



2019-2020 Course Offerings

Archbishop Riordan High School

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This catalogue represents a comprehensive list of courses from the past few academic years. Please refer to class registration forms for specific courses offered each year.

Revised 9/23/2019

The Academic Program

Archbishop Riordan's curriculum serves the needs of all its students. At the program's core is a commitment to a rigorous and challenging liberal education designed to develop a student's understanding of the key topics and issues in each academic discipline in light of 21st Century learning and technology. Students are trained to think critically, express themselves clearly, and identify the overlapping themes among the disciplines. While the curriculum offers a great breadth and identifies essential questions, it is also designed to develop academic skills in each student. The program encourages - indeed, insists - that students take a hands-on, active, self-advocating approach to their own education and that they apply learning to real-life situations.

Block Schedule

Archbishop Riordan utilizes an A/B "modified block" schedule. The school year is split into two terms, Fall and Spring (five credits each), with students taking 6-8 year-long courses. Each class lasts eighty minutes, thus providing sufficient time for students and teachers to delve more deeply and actively into topics and activities. This emphasis on depth promotes greater understanding of skills, concepts, and ideas than the traditional fifty-minute period allows. Additionally, Riordan teachers encourage active participation of students in their own learning.

Graduation Requirements

Due to our transition in the 2016-17 school year from the 4X4 Block, credit requirements for each graduating class up to 2021 will differ as follows:

Class of 2020, 2021, 2022, 23

English	– 4 Courses (40 credits)
Laboratory Science	– 3 courses (30 credits)
Mathematics	– 4 courses (40 credits)
Modern Language	– 2 courses (20 credits)
Physical Education	– 1 course (10 credits)
Social Science	– 4 courses (40 credits)
Theology	– 4 courses (40 credits)
Visual & Performing Arts	– 1 course (10 credits)
Electives	– 3 courses (30 credits)
Enrichment	(Variable)/5 credits

All students must complete 100 hours of community service to graduate.

Advanced Placement® Program

Archbishop Riordan offers up to fifteen Advanced Placement® courses to qualified students in the sophomore, junior and senior years. These courses culminate in May of each year with the AP exam, which if completed successfully, confer advanced standing and actual credit toward the baccalaureate degrees at over 1,500 colleges and universities. The courses that culminate in Advanced Placement exams are

AP Biology
AP Calculus AB
AP Calculus BC
AP Chemistry
AP Chinese Language and Culture
AP Computer Science
AP Economics
AP English Language and Composition
AP English Literature and Composition
AP Environmental Science
AP Government and Politics: United States
AP Physics C: Mechanics
AP Spanish Language
AP Statistics
AP United States History
AP World History

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Engineering Program

Archbishop Riordan High School is always looking for new approaches to curriculum that provide innovative ways to challenge our students. This ethos plus Riordan's existing strong math and science curriculum led Riordan to create a four-year honors engineering program (launched in the 2017-18 school year) with a focus on computer engineering, fabrication and design.

The Engineering Program is a highly challenging academic program fit for a mature student. It is expected that students take advanced math and science courses that complement the engineering offerings and prepare them for a college-level engineering major. Students will take classes to build skills across multiple disciplines, with the goal that by their senior year, they will graduate as proficient programmers, engineers, designers, collaborators, and problem solvers.

First Year Courses

- Computer Programming 1: App Dev w/Swift
- Engineering

Second Year Courses

- Advanced Engineering
- Computer Programming 2: Full Stack Web Dev w/JavaScript

Third Year Courses

- AP Computer Science with Java and Android Dev
- Computer Programming 3: Game Dev with Unity

Fourth Year Courses

- Advanced Computer Science w/AI
- School Year Final Project

Please note that second, third, and fourth year classes are currently in development.
More information can be found at www.riordanhs.org/engineering

University of California A-G Requirements

The University of California sets the high school course requirements for applying to the University of California's nine campuses. They are called the A-G course requirements. These requirements are also mandated by the California State College System and meet the course guidelines for all private schools in California and elsewhere. The A-G course requirements are listed below:

A–History/Social Science: Two years required (of courses listed below); three years recommended

World History or Regional History
US History
American Government

B–English: Four years of college preparatory English

C–Mathematics: Three years of college preparatory mathematics; four years recommended

D–Laboratory Science: Two years of laboratory science in two of the following fields; three years recommended

Biological Science
Chemistry
Physics

E–LOTE (Language Other Than English): Two years of the same foreign language; three years recommended

F–Visual & Performing Arts: One year of either drama/theater, music, and/or visual arts

G–College Preparatory Electives: In addition to those courses required in "A – F" above, one year (two semesters) of college preparatory electives are required, chosen from visual and performing arts, history, social science, English, advanced mathematics, laboratory science, and language other than English.

Notes:

1. Archbishop Riordan's college preparatory graduation requirements exceed the A-G list.
2. AP courses meet A-G requirements.
3. Recommended courses should be taken to surpass minimum A-G course requirements.

DIGITAL ARTS

Digital Video Art (University of California Requirement-G)

Ten Credits

Open to Grade 10, 11, 12

PREREQUISITES: None

In this course students will learn to use a variety of multimedia software and equipment using a project-based approach to teach students to create publishable products. Students will have access to graphic design programs and various digital still and hi-definition video cameras to help them complete their projects. Students will also be introduced to editing, digital photography, video production (from pre-production to final project), vector graphics, and graphic and web design.

Digital Media (University of California Requirement-G)

Ten Credits

Open to Grades 10, 11, and 12

PREREQUISITE: Web or Graphic Design course or teacher approval

DESCRIPTION: In this course students will examine web based media and the many digital formats that are being used to communicate information. Students will work on projects for various school departments. Projects will require the students to work independently and in groups. Students will use multiple programs to create various types of media. During the semester students will use Adobe CS5.5 and other media applications.

Advanced Multimedia Communications (University of California Requirement-G)

Ten Credits

Open to Grades 11 and 12

PREREQUISITE: C average in any other Computer Course; Departmental approval

DESCRIPTION: The course is dedicated to developing advanced skills in multimedia productions. Advanced techniques in conducting, shooting, and editing interviews will be discussed. Students will be involved in producing media for various departments of the school. Productions include coordinating the LIVE KRHS news telecast during homeroom, running LIVE streams of some athletic events, managing the Crusader athletic website, and assisting with promotional videos for various departments within the school. Students will learn how to prepare, write, shoot, edit, and distribute media using professional software Final Cut Studio and the Adobe CS Suite.

Computer Programming

Ten Credits

Open to grades: 10, 11, 12

PREREQUISITES: TBA

DESCRIPTION: This course is designed to give students a fun, stress-less introduction to computer programming, using two different programming environments, Java and Scratch. Prior knowledge of computer programming is not required. Students will work on multiple Scratch projects while learning programming in Java. The Java emphasis is on variables, if-statements, loops, algorithms, and the basic concepts of object-oriented programming, as well as the hands-on experience to create interactive figures with Scratch. The class meets five days a week with no written homework and a few quizzes. Students will not be required to do any programming work outside of class, but interested students can continue to work on their projects at home.

Motion Graphics

Ten Credits

Opens to Grades 10, 11 and 12

PREREQUISITES: None

This course introduces students to the principles and elements of motion design through examining and applying beginning and advanced level industry standards. This multi-level course emphasizes the relationship between typography principles and animation, building upon the fundamental skills and moving towards a more advanced approach. Students will apply the principles of motion to create a narrative structure. In addition to focusing on structure and synthesis of text and image for length-specific media, the course also encourages students to refine their skills in digital creativity.

