive an IMS, but only after a hearing.

**SCIENCE DEPARTMENT****Biology****Credits 6**

This laboratory science course is designed to satisfy the needs of a college-bound student. A molecular biology approach is used to introduce various topics to students. Topics include characteristics of organisms, microscopes, molecular and cell chemistry, cell structure and function, cell energy use, cell division (mitosis and meiosis), genetics, DNA structure and function, evolutionary theory, and the classification of organisms.

**Honors Biology****Credits 6**

This laboratory science course is designed for students who have high ability and interest in the sciences. The course approaches Biology from a molecular point of view, using the Theory of Evolution as a framework. Topics include cellular structure and biochemistry, cellular reproduction, and information flow from DNA to protein. The final topic will focus on animal tissues and organ systems, with three organ systems being analyzed in detail. The course concludes with the dissection of a fetal pig. Lecture topics will be closely integrated with at least one laboratory activity. Students are

selected by careful review of the student's academic records and standardized test scores.

**Chemistry****Credits 6**

The content of this laboratory science course is designed to meet the needs of students preparing to enter college. The material is taught so that students will understand and learn to use the basic principles of Chemistry in order to collect, analyze, problem solve, and test facts in the topics covered. Areas of study include nomenclature, stoichiometry, chemical reactions and equations, gas laws, atomic theory, periodic law and chemical bonding.

**Honors Chemistry****Credits 6**

The Honors Chemistry course is designed for students who have high motivation and a superior background in mathematics and science. It is primarily for those students who want to enter a scientific program in college. The goal of this course is to develop essential principles and concepts in a logical sequence with emphasis on problem solving by dimensional analysis. Topics include atomic theory, composition of matter, periodic law, gas laws, chemical equation, solution chemistry, acids, bases and oxidation-reduction. Lecture topics will be closely integrated with at least one laboratory activity.

**PREREQUISITE:** Must have completed Honors Math course (Honors Algebra 2 or Honors Geometry or higher with a minimum of 93) AND completion of Honors Biology with a minimum average grade of 90 OR

completion of CP Biology with a minimum average grade of 93 at the end of quarter 3

### **Physics**

**Credits 6**

Physics is a full-year course designed specifically for the college bound student. Those interested in majoring in a science or technological field are strongly urged to select physics. Physics is the study of relationships between matter and energy. Special emphasis is placed on problem solving, which requires a proficiency in math. Topics in the lecture are closely integrated with laboratory experiments.

**PREREQUISITE:** Completion of Geometry with a minimum grade of 85. Completion of Algebra II with a minimum average grade of 83 at the end of quarter 3 OR currently enrolled in Algebra II.

**CO-REQUISITE:** Current enrollment in Algebra II (or higher)

### **AP Physics 1**

**Credits 6**

AP Physics 1 is the equivalent to a first semester college course in algebra based physics. The course is designed for the high ability student who is highly motivated and has a science, engineering or technological major as his/her future goal. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy and power, and mechanical waves and sound. It will also introduce electric circuits. Primary emphasis is placed on physical principles and the development of problem solving techniques. A proficiency in mathematical

skills is necessary. Laboratory work will include experiments that are closely related to theory presented in lectures.

**PREREQUISITE:** Completion of Honors Algebra 2 with a minimum average grade of 90 at the end of quarter 3

**CO-REQUISITE:** Current enrollment in Honors Pre Calculus. Students selecting Calculus, MUST have completed Honors Algebra 2 and Honors Pre Calculus with a minimum average grade of 90 in each course.

### **Human and Experimental Genetics**

**Credits 5**

In the first semester this elective is designed to offer the student an opportunity to continue the study of genetics which was begun in Biology and Honors Biology. The course will offer some computer based lab studies, but the majority of the course work will employ a lecture approach. Topics will include: a review of mitosis and meiosis; classical Mendelian genetics, extensions of Mendelian genetics and gene interaction; quantitative genetics, sex determination and the sex chromosomes; chromosomal mutations, which include variations in chromosome number and arrangement; and linkage, crossing over and gene mapping. Each of the topics will be supplemented by extensive problem solving, laboratory analysis, or a combination of both. Student evaluations will be based upon tests, quizzes, laboratory reports, and graded supplemental material. In the second semester The course is divided into two major components, (1) Drosophila

studies and (2) DNA technology. During the Drosophila section of the course, students will be expected to identify all Drosophila life cycle stages, complete a three trait cross, and perform specific microscopic dissections. During the DNA segment of the course, students will be expected to extract DNA, perform various electrophoresis experiments including DNA fingerprinting, restriction enzyme studies, and polymerase chain reaction. Student evaluations will be based on successful execution of laboratory techniques and laboratory reports.