ENGLISH

Introduction to Literature and Composition (University of California Requirement-B)

Ten Credits

Open to Grade 9

PREREQUISITES: None

DESCRIPTION: This course is designed to strengthen a student's writing ability, bolstering his skills in grammar, vocabulary, sentence structure, and paragraph and formal essay development. By the end of the course, students will have composed descriptive, narrative, argumentative, and expository essays. This course is also designed to enhance a student's appreciation of literature: the novel, the short story, drama, and poetry. Special emphasis is placed on enhancing reading comprehension and analytical skills. Students will read a broad selection of novels, short stories, and a play to learn how to analyze and appreciate literature.

Introduction to Literature and Composition Honors (University of California Requirement-B)

Ten Credits
Open to Grade 9

PREREQUISITES: B+ or better all 7th and 8th grade Language Arts classes; top scores on entrance exam (HSPT), writing sample and teacher recommendation

DESCRIPTION: This course is the first of a four-year English honors/AP program designed for students who demonstrate superior reading and writing skills. Students will read a variety of literature such as novels, short stories, drama, poetry, and non-fiction pieces while learning to analyze the components of literature. In addition, students will continue to enhance their reading comprehension and writing skills by learning reading strategies and by reviewing and composing analytical essays. The overall goal is strengthen already developed Language Arts skill and gain a greater appreciation for literary works.

World Literature/Composition (University of California Requirement-B)
Ten Credits
Open to Grade 10

PREREQUISITES: None

DESCRIPTION: This survey course samples an extraordinary body of literature created by the many world cultures. The class ranges from ancient epics through the course of recorded history to discover and analyze complex themes from cultures familiar and not so familiar. Close attention will be paid to major literary genres: poetry, short story, the novel, and drama. Throughout this course, academic organization in collaboration with study skill technique shall be practiced and assessed. In addition, students will strengthen their writing skills by reviewing important grammar concepts and continuing the practice of composing analytical, comparative, and persuasive essays adhering to Modern Language Association (MLA) format.

World Literature/Composition Honors (University of California Requirement-B)
Ten Credits
Open to Grade 10

PREREQUISITES: B or better in previous English course and departmental recommendation

DESCRIPTION: This survey course for advanced tenth grade English students will examine literature from an array of ancient and modern civilizations. A key objective will be to explore themes that are applicable to people throughout the world. Students taking this class are expected to read and write at a higher level than sophomores in the non-honors courses and to deal with complex themes from cultures not familiar to them. Composition types will include narrative, analytical, persuasive, and descriptive writing.

American Literature/Composition (University of California Requirement-B)
Ten Credits
Open to Grade 11

PREREQUISITES: None

DESCRIPTION: This college-preparatory course is designed to build on the reading and writing skills developed in the previous two years of English. Students will survey the poetry and literature of North America and the United States from the pre-Columbian era to the present. Teachers will continue to develop grammar and usage concepts and review those learned in lower division English. The continued focus of the writing portion of this class is on the major types of essays: analytical, persuasive, and comparative, as well as research papers or projects.

AP English Language and Composition (University of California Requirement-B)

Ten Credits

Open to Grade 11

PREREQUISITES: B or better in previous English course and departmental recommendation

DESCRIPTION: This is an Advanced Placement course designed to prepare students to pass the Advanced Placement English Language exam offered in May. Some novels and short stories will be read, but the core of this college-level course focuses on various modes of rhetorical expression: analytical, persuasive, narrative, descriptive, and comparative writing.

Senior Literature and Composition (University of California Requirement-B)

Ten Credits

Open to Grade 12

PREREQUISITES: None

DESCRIPTION: Over the course of the year, students will read a selection of plays and novels from William Shakespeare to Sherman Alexie. As students will come to recognize, literature mirrors its time even if it tries not to and there is much to learn from the past. In examining multiple genres, periods, cultures, and ideologies, students will gain experience and understanding of different cultures and time periods, with the recognition that human beings are all connected—no matter the time period or culture—through story. This course is designed to help students see, hear, and understand the art form of literature by taking a close look at the text, and by engaging students in the critical reading of literature. From this close reading comes an understanding of perspective, narrative, purpose, implications, complexities, and meanings beyond the text. This includes a close look at a work's structure, style, and themes as well as elements such as figurative language, imagery, symbolism, and tone. Students will come to appreciate the subtleties and power of language, and an understanding of the ways writers use language to provide both meaning and pleasure for their readers. Writing is an integral component of this course and it serves as the avenue by which students will understand what they read. As writers, students will work toward explaining literary works, making judgments about artistry, and exploring the underlying social and cultural values through analysis, interpretation, and argument. Students will write in a variety of modes, with an emphasis on developing stylistic maturity. By the end of the course, the goal is for students to be writing at the college level. Finally, students will acquire and practice these skills with the goal of true understanding, that is, to become lifelong learners, critical thinkers, readers, and writers.

AP English Literature and Composition (University of California Requirement-B)
Ten Credits
Open to Grade 12

PREREQUISITES: B or better in previous English course and departmental recommendation

DESCRIPTION: This is an Advanced Placement course designed to prepare students to pass the Advanced Placement English Literature exam offered in May. Students in this college-level class will read a selection of great literature from a broad range of authors as prescribed by the College Board. Students will write analytical essays to explore important ideas, themes, and patterns found in great literature, as well as compose “college essays” and research papers. Students who pass the AP exam receive college credit.

Journalism (University of California Requirement-G)
Ten Credits
Open to Grades 10, 11 and 12

PREREQUISITES: At least a B- in all previous English classes OR approval of teacher

DESCRIPTION: This is an introductory course to print journalism in which students learn the skills necessary to produce a newspaper. The students in the class function as the staff of the school paper, *The Crusader*, which has been published since 1953.

Students are responsible for the entire process of creating the paper: brainstorming ideas and topics, background research, interviews, news writing, editing, photography, and layout. Students discuss current events, especially as they may relate to the responsibilities, standards, and ethical considerations of journalists or relate to a topic they want to cover in the paper. Students in this class will learn how to use the professional desktop publishing program Adobe InDesign to produce the school paper, and will also work with other software programs such as Adobe Photoshop, Google Drive, and MS Office.

During the one-year course, students will learn the basic facets of journalistic writing as well as media law, history of journalism, photography, editing, layout and design, advertising, and the effect journalism has had on history as well as social media. In addition, students will refine their technology skills through the use of computers and receive valuable hands-on training and knowledge from San Francisco Bay Area professionals. Students will also benefit from attending various journalism workshops and entering writing competitions throughout the school year.

In addition to writing and editing, students will complete the following assignments, one per semester:

Fall: Students will choose a newspaper published by a neighborhood, college, or high school and read it over the course of the semester. After, students will critique the newspaper on various elements of journalism including news, editorial content, sports, advertising, photography, graphics, layout and design.

Spring: Students will choose a journalism-based book, that is, a book written by a journalist, about journalism, or writing with journalistic features such as creative non-fiction. Students will then be asked to complete a report on the book.

MATHEMATICS

Algebra IA (University of California Requirement-C)

Ten Credits

Open to Grade 9

PREREQUISITES: None

DESCRIPTION: This is the first of a two-course sequence covering the topics of first-year algebra. This course is designed to strengthen arithmetic skills and to develop basic algebraic concepts as a foundation for the topics studied in the second course in the sequence. Algebra IA provides a review of the basic skills of arithmetic in an algebraic setting via intensive work with rational numbers, monomials and linear equations in one variable. Problem solving, topics in number theory, and work with polynomials are also included. (This course is no longer offered.)

Algebra IB (University of California Requirement-C)

Ten Credits

Open to Grade 9

PREREQUISITES: Algebra IA

DESCRIPTION: This is the second of a two-course sequence covering the topics of first-year algebra. Among the topics studied in this second course are: solving equations and inequalities, polynomials, linear systems, operations on real numbers, quadratic equations, radicals, and rational expressions. (This course is no longer offered.)

Algebra Booster

Credits: Variable

Open to Grade 9

PREREQUISITES: None

DESCRIPTION: This enhancement course is designed as a companion piece to Algebra 1 for those students who may need extra help acquiring or mastering skills needed for success and movement to the next level. At any time during the school year, students may be required to attend this class until such a time that their skill set in a given area is up to Algebra 1 course level.

Algebra I (University of California Requirement-C)

Ten Credits

Open to Grade 9

PREREQUISITES: Departmental recommendation

DESCRIPTION: This first-year algebra course is designed to provide the student with a basic understanding of the structure of algebra. Emphasis is placed on developing algebraic concepts and the use of these concepts in problem situations. Among the topics studied are the real number system, polynomial and exponential expressions, factoring, solving linear and quadratic

equations, systems of equations, graphing in one and two dimensions, radicals, and rational expressions.

Modern Geometry (University of California Requirement-C)

Ten Credits

Open to Grade 9 and 10

PREREQUISITES: Algebra I or Algebra IB

DESCRIPTION: This course emphasizes the ability to reason both in formal mathematics and in the practical applications of mathematics. Among the topics studied are formal proof, plane and solid figures, congruence, similarity, some coordinate geometry and geometric constructions. This course also reviews algebraic concepts in a geometric setting.

Modern Geometry Honors/Accelerated Modern Geometry Honors

(University of California Requirement-C)

Ten Credits

Open to Grade 10

PREREQUISITES: Algebra II/Trigonometry or Algebra I and departmental recommendation

DESCRIPTION: This Honors course emphasizes the ability to reason both in formal mathematics and in the practical applications of mathematics. Among the topics studied are formal proof, plane and solid figures, introduction to right angle trigonometry, intense study in the topics of solid and coordinate geometry, and geometric constructions.

Algebra II (University of California Requirement-C)

Ten Credits

Open to Grades 11 or 12

PREREQUISITES: Modern or Plane Geometry

DESCRIPTION: In this course the topics of first-year algebra are reviewed and studied in greater depth. In addition, the topics of quadratic equations and inequalities are introduced with emphasis on their solutions. A major part of the course deals with problem-solving (translating problems into mathematical symbols and solving the resulting equations and inequalities).

Algebra II/Trigonometry (University of California Requirement-C)

Ten Credits

Open to Grades 9, 10, 11 and 12

PREREQUISITES: Algebra I, Geometry

Description: This course reviews and deepens understanding of Algebra 1 concepts and covers the more advanced topics of algebra 2 and trigonometry. Topics included are relations and functions, quadratic and polynomial equations, exponents and radicals, complex numbers, trigonometry, exponential and logarithmic functions and conic sections. An emphasis is placed on math-

emational modeling and applying skills to solve word problems.

Math Analysis (University of California Requirement-C)

Ten Credits

Open to Grades 10, 11 and 12

PREREQUISITES: Algebra II or Advanced Algebra

Description: This course is recommended for those students planning to take Calculus. Topics covered include trigonometric functions of ratios of lengths of sides of triangles, circular functions, graphical characteristics of trigonometric functions, solution of right triangles, radian and degree measure, trigonometric identities, laws of sines and cosines, solution of oblique triangles, reinforcement of function concept, inverse trigonometric functions and their graphs, polar coordinates and vectors and their graphs, trigonometric form of complex numbers, de Moivre's Theorem, coordinate geometry, conic sections, rational functions and their graphs, elementary functions and their inverses, introduction to linear algebra, parametric equations and their graphs, lines and planes in space, three-dimensional coordinate geometry and vectors in space.

The course is functions based and will explore and investigate various function families. The course will emphasize applications and modeling in order to strengthen the students' mathematical reasoning and problem-solving skills. Integration of technology, such as the use and programming of graphing calculators, throughout the units will prepare students for participation in a technological society.

Pre-Calculus (University of California Requirement-C)

Ten Credits

Open to Grades 10, 11 and 12

PREREQUISITES: Grade of C or better in Functions and departmental recommendation

DESCRIPTION: This course provides a thorough review of the topics covered in Advanced Algebra and Functions. Topics include polar coordinates and complex numbers, sequences and series, exponential and logarithmic functions, and topics in analytic geometry, polynomial functions and vectors. (This course is no longer offered.)

Calculus (University of California Requirement-C)

Ten Credits

Open to Grades 10, 11 and 12

PREREQUISITES: Math Analysis or Algebra II/Trigonometry and departmental recommendation

DESCRIPTION: This course is designed to give a conceptual understanding of foundational calculus topics. Topics to be covered include review of linear and nonlinear functions, limits, derivatives, and integrals and the Fundamental Theorem of Calculus. Students will learn techniques for determining derivatives and apply derivatives to describe increasing and decreasing functions, relative and absolute extrema, and concavity, and will be able to use derivatives to help sketch curves. Students will

learn integration techniques and apply integration to find areas, including areas between curves, volume of solids and average value of functions. Students will learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.

AP Calculus AB (University of California Requirement-C)

Twenty Credits (2 semesters)

Open to Grades 10, 11 and 12

PREREQUISITES: Pre-Calculus and departmental recommendation

DESCRIPTION: This is a college-level calculus program based on the College Entrance Examination Board's Calculus AB syllabus. This course covers both differential and integral calculus.

AP Calculus BC (University of California Requirement-C)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: AP Calculus AB and departmental recommendation

DESCRIPTION: This is a one-semester college-level calculus program based on the College Entrance Examination Board's Calculus BC syllabus. This course covers both differential and integral calculus and is equivalent to one semester of college calculus.

Trigonometry (University of California Requirement-C)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: Algebra II or Advanced Algebra

DESCRIPTION: Along with presenting the mathematical foundation of trigonometry, this course stresses the practical uses of trigonometry. Topics included are triangle trigonometry, circular functions and their graphs, proving trigonometric identities, inverse circular functions, the laws of sines and cosines, and vectors.

Statistics (University of California Requirement-C)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: Algebra II or Advanced Algebra

DESCRIPTION: This course is an introduction to elementary statistics and an introduction to probability. Topics included in this course are methods for collecting and assessing the validity of data, frequency distributions, graphing, central tendency measures, standard deviation, variance, correlation and sampling, probability, and simulation.

AP Statistics (University of California Requirement-C)

Ten Credits

Open to Grades 10, 11 and 12

PREREQUISITES: Grade of B or better in Advanced Algebra or Algebra II and departmental recommendation

DESCRIPTION: This course introduces the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes:

1. Exploring data: Observing patterns and departures from patterns.
2. Planning a study: Data collecting and conducting surveys and experiments.
3. Anticipating patterns: Using probability theory, binomial distribution, normal distribution, and simulations of sampling distributions.
4. Statistical inference guides the selection of appropriate models to draw conclusions from data: confidence intervals, tests of significance, and special case of normally distributed data, i.e. t-distribution.