**PREREQUISITE:** Completion of Honors Biology or Biology AND Honors Chemistry or Chemistry

### **Forensic Science**

**Credits 5**

This course will provide students with an introduction to a variety of topics in forensic science and will give them hands-on experience in laboratory techniques currently being used. Students will be required to participate in discussions of the ethical implications of crime scene analysis and crime reporting. Students will use the knowledge they have gained in their previous science classes (biology, chemistry, physics) and apply it to the study of forensic science. Case studies of actual investigations will be utilized to give students real-world examples of how forensic science can be used in criminal investigations. A culminating activity will be the student's participation in the examination and analysis of a mock crime scene.

**PREREQUISITE:** Completion of biology or honors biology and chemistry or honors chemistry

### **Anatomy & Physiology 1**

**Credits 5**

The first semester course provides an overview of basic concepts of Anatomy and Physiology with presentation of overall morphology and function of the integumentary, skeletal, cardiovascular and endocrine systems. Laboratory studies provide an introduction to histology and identification of bones in the skeletal system. Throughout the semester, emphasis will be placed on homeostasis as the foundation of Anatomy and Physiology. In the second semester students will continue to study the overall morphology and function of the muscular, lymphatic, immune, respiratory and nervous systems. Body systems will be explored in greater detail, culminating with a complete dissection project designed to demonstrate the integration of each system. A comprehensive dissection practical examination will follow. Once again, the concept of homeostasis will be emphasized throughout the semester.

**PREREQUISITE:** Minimum final grade of 80 or above in Biology and a minimum average grade of 80 in chemistry by the end of quarter 3

### **CP Environmental Science**

**Credits 5**

This course is an interdisciplinary field that studies the relationship among the natural world, its organisms and humans. Topics include: renewable resources, minerals, energy, biomes, climate, pollution, food



webs, population growth, endangered species, waste management, climate change, and conservation.

**PREREQUISITE:** Completion of Biology or Honors Biology and Chemistry or Honors Chemistry.

### **AP Biology**

**Credits 6**

This course is designed to be the equivalent of a college introductory biology course which includes a laboratory component. It aims to provide students with the conceptual framework, factual knowledge and analytical skills necessary to deal critically with the rapidly changing science of biology. Experimental design, data presentation and analysis will be emphasized. The major topics covered include: heredity and evolution, energy processing, cell structure and biochemistry, and ecosystem interaction. The textbook used is one commonly used by colleges and universities for a first year biology course.

**PREREQUISITE:**

Completion of Honors Biology with a minimum grade of 90 OR Biology with a minimum grade of 93 AND completion of Honors Chemistry with a minimum grade of 85 or completion of Chemistry with a minimum grade of 93.

### **AP Chemistry**

**Credits 6**

This course is the equivalent of first semester college chemistry which includes a laboratory component. It aims to provide a depth of understanding of theoretical and analytical concepts. There will be an

emphasis on chemical calculations and mathematical formulation of principles. The major topics covered include: structure of matter, states of matter, Kinetic Theory of Gases, equilibria, kinetics, Thermodynamics, reactions and descriptive chemistry.

**PREREQUISITE:**

Completion of Honors Chemistry with a minimum average grade of 90 OR Chemistry with a minimum average grade of 93 by the end of quarter 3. Completion of Algebra 2 or Pre Calculus with a minimum average grade of 90 by the end of quarter 3

**CO-REQUISITE:**

Current enrollment in Honors Pre Calculus, Pre Calculus or Calculus.

### **AP Physics C**

**Credits 6**

Advanced Placement Physics C is a second year physics course that expands on topics covered in the first year physics course. The areas of study are Newtonian mechanics (including wave motion), electricity and magnetism. The course will prepare students to sit for the Advanced Placement Physics C exam. Students taking the course should have strong mathematical abilities and have an interest in pursuing a science or engineering degree in college.

**PREREQUISITES:**

Completion of AP Physics 1 with a minimum average grade of 90 OR CP Physics with a minimum average grade of 93 by the end of quarter 3.