MODERN LANGUAGES

Students are required to study two years of a language other than English to graduate from Archbishop Riordan High School. A third year of study in the same language is strongly encouraged to prepare students for college. The Language Requirement provides students with knowledge of second language acquisition, enhances communication skills, and broadens perspective to enable access to a range of materials and cultures that otherwise would be out of reach.

Language Theory Acquisition at Riordan is based on the belief that students learn best when they actively participate in lessons that are interesting and meaningful to them. Teaching strategies such as Total Physical Response and the Natural Approach take into account the stages of language acquisition and therefore facilitate student comprehension and success.

The American Sign Language Program curriculum is an intensive program of study designed to assist students in acquiring competence in American Sign Language and to develop an understanding of the American Deaf Community and its culture.

ASL I (University of California Requirement-E)

Ten Credits

Open to Grades 9, 10, 11 and 12

PREREQUISITES: None

DESCRIPTION: ASL I introduces student to basic signs and grammatical structures, and integrates historical and cultural aspects of the language to develop competency in communication skills. An emphasis is on the history of American Sign Language.

ASL II (University of California Requirement-E)

Ten Credits

Open to Grades 10, 11 and 12

PREREQUISITES: C- or better in ASL I

DESCRIPTION: ASL II is a continuation of ASL I. Students will increase their signing proficiency and engage in authentic assessment through community service in the Deaf World. Class lecture and discussion promote an awareness of issues facing deaf students in schools and provide information about services available to them in the Bay Area.

ASL III (University of California Requirement-E)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: B better in ASL II or departmental recommendation

DESCRIPTION: ASL III introduces a variety of language acquisition methodologies. This course immerses the student in the art of storytelling. The student studies and appreciates full-length

narratives through ASL Literature. The literary selections offer an opportunity to study how a language is used and how it reflects the culture of the deaf community. In addition, the stories foster understanding of the experience of the deaf student.

ASL IV (University of California Requirement-E)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: B- or better in ASL III or departmental approval

DESCRIPTION: ASL IV expands vocabulary and introduces more complex grammatical structures and non-manual behaviors learned in levels I, II and III to increase fluency of conversational receptive and expressive ASL while working within a bilingual, bi-cultural setting. Special units on historical figures and cultural aspects of the deaf community enhance the overall understanding of the language and its community.

The Chinese Language Program provides an opportunity for students to explore Chinese language and culture through the intensive curriculum and with the help of digital media and a variety of activities to create an effective learning environment. Students will improve their communication skills in Mandarin and their understanding of Chinese culture.

Mandarin I (University of California Requirement-E)

Ten Credits

Open to Grades 9, 10, 11 and 12

PREREQUISITES: None

DESCRIPTION: Mandarin I introduces the Chinese language and culture. Students will learn basic communication skills in Mandarin Chinese to facilitate simple conversations about daily life. Students will also learn to read, write, speak and understand basic Mandarin Chinese. In addition, students will be exposed to a variety of Mandarin-speaking cultures in Mainland China, Taiwan, Singapore and other locations.

Mandarin II (University of California Requirement-E)

Ten Credits

Open to Grades 10, 11 and 12

PREREQUISITES: C- or better in Mandarin I

DESCRIPTION: Mandarin II is a continuation of Mandarin I. Students will continue to develop their reading, writing, speaking, and listening skills through various culture-related projects, reading comprehension, role-plays, class presentations, and note writing. Students are expected to use Mandarin as the tool to hold longer conversations and demonstrate social skills.

Mandarin III (University of California Requirement-E)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: B- or better in Mandarin II or departmental recommendation

DESCRIPTION: Mandarin III is designed to serve students who have beginner to intermediate level of Mandarin Chinese or students who have completed the study of Mandarin I and II that want to continue learning Mandarin. Mandarin III will focus more on reading, writing, and communication in cultural settings. Cultural units will be extended in Mandarin III discussing the geographic, historical and social aspects of China. Students will learn up to 1,000 characters and advanced grammatical structures to help them stay solid at an intermediate level of Mandarin Chinese.

Mandarin IV (University of California Requirement-E)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: B- or better in Mandarin III or departmental recommendation

DESCRIPTION: Mandarin IV is designed to serve students who have intermediate to advanced intermediate levels of Mandarin Chinese or students who have completed the study of Mandarin I, II and III that want to continue learning Mandarin. This course is designed to read, critique and present from authentic language newspapers, videos, and literary sections. The primary goal of this course is to enhance students' ability to speak, read, write and comprehend Mandarin in more sophisticated contexts. The class will be conducted primarily in Mandarin except for complex grammatical explanations.

AP Chinese Language and Culture (University of California Requirement-E)

Ten Credits

Open to Grades 11 and 12

AP Chinese Language and Culture is a full-year course that covers the equivalent of a second-year (and/or fourth-semester) college Chinese course. It includes aural/oral skills, reading comprehension, grammar, and composition. The AP Chinese course is designed to provide students with varied opportunities to further develop their proficiencies across the three communicative modes—interpersonal (speaking, listening, reading, and writing skills), interpretive (listening and reading skills), and presentational (speaking and writing skills)—and the five goal areas (communication, cultures, connections, comparisons, and communities) as outlined in the *Standards for Foreign Language Learning in for the 21st Century*.

The Spanish Language Program encourages communication and cultural exploration for a broader global perspective; provides an effective classroom environment and necessary tools to facilitate mastery of the target language; integrates history, literature, art, multimedia, and creative expression that will enhance learning and inspire all students.

Spanish I (University of California Requirement-E)

Ten Credits

Open to Grade 9 and 10

PREREQUISITES: None

DESCRIPTION: Spanish I introduces the student to the phonetic system of the Spanish language. A sufficient number of basic structure and vocabulary drills are presented to aid the student in building comprehension, listening, and speaking skills in order to establish a rich environment for communication in the target language. Students are exposed to some of the cultural aspects of Spain and Latin America.

Spanish II (University of California Requirement-E)

Ten Credits

Open to Grades 10, 11 and 12

PREREQUISITES: C- or better in Spanish I

DESCRIPTION: Spanish II is a continuation of Spanish I. Additional emphasis is placed on reading comprehension, writing skills, and more communication between students in the target language. The program includes a review of concepts presented in Spanish I; specifically the use of the preterit and imperfect within the same structure. The course also introduces students to more complex grammatical structures of the language in order to facilitate the achievement of a higher level of these skills. Exposure to cultures of Spain and Latin America is included.

Spanish III (University of California Requirement-E)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: B- or better in Spanish II or departmental recommendation

DESCRIPTION: Spanish III is a continuation of Spanish II, with much greater emphasis placed on communication, writing, reading, and listening skills. The student's comprehension and speaking skills are enhanced at this point as the course is taught predominantly in the target language. Cultural units are substantive and encourage students to connect content to their lives outside the classroom. Cultural emphasis in the third year is on music and art history of Spain and Latin America.

Spanish IV (University of California Requirement-E)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: B- or better in Spanish III or departmental recommendation

DESCRIPTION: Spanish IV continues the cultural exploration of the Hispanic world through literature by renowned Spanish and Latin American authors. Emphasis of this class is Spanish for communication. Reading and composition assignments will provide the spring board to review and expand understanding of complex grammar structures. Cultural units encourage students to become lifelong learners by using the language beyond the classroom for personal enjoyment and enrichment. Units include a poetry-writing workshop, an exploration of the great civilizations of Mesoamerica, and a cultural perspective on the tradition of the bullfight in Spain. Class conducted in Spanish. Enthusiasm for Spanish is a must. Though not a prerequisite for AP Spanish Language, it is recommended.

AP Spanish Language (University of California Requirement-E)
Ten Credits
Open to Grades 11 and 12

PREREQUISITES: B or better in Spanish IV or departmental recommendation

DESCRIPTION: AP Spanish Language prepares student for the Advanced Placement Spanish test administered near the end of the spring semester. Students are exposed to a variety of media in Spanish, such as novels, short stories, poetry, popular songs, plays, newspaper articles, and essays. Aside from the specific grammar, reading, writing, listening, and speaking components of the AP test, which are extensively practiced throughout the course of the year, students are provided with an in-depth study of the Spanish-speaking world from an historical, literary, and cultural perspective.

PHYSICAL EDUCATION

Physical Education 9
Ten Credits
Open to Grade 9

PREREQUISITES: Physical Exam

DESCRIPTION: In this Freshmen P.E. course students will develop skills in many areas. Cardiovascular training will build strong hearts and also prevent disease. In the weightlifting unit the students will develop an exercise regimen to better enhance the major muscle groups of their body. A unit of Nutrition will help students choose better food options. They will learn about vitamins and minerals and the proper foods to get these nutrients.

The most important goal of the class is to build character and a sense of self-discipline that will influence other aspects of their academic and personal lives. A uniform will be mandatory each day, and students will also be responsible for their own lock, locker, and personal items.

Athletic P.E.
Ten Credits
Open to Grades 10, 11 and 12

PREREQUISITES: Physical Exam

DESCRIPTION: Athletic P.E. emphasizes the physical development of the individual. This course is designed to help the student realize the importance of physical fitness, achieved through individual weight training programs, the President's physical fitness program, conditioning and agility programs, and regular participation in team sports. The difference between the upper division P.E. and the Freshman P.E. is a greater level of competition in the previously mentioned areas.

Once again, in upper division P.E. the students are responsible for an issued uniform, as well as their lock, lockers, and personal items. This level of responsibility is continued throughout the sophomore to senior classes. The skill of responsibility is imperative in the development of the whole person.

RELIGIOUS STUDIES

Marianist Education & Sacraments/Hebrew Scriptures (Formerly Hebrew Scriptures / Intro to Marianist Education)

Ten Credits

Open to Grade 9

PREREQUISITES: None

DESCRIPTION: This course introduces freshmen to the foundations of Marianist Catholic teaching and Christian faith through a study of the Hebrew Scriptures. In the first weeks this course introduces Marianist history, notable personae, and emphasis on family spirit and hospitality. Next, the course provides an overview of the Hebrew Scriptures, exploring themes of covenant and law in the Torah, the history of the people Israel, and extraordinary literary works like Isaiah, Job, and the Book of Psalms. The course uses the Ten Commandments as the point of departure to introduce students to the fundamentals of Christian morality—a theme revisited all four years. The course also introduces Catholic teaching on sexual morality and intimate relationships for adolescents in the 21st Century.

Scripture/Church 2K (University of California Requirement-G) (Formerly Scriptures & Sacraments)

Ten Credits

Open to Grade 10

PREREQUISITES: Passing grade in previous theology course

DESCRIPTION: This course focuses on the Gospels and the Catholic Church—its history, structure, and mission—and presents the historical and literary development of the Christian scriptures. Included are characteristics of the land of Palestine, the life of Jesus of Nazareth, his teachings, and accounts of his death and Resurrection. The Christian scriptures are presented as the record of the faith response of the people of the first century A.D. who accepted Jesus of Nazareth as the Messiah. During the second quarter, this course presents an overview of the history of the Catholic Church from early Christian communities through the modern age. During each unit, we will focus on the development and meaning of one of the seven sacraments, revisiting the importance of living a chaste life during the unit on Matrimony. Additionally, students will present on notable Catholic saints of each era. The Marianist component of the sophomore course emphasizes the charisms formation in faith, family spirit, and service, justice, and peace. We make one field trip to St. Anthony's Foundation to participate in their Justice Education Program.

Life Issues: Ethics/Social Ethics (University of California Requirement-G)
(Formerly Life Issues)
Ten Credits
Open to Grade 11

PREREQUISITES: Passing grade in previous theology course

DESCRIPTION: This course begins with an introduction to Christ and the Church as the foundation of all morality. This course stimulates an awareness of economic and political systems as they relate to total world development and basic human needs and rights. Issues addressed include poverty, sexism, racism, the aged, the environment, violence, nuclear proliferation, criminal justice, labor justice, simple living, and economic justice. The question of religious involvement in political and social issues is carefully considered. The Consistent Ethic of Life serves as the centerpiece of a study of human life issues and of the fundamentals of moral living. The topics of abortion and the status of women, as part of this ethic, introduce students to the family life and human sexuality component of this course. Abstinence is introduced in a unit on sexual morality from the text on Catholic Social Teaching. The contributions of women of faith to the Christian tradition are emphasized. Blessed Chaminade's three levels of virtue are presented as are his instruction about reading "the signs of the times," which is connected to the beginnings of Catholic Social Teaching with the publication of *Rerum Novarum*.

World Religions of the East/West (University of California Requirement-G)
(Formerly World Religions / Christian Lifestyles)
Ten Credits
Open to Grade 12

PREREQUISITES: Passing grade in previous theology course

DESCRIPTION: The purpose of this course is to introduce the student to the major world religions: their roots and histories, their basic tenets, and specific topics that serve to expand the student's understanding of particular themes within each belief system. This class explores non-Western traditions during the first quarter, including primal and Asian religions. During the second quarter we study the Western traditions, including Judaism, Christianity, and Islam. Some special topics include the role of suffering in human life and student presentations on major Islamic nations and historically significant Christian figures and events. During the final five weeks of the second quarter we will turn our attention to ways in which a graduate resolves to live a life guided by Catholic Christian principles, in single, married, religious, or ordained ministry. Each of the seven sacraments are revisited and taught as the essential foundation of a moral, Christian life, with particular emphasis on the Eucharist as our call to "assist Mary in her mission" of bringing Christ into the world through acts of charity and justice. We will explore upcoming changes in the life of a high school graduate, how to approach career vocation and money, dealing with suffering and loss, understanding what contributes to a healthy sexuality, and finally how to develop and maintain positive, meaningful relationships. This course is designed to further the growth of our students, who will graduate with better-developed perspectives on inter-religious relations and global issues as well as stronger academic skills, particularly in writing.

Catholic History

Ten Credits

Open to International and English as a Second Language Students

PREREQUISITES: None

DESCRIPTION: This first year course in Religious Studies is designed as an introduction to faith and religion in general, and to Roman Catholicism in particular. The course begins with a closer look at the student who is discovering his unique identity. Next, questions and beliefs about God, Jesus, Scripture, moral living, Catholic Church history, the sacraments, prayer, Catholic liturgy, Mary and the saints are investigated, as well as Fr. Chaminade and the Marianists. By the end of the first year, the students will have been introduced to many of the areas of concern within Religious Studies. This course is taught with methodologies which incorporate basic structures and vocabulary of the English language through the skills of reading, writing, speaking, and listening. Students learn strategies in order to advance their reading, listening, and pronunciation skills. They will also expand oral comprehensibility and write complete sentences, a standard paragraph, and short content-based essays. (Texts: Chaminade; Church History).