**CO-REQUISITE:** Current enrollment AP Calculus.

### **AP Environmental Science Credits 6**

The AP Environmental Science course is a full-year introductory college course with a laboratory component. This is an interdisciplinary field of science that studies the relationship among the natural world, its organisms and humans. Topics include: renewable resources, minerals, energy, biomes, climate, pollution, food webs, population growth, endangered species, waste management, climate change, and conservation.

**PREREQUISITES:** Completion of CP Biology and CP Chemistry with a minimum grade of 90 OR Completion of Honors Biology and Honors Chemistry with a minimum grade of 85 by the end of quarter 3.

## **TECHNOLOGY DEPARTMENT**

### **CP/AP Computer Science Principles**

#### **Credits 5/6**

This course teaches the principles of computer science from a mobile computing perspective. Mobile computing is an emerging field that focuses on mobile devices such as tablets and smartphones. In this course, we will use the mobile programming language "App Inventor" to program Android tablets and smartphones. Students will create a socially useful app that uses some combination of graphics, animation, simulation, location awareness, data persistence, and/or texting. The only limit on the types of apps you will learn to

build is your own imagination. This course satisfies the senior year Humanities requirement. *Students have the option to take this course at either the CP or AP level/s*

**PREREQUISITES:** Completion of CP Algebra II and Geometry with a final grade of 85.

## **THEOLOGY DEPARTMENT**

### **Sacred Scripture Credits 5**

This survey course is offered in the freshman year. The course offers an introduction to the Bible which includes cultural and historical background, structures, and literary form. The students then move to a survey of the Old Testament with special emphasis on the Pentateuch, Prophets, and Psalms. This course provides students with a forum to explore their rich religious heritage and bring them into contact with the Living Word itself. The course then addresses itself to the person, message and Paschal Mystery of Jesus as presented in the New Testament. Through a study of the New Testament, the students develop an understanding of Jesus, his life and message, the cultural and political situation in which he lived, and the growth of his earliest followers' beliefs about him in the developing community which is now the Church. The course offers students the time and opportunity to explore, clarify and apply their instruction to their personal lives.

### **Catholic Worship & Morality Credits 5**

This course is offered in the sophomore year. The course is a study of the purpose and efficacy of worship and why we worship.

The course emphasizes the centrality of Christ in the liturgy, his personal presence and action in the Sacraments, the need for personal response, and the mission of the Church to extend Christ's life through liturgy into the everyday world. A study of the roots of liturgy and the development of the seven Sacraments over the centuries stresses that a Sacramental encounter with God is always a present action. A special emphasis is placed upon the meaning of the Eucharistic celebration from the perspectives of history, symbol and present customs. An analytical study of the parts of the Mass is included. This course continues on Catholic decision making and deals with the ethical dimensions of our personal and inter-personal lives, and of the society in which we live. The course explores the nature and importance of moral principles, especially the primary Christian principles of love and respect for human life. The course is reinforced by actual and hypothetical moral dilemmas which serve to clarify and enhance the student's ability to utilize the process explained in class.

### **Church History**

**Credits 5**

This survey course offered in the Junior year is a study of the major world religions in the history and development of the Roman Catholic Church from its beginnings to the present day. This study can empower the students to seek responses to life's meaningful questions based on an analysis of religions and cultural expression. This course comes out of the teaching of the Second Vatican Council and its thrust toward Ecumenical and Interreligious Issues.

### **Apostles in Mission**

**Credits 5**

In this course students will examine the 7 Themes of Catholic Social Teaching as they relate to one's baptismal call to be a child of God in an increasingly secular world. Additionally, the teachings of St. Vincent Pallotti will be examined in conjunction with the 7 Themes of Catholic Social Teaching. The premise of this course is set with the understanding of Baptism and Liturgy and leads to the four-fold methodology of evangelization: encounter, accompany and community. Students will also be required to examine the effects of evangelization in the digital age as means for the human person's desire to know and to live truth, that which is Christ.

## **WORLD LANGUAGES DEPARTMENT**

### **Latin I**

**Credits 5**

This full-year course stresses pronouncing, reading, writing and comprehending the Latin language. Students study basic forms, syntax, and rules of Latin and English grammar, and they learn the similarities and differences of both languages. Students also study Latin vocabulary, roots and prefixes in order to strengthen English vocabulary skills. In addition, students practice reading and comprehending through short Latin readings about the people, places, customs and mythology of Ancient Rome.

### **Latin 2**

**Credits 5**

This full-year course is a continuation of Latin 1. Further development of reading, writing, pronunciation and comprehension is emphasized. Students are introduced to

more complex grammar and vocabulary skills through Latin readings about the history and culture of the people of Ancient Rome. This course is available to freshmen by invitation only.

**PREREQUISITE:** Completion of Latin 1 or its equivalent.

### **Honors Latin III + Credits 5**

Latin 3 continues the study of grammar and syntax through cultural, historical and mythological readings in Latin. Students also begin writing short compositions and study the culture and history of Ancient Rome and Greece through class discussions and mini-projects. Students who enroll in this course are eligible for college credit.

**PREREQUISITE:** Completion of Latin II with a minimum grade of 90.

### **AP Latin Credits 6**

This course is equivalent to an upper-intermediate level college course in Latin focusing on the in-depth study of selections from two of the greatest works in Latin literature: Vergil's Aeneid and Caesar's Gallic War. Students cultivate their understanding of classics through preparing and translating readings and considering themes in the context of ancient literature as they explore concepts like literary techniques, Roman values, war and empire, leadership, views of non-Romans, history and memory, and human beings and the gods.

**PREREQUISITE:** Completion of Honors Latin 3 with a minimum grade of 90.

### **French I Credits 5**

This is a full-year introductory course which stresses the four basic foreign language skills (reading, writing, speaking, and listening comprehension). In addition, the students explore the culture of the French-speaking world.

### **French II Credits 5**

This full-year course, a continuation of French I, further develops the four basic language learning skills with increased emphasis on pronunciation and intonation, oral and reading comprehension, writing and culture. This course is available to freshmen by invitation only.

**PREREQUISITE:** Completion of French 1 or its equivalent.

### **Honors French III Credits 5**

In this full-year elective course, students are introduced to more complex grammar skills. They are required to read, write, and speak French and further study French culture. Students who enroll in this course are eligible for college credit.

**PREREQUISITE:** Completion of French 2 with a minimum grade of 90.

### **Honors French IV Credits 5**

In this full-year honors elective course, students are expected to be able to express themselves orally in the language, read literary selections for comprehension, be

able to communicate through essays and discussions and further develop an awareness of the culture. Students who enroll in this course are eligible for college credit. This course satisfies the senior year Humanities requirement.

**PREREQUISITE:** Completion of Honors French 3 with a minimum grade of 90.

### **AP French Credits 6**

AP French Language and Culture is equivalent to an intermediate level college course in French. Students cultivate their understanding of French language and culture by applying interpersonal, interpretive, and presentational modes of communication in real-life situations as they explore concepts related to family and community, personal and public identity, beauty and aesthetics, science and technology, contemporary life, and global challenges. Students who enroll in this course are eligible for college credit. This course satisfies the senior year Humanities requirement.

**PREREQUISITE:** Completion of Honors French 4 with a minimum grade of 90.

### **German I Credits 5**

This is a full-year introductory course which stresses the four basic foreign language skills (reading, writing, speaking and listening comprehension). In addition, the students explore the culture of the German-speaking world.

### **German II Credits 5**

This full-year course, a continuation of German I, further develops the four basic language learning skills with increased emphasis on pronunciation and intonation, oral and reading comprehension, writing and culture. This course is available to freshmen by invitation only.

**PREREQUISITE:** Completion of German I or its equivalent.

### **Honors German III Credits 5**

In this full-year elective course, students are introduced to more complex grammar skills. The students are required to read, write and speak German and further study German culture. Students who enroll in this course are eligible for college credit.

**PREREQUISITE:** Completion of German 2 with a minimum grade of 90.

### **Honors German IV Credits 5**

In this full-year honors elective course, students are expected to be able to express themselves orally in the language, read literary selections for comprehension, be able to communicate through essays and discussions and further develop an awareness of the culture. Students who enroll in this course are eligible for college credit. This course satisfies the senior year Humanities requirement.

**PREREQUISITE:** Completion of Honors German 3 with a minimum grade of 90.

**Spanish I****Credits 5**

This is a full-year introductory course, which stresses the four basic foreign language skills (reading, writing, speaking, and listening comprehension). In addition the students explore the culture of the Spanish-speaking world.

**Spanish II****Credits 5**

This full-year course, a continuation of Spanish 1, further develops the four basic language learning skills with increased emphasis on pronunciation and intonation, oral and reading comprehension, writing and culture. This course is available to freshmen by invitation only.