SCIENCE

Conceptual Physics (University of California Requirement-D)

Ten Credits

Open to Grade 9 or 10

PREREQUISITES: None

DESCRIPTION: This course presents a study of the physical and chemical interactions of matter. The chemistry concepts include the atom and its structure, formation of compounds and chemical reactions; and the physics concepts include motion, force, energy, electricity, and magnetism. Laboratory investigations emphasize development of process skills, math skills, and safe manipulation of laboratory apparatus and materials. This course serves as a background for subsequent courses in biology, chemistry, and physics.

Biology (University of California Requirement-D)

Ten Credits

Open to Grade 9 or 10

PREREQUISITES: For Sophomores: None. For Freshman: Placement exam scores

DESCRIPTION: This laboratory course introduces students to the study of the structure and functions of living things. Emphasis will be placed on the use of the scientific method, laboratory equipment, and computer technology. Topics of study include evolution and biodiversity, cell structure and function, genetics and bioethical issues, pathogens (including HIV and drug-resistant bacteria), and animal organs and systems. Recent scientific advances are related to the topics being studied.

AP Biology (University of California Requirement-D)

Ten Credits

Open to Grades 11 and 12, Sophomores in exceptional cases with permission

PREREQUISITES: Biology, Chemistry

DESCRIPTION: AP Biology is an intensive course designed to be the equivalent of an introductory biology course taken in college. Course emphasis is on developing an understanding of biological concepts, rather than an accumulation of facts. Before beginning the course, students should have an understanding and appreciation of the science of biology as a process. This class will provide further experience in scientific inquiry that develops students problem solving and critical thinking skills. This course also prepares high school students to take the AP exam given in May. In order to pass the exam (usually this is with a score of 3 or higher), students must be highly motivated and driven to excel in this challenging course. In order to maximize the amount of content covered before the AP exam, students will be responsible for significant reading and reviewing of content on their own out-of-class time, with in-class time primarily reserved for labs, projects, and other hands-on activities. Some summer assignments will be required, due the first day of class in the fall term.

Anatomy & Physiology (University of California Requirement-D)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: None

DESCRIPTION: This is a second-level course in biological science. Special focus is given to the gross anatomical structure of the human body as well as the physiological processes of basic cells, tissues, and organs of the body. The structure and functions of the human body in both health and disease are studied. Through dissection, students will observe the detailed anatomy of the brain, eye, bone, muscle, and heart. The course culminates with a dissection emphasizing the comparative anatomy of an herbivore (rabbit) and carnivore (cat).

Chemistry (University of California Requirement-D)

Ten Credits

Open to Grades 10, 11 and 12

PREREQUISITES:

For Sophomores: Grade of C or better in Biology and departmental recommendation

For Juniors: Grade of C or better in Biology and C or better in Advanced Algebra (concurrent enrollment in Functions or better recommended)

For Seniors: Grade of C or better in Biology and C or better in Junior year math course

DESCRIPTION: This course is designed for the student bound directly for a four-year college after high school. Special emphasis is given to topics in chemistry that form the basis for college-level courses as well as providing general knowledge. The principles of chemistry are taught through an integrated program of lecture, class discussions, and laboratory investigations. Problem-solving skills and the quantitative investigation of matter and its changes are the basis of this course.

Physics (University of California Requirement-D)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: Grade of C or better in Chemistry recommended

DESCRIPTION: This course is a general study of topics in physics. Topics include Newtonian mechanics, thermodynamics, gravity, optics, and DC electricity. A premium is placed on the understanding of algebra and basic trigonometry, critical thinking skills, and laboratory exercises. Successful completion of this course enables students to understand the complex natural laws of the physical world, both conceptually and mathematically.

AP Environmental Science (University of California Requirement-D)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: For Juniors: Grade of B or better in Biology. Grade of C or better in Chemistry recommended

DESCRIPTION: This college-level course provides students with the scientific principles, concepts, and methodologies required to understand the interrelationships in the natural world, to identify and analyze environmental problems, both natural and man-made, to evaluate risks associated with these problems, and to examine alternative solutions for resolving and/ or preventing them. Environmental science is interdisciplinary. Themes include: science is a process; energy conversions underlie all ecological processes; the Earth itself is one interconnected system; humans alter natural systems; environmental problems have a social and cultural context; and human survival depends on developing practices that will achieve sustainable systems. Emphasis is placed on critical thinking skills, writing skills, and analytical math skills.

AP Chemistry (University of California Requirement-D)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: Grade of B or better in Biology, grade of B or better in Functions, grade of B or better in Chemistry, as well as Department Chair and Instructor Approval

DESCRIPTION: This college-level course is an intensive and more thorough version of the General Chemistry course. This course is designed to meet the requirements of the Advanced Placement Test held each May. Special emphasis is given to topics in chemistry that form the basis for college-level courses as well as providing general knowledge. The principles of chemistry are taught through an intensive integrated program of lectures, class discussions and laboratory investigations. The investigation of the composition of substances and the changes they undergo are the basis of this course.

AP Physics C: Mechanics (University of California Requirement-D)

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: Completed Calculus or enrolled in Calculus

DESCRIPTION: Advanced Placement Physics C, Mechanics is an intensive and more thorough version of the General Physics course. The course is designed to meet the requirement of the Advanced Placement Test held each May. Passing this test wins the student college credit for physics. Taking this particular AP course requires calculus; an in-depth knowledge of advanced algebra and trigonometry is a must. Topics covered in this course are those of Newtonian mechanics.

AP Computer Science

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: Department Approval

DESCRIPTION: This course focuses on the core concepts of programming and computer science in general. Material will cover basic programming in Java, followed by a more in-depth look at design concepts in Object Oriented Programming, with a goal of preparing students for the AP test.

SOCIAL SCIENCE

Global Ethnic Studies (University of California Requirement-A)

Ten Credits

Open to Grade 9

PREREQUISITES: None

DESCRIPTION: The major purpose of this course is to educate students to be politically, socially, and economically conscious about their personal connections to local and national history. This course will focus on the experiences of African Americans, American Indians, Asian Americans, European Americans, and Latin Americans. Students will examine Ethnic Groups around the world, their immigration and contribution to the United States and the Bay Area. The course teaches students to explore their individual identity, their family history, and their community history through the lenses of ethnicity, nationality and culture. The course explores social movements that have successfully resisted and overcome oppressive political, economic, and social conditions with the goal of having students understanding their own role in being agents of positive adaptation and change in their communities, country, and world. In the course students will develop their critical thinking through research, writing and presentations on various ethnic groups.

AP European History (University of California Requirement-A or G)

Ten Credits

Open to Grade 10

PREREQUISITES: B- or better in Intro to Composition and Intro to Literature Honors English courses and departmental recommendation

DESCRIPTION: This course follows the curriculum recommended by the College Board in preparing students to pass the Advanced Placement European History exam offered in May. The course begins with an examination of the Renaissance and the Reformation and covers the emergence of Europe as the dominant political and cultural force in the last 500 years. Topics such as social and cultural developments, science and art, politics and government, exploration and expansion, trade and commerce will be investigated and discussed in depth. Emphasis will be placed on writing skills, critical thinking, class discussions and presentations, and the use of primary source documents.

Modern World History (University of California Requirement-A)

Ten Credits

Open to Grade 10 and students who do not take AP World History

PREREQUISITES: None

DESCRIPTION: Modern World History presents a chronological narrative of world history from 1550 A.D. to the present. Cultural, religious, economic, political, and social development of various world civilizations are examined, as are the causes and consequences of their interaction. Students will study the political, social, economic, cultural, and religious histories of the world since 1500.