**PREREQUISITE:** Completion of Spanish 1 or its equivalent.

**Honors Spanish III****Credits 5**

In this full-year elective course, students are introduced to more complex grammar skills. The students are required to read, write and speak Spanish and further study Spanish culture. Students who enroll in this course are eligible for college credit.

**PREREQUISITE:** Completion of Spanish 2 with a minimum grade of 90.

**Honors Spanish IV****Credits 5**

In this full-year elective honors course, students are expected to be able to express themselves in the language, read literary selections for comprehension, be able to communicate through essays and discussions and further develop an awareness of the culture. Students who

enroll in this course are eligible for college credit. This course satisfies the senior year Humanities requirement.

**PREREQUISITE:** Completion of Honors Spanish 3 with a minimum grade of 90.

**Italian I****Credits 5**

This is a full-year introductory course which stresses the four basic foreign language skills (reading, writing, speaking, and listening comprehension). In addition, the students explore the culture of the Italian-speaking world.

**Italian II****Credits 5**

This full-year course, a continuation of Italian 1, further develops the four basic language learning skills with increased emphasis on pronunciation and intonation, oral and reading comprehension, writing and culture.

**Honors Italian III****Credits 5**

In this full-year elective course, students are introduced to more complex grammar skills. The students are required to read, write and speak Italian and further study Italian culture. Students who enroll in this course are eligible for college credit.

**PREREQUISITE:** Completion of Italian 2 with a minimum grade of 90.

### **Honors/AP Italian IV/V**

#### **Credits 5/6**

Honors Italian IV: In this full-year elective course, students review and refine the complex grammar points taught in the previous year of Italian. Students continue to develop their reading and translation ability through the writings of selected Italian authors. Students who enroll in this course are eligible for college credit.

AP Italian V: AP Italian Language and Culture is equivalent to an intermediate level college course in Italian. Students cultivate their understanding of Italian language and culture by applying interpersonal, interpretive, and presentational modes of communication in real-life situations as they explore concepts related to family and community, personal and public identity, beauty and aesthetics, science and technology, contemporary life, and global challenges. Students who enroll in this course are eligible for college credit.

**PREREQUISITE:** Completion of Honors Italian 3 with a minimum grade of 90.

### **Japanese Culture I Credits 2.5**

This is a semester elective course, which focuses on speaking, listening, reading, and writing in Japanese. Completion of Japanese I & II will not fulfill the World Language graduation requirement. This course is only available to seniors.

### **Japanese Culture 2 Credits 2.5**

Building from the grammar/reading and auditory skills learned in Japanese I, students will enhance their study through the

exploration of traditional and modern Japanese culture. This course is only available to seniors.

**PREREQUISITE:** Completion of Japanese 1 or its equivalent. Completion of Japanese 1 and 2 will not fulfill the World Language graduation requirement.

### **American Sign Language Credit/s 2.5**

ASL 1 is an introductory course tailored for students with little or no prior experience in ASL. This course is structured to teach fundamental conversational skills, grammar principles, and vocabulary. The primary emphasis is on developing proficiency in both expressive and receptive American Sign Language, including fingerspelling, along with an exploration of Deaf culture. Each unit will focus on vocabulary pertinent to a specific theme (such as friends and family, leisure activities, school, or work, etc.), as well as grammar concepts suitable for beginners at level 1.

## **ADDITIONAL COURSES**

### **College Seminar- Juniors Only (Second semester only)**

The College Seminar is designed to help prepare juniors during the college process. Topics include; researching colleges and developing a college list, exploring majors and careers, completing and submitting college applications, writing the college essay, the importance of recommendations, etc. Students are encouraged to take ownership of the college search process



and prepare college applications. Students are expected to turn in course materials on time and communicate with their college counselors on a frequent basis. This required course will meet once a cycle in the spring of junior year.

### **College Seminar - Seniors Only (First quarter only)**

This course is a continuation from junior college seminar. Students will complete college applications, college essays, SRAR if necessary, and ask any questions about the college search/application process. This is a required course and meets once a cycle in the first quarter of the first semester.

### **Course Waivers**

Students who do not meet the prerequisite(s) of a particular course may inquire about a course waiver form by meeting with the department chair. After careful examination of the student's overall academic progress, and at the discretion of the chair and school administration, the student may be approved or denied to register for the course.