AP World History (University of California Requirement-A)

Ten Credits

Open to Grade 10

PREREQUISITES: B- or better in AP European History or B+ or better in Early World History and B- or better in World Literature English course; teacher and departmental recommendation

DESCRIPTION: The AP World History course focuses on developing students' understanding of world history from approximately 8000 B.C.E. to the present. The course has students investigate the content of world history for significant events, individuals, developments, and processes in six historical periods, and develop and use the same thinking skills and methods (analyzing primary and secondary sources, making historical comparisons, chronological reasoning, and argumentation) employed by historians when they study the past. The course also provides five themes (interaction between humans and the environment; development and interaction of cultures; state building, expansion, and conflict; creation, expansion, and interaction of economic systems; development and transformation of social structures) that students explore throughout the course in order to make connections among historical developments in different times and places encompassing the five major geographical regions of the globe: Africa, the Americas, Asia, Europe, and Oceania.

United States History (University of California Requirement-A)

Ten Credits

Open to Grade 11

PREREQUISITES: None

DESCRIPTION: This course is a survey of the history of the United States, beginning with Pre-Columbian America and concluding with an examination of the United States as the twenty-first century closes. Students will examine the American experience from political, diplomatic, cultural, and economic perspectives, acquiring analytical skills in the course of identifying the experiences and ideals that bring Americans together as well as the tensions that fragment them. The course continues the Social Science department's emphasis on developing students' critical thinking through extensive reading, and formal analytical writing, this course aims to create amateur historians, not merely students reading history.

AP United States History (University of California Requirement-A)

Ten Credits

Open to Grade 12

PREREQUISITES: B- or better in AP World History or B+ or better in Modern World History and B- or better in American Literature; and departmental recommendation

DESCRIPTION: This is a rigorous course analyzing events, places, people and themes in American History from colonization and settlement to the present. This is a college-level course that stresses critical thinking and analytical writing. Various teaching methods are utilized: simulation games, speeches, panel presentations, discussion, and lecture. Reading and writing are integral parts

of the course. Students must be willing to devote extra time to the coursework. In May, the AP examination is given; successful completion of the examination earns a student college credit.

Economics (University of California Requirement-G)

Ten Credits

Open to Grade 12

PREREQUISITES: None

DESCRIPTION: This course will provide a thorough study of both microeconomics and macroeconomics by examining the principles of production, distribution, and consumption of wealth in both the American and world economic systems. Marketplace competition, government regulation, consumer demand, stock and bond market investment, and wages and prices will be examined. The law of supply and demand will be the basis of the course, and the factors determining economic policy, including inflation, productivity, deficit spending, unemployment, taxation, and international interdependence, will be analyzed. Four major economic systems that governments employ will be analyzed: monetarism, Keynesianism, economic planning, and supply-side economics. Role-playing, critical thinking and writing, individual and group projects will be among the methods employed. Current world and national events will be examined through an economic lens.

AP Economics, Macro and Micro (University of California Requirement-G)

Ten Credits

Open to Grade 12

PREREQUISITES: B- or better in Economics or permission of teacher

DESCRIPTION: This is a rigorous course analyzing both microeconomics and macroeconomics. Microeconomics examines economic principals that apply to the individual decision makers, both the consumer and producer. Microeconomics emphasizes the nature and function of the product market (the market for final goods and services) and the factor market (the market for goods and services used to make final goods) as well as the study of the role of the government in promoting greater efficiency in the markets and equity in the economy. Macroeconomics explores the economic system as a whole, placing particular attention on the study of national income, economic performance measures, the financial sector, stabilization, economic growth and international economics. This is a college-level course that stresses critical thinking and analytical writing. Various teaching methods are utilized: simulation games, panel presentations, discussion, and lecture. Reading and writing are integral parts of the course. Students must be willing to devote extra time to the coursework. In May, the College Board administers two economics exams, one for Macroeconomics and one for Microeconomics. Students taking this course will have covered the materials in order to sit for each of the exams.

Five Credit Courses

U.S. Government (University of California Requirement-G)

Five Credits

Open to Grade 12

PREREQUISITES: U.S. History

DESCRIPTION: This course examines the system of government established by the Constitution of the United States, the intellectual and political influences—both European and American—which contributed to its content, and studies how that system has evolved to meet the demands of contemporary American society. The concept of federalism will be examined, as will the form and functions of executive, legislative, and judicial branches of government. The role and purpose of the media will be analyzed. Terms and labels commonly used but frequently misunderstood in American political discourse will be studied. Students will be expected to read political critiques and to write analytically about the topics they study.

AP US Government & Politics

(University of California Requirement-A)

Five Credits

Open to Grade 12

PREREQUISITES: This course is taught in combination with AP U.S. History

MODERN AMERICAN SOCIAL HISTORY HONORS DESCRIPTION: See AP U.S. History.

DESCRIPTION: This Advanced Placement course examines the system of government established by the Constitution of the United States, the intellectual and political influences—both European and American—which contributed to its content, and evaluates the changes time has wrought in this remarkable political document. The concept of federalism will be examined, as will the form and functions of executive, legislative, and judicial branches of government. The influence of the media and major financial institutions will be analyzed. Students will gain an understanding of macro- and micro-economics. The law of supply and demand will be one basis, and the factors determining economic policy, including inflation, productivity, deficit spending, unemployment, taxation, and international interdependence, will be analyzed. AP students will be expected to read sophisticated, detailed political critiques and to speak and write analytically about the topics they study. Passage of the AP exam in May will result in college course credit.

VISUAL & PERFORMING ARTS

Instrumental Music Ensemble (University of California Requirement-F)

Ten Credits

Open to Grade 9 (10, 11 and 12 by permission)

PREREQUISITES: None (Students are not required to have prior music training)

DESCRIPTION: This course introduces the traditional instruments of the band as well as the basics of harmony, rhythm, and analysis. Students study the art of reading and interpreting music notation, perform music independently and with others, evaluate music by using critical thinking and listening skills, and participate in the cultural life of the community through involvement in school and local music opportunities.

Intermediate Band (University of California Requirement-F)

Ten Credits

Open to Grades 9 and 10 (11 and 12 by permission)

PREREQUISITES: Successful completion of Instrumental Music Ensemble or audition/teacher recommendation.

DESCRIPTION: This course builds on the skills acquired in the beginning band program or from previous experience. Students will continue to develop individual technique and performance skills. Students will evaluate music by using critical thinking and listening skills, and participate in the cultural life of the community through involvement in school and local music activities. Students in this band are considered part of the Marching Band, which will perform at local parades, civic events, and school sporting events.

Concert Band (University of California Requirement-F)

Ten Credits

Open to Grades 11 and 12 (9 and 10 by permission)

PREREQUISITES: Successful completion of Intermediate Band or audition/teacher recommendation.

DESCRIPTION: This course explores and builds upon the skills acquired in the Instrumental Music Ensemble and Intermediate Band courses. Students will engage in a variety of performance opportunities that include formal concerts, parades, school athletic events, community relations events, and state music festivals. About thirty performances are given each year, some of which include state and national travel. As the most visible traveling ensemble on campus, students are expected to maintain the highest standards of instrumental technique, marching skills, and personal/group discipline.

Jazz Band (University of California Requirement-F)
Ten Credits
Open to Grades 11 and 12 (9 and 10 by permission)

PREREQUISITES: Concurrently enrolled in Concert Band. Acceptance based on audition and teacher recommendation.

DESCRIPTION: An advanced band ensemble with an instrumentation of five saxophones, five trombones, five trumpets, and a percussion section. Instruction includes the history and development of jazz music. Students will receive coaching in the techniques and theories of Jazz, including improvisation. There will be tours of several jazz festivals and workshops. The Jazz Band will perform regularly at school functions and in regional Jazz Band competitions.

Introduction to Acting (University of California Requirement-F)
Ten Credits
Open to Grades 10, 11 and 12

PREREQUISITES: None

DESCRIPTION: This course is a "how to" for beginning and intermediate actors, wherein students learn aspects of the craft, and work to gain confidence expressing themselves as creative artists, writers and public speakers. Students study terms and techniques, get up on their feet and "do," and participate in character development vis-a-vis scene study, audition techniques, character development and text analysis. The class encourages imagination, spontaneity, and risk-taking through activities & exercises such as Character Analysis; Scene Study, Script Analysis and Interpretation; Rehearsal & Performance; Improvisation; Shakespeare/Sonnet; Journaling, Theatre History, Play Reviews, a hands-on differentiated unit on *Hamlet* and more.

Art I and II (University of California Requirement-F)
Ten Credits
Open to Grades 10, 11 and 12

PREREQUISITES: None

DESCRIPTION: Introductory art students learn to use the Elements of Art and Principles of Design. Basic composition skills are taught primarily through drawing and painting in a variety of media. Students first form the basis of their artistic expression with elementary skills and techniques before moving toward self-expression and the exploration of larger concepts. Students are expected to master terminology of visual arts and acquire skills in art criticism. A visit to a local art museum will be required. Students will also be directed to purchase materials for their own art kits, including a sketchbook and drawing supplies.

Art III and IV (University of California Requirement-F)
Ten Credits
Open to Grades 10, 11 and 12

PREREQUISITES: C or better in both Art I & II, or by permission of instructor

DESCRIPTION: Engaging in problems of visual communication and aesthetics, students will further the composition and design skills that were introduced in Art I & II through drawing, painting, sculptures, and mixed media works. Students will be more independent in their explorations of contemporary art making problems and techniques. A strong emphasis is placed on collaborative meaning making and art criticism. A visit to a local art museum or galleries will be required. Students will also be directed to purchase materials for their own art kits, including a sketchbook and drawing supplies.

Art V - Portfolio Development

Ten Credits

Open to Grades 11 and 12

PREREQUISITES: C or better in Art I & II, C or better in Art III & IV, and permission of instructor

DESCRIPTION: After taking both Art I & II and Art III & IV, students in this course will have the opportunity to develop and explore their artistic vision and voice through a more independent framework. This course is primarily designed for the student artist interested in pursuing a fine arts education at the college level, and will provide the student artist with an opportunity to develop, create, and strengthen a portfolio for college admissions. In order to be considered for enrollment in this course, the student MUST submit a proposal outlining his plans for the course. This proposal must be submitted to the instructor by the end of the spring semester of the previous academic year.

Technical Theatre/Stagecraft

Ten Credits

Open to Grades 10, 11 and 12

PREREQUISITES: None

DESCRIPTION: As its title implies this course is an introduction to all aspects of technical theatre. This includes the tools, techniques and execution of theatrical scenery and properties. Through demonstrations, workshops, projects, shop work and field trips, students explore the basic principles of two and three dimensional scenery construction, painting techniques and other stage crafts such as the fundamentals of stage lighting, sound/sound effects and props. Students examine basic construction principles and tools and how they apply to the creation of scenery and properties. This provides the background for student participation in the construction, painting and rigging of the fall play or spring musical. Emphasis is placed upon textual analysis for design, graphic techniques, traditional and nontraditional materials for the realization of designs, shop and studio exercises to explore stage action as it relates to the visual, and communication among members of the production team. Students are expected to participate in the design and execution of our production, requiring time outside class meetings for their execution.

NON A-G ELECTIVES

Frosh Skills Five Credits Open to Grades 9

PREREQUISITES: None

DESCRIPTION: This course introduces incoming freshmen to the world of Riordan; and how to be a successful student, son and citizen. Students will analyze and discover the answer to three important questions over the course of one semester: Who am I? What do I want? How do I get there? They will explore their own unique abilities, ambitions, and dreams while learning important “soft skills” to identify a successful life in high school, and beyond. Through hands-on exercises in a safe environment we will establish new relationships within a class where each student is afforded the opportunity to develop himself. Curriculum exercises range from study skills, organizational planning, technology, and the logistics of navigating your freshman year; to public speaking, writing a resume, letters of recommendation, interview tactics, community service, financial planning, and even tying a tie, how to tip after a nice restaurant meal, and asking a date to a dance. This course will encourage students to always put forth their best effort.

Computer Programming 1: App Dev w/Swift 10 Credits Open to Students in the Engineering Program

PREREQUISITES: Department Approval

In this class students learn the fundamentals of programming, while making apps for iPhones and iPads, using Apple’s new Swift programming language. Initially students start in a more simple environment (Processing / p5) to get the basics, then they move onto Swift programming challenges, and finally they start making apps with Xcode. This class covers programming basics like functions, variables, loops, conditionals, and arrays, then moves on to object-oriented design, and finally touches on the MVC architectural pattern (model-view-controller).

Computer Programming 2: Full Stack Web Dev w/JavaScript 10 Credits Open to Students in the Engineering Program

PREREQUISITES: Department Approval

This class takes students’ professional programming skills to the next level, as they become full stack web developers. They will tackle the client-server relationship, which in this case is how browsers and apps interact with web servers. They will leave able to create simple websites, blogs, and all out web apps like Facebook or Airbnb.

Engineering

10 Credits

Open to Students in the Engineering Program

PREREQUISITES: Department Approval

In this class students will focus on electrical and mechanical engineering, though there will also be some programming in the robotics portion. The first portion of the class focuses on mechanical engineering, specifically CAD (Computer-Aided Design) with Tinkercad and Fusion 360. Later in the course the focus will turn to robotics which will add a lot of electrical engineering and programming for physical products. Students will become comfortable with fabrication and electronics, and will synthesize the interaction of mechanical, electrical and software engineering. Projects will include building a lamp and a robot, and students will gain knowledge about the proper uses of the powerful equipment they have access to.

Advanced Engineering

10 Credits

Open to Students in the Engineering Program

PREREQUISITES: Department Approval

Students will continue tinkering in the Makerspace, delving deeper into fabrication and electronics, while completing more open ended projects. For electronics they will move up from Arduino microcontrollers to the Raspberry Pi microprocessor, and they will try their hand at fancy tools like Oscilloscopes. On the fabrication side they will dive into the design thinking process and industrial design principles while taking on the biggest machine in the shop, the Tormach (CNC mill).

Graphic Design I (University of California Requirement-G)

Ten Credits

Open to Grades 10, 11 and 12

PREREQUISITES: None

DESCRIPTION: This advanced course involves “hands-on” work with Microsoft Office X (for Macintosh), developing sophisticated word-processing, graphic, database, and spreadsheet projects. This course will also provide extensive instruction and self-paced practice with Adobe InDesign and Photoshop. Working within the context of a Graphic Design Studio, students will produce personal projects as well as documents and presentations requested by the various components of the school community. Projects will be solicited from all areas of school life and students will work within a “contract” context to satisfy the graphic design needs of the school. Students will work with scanners, digital cameras, and other peripherals to complete these projects.

Web Design

Ten Credits

Open to Grades 10, 11 and 12

PREREQUISITES: None

DESCRIPTION: This course will explore the development of computers, concentrating on the invention and increasing use of the Internet and the World Wide Web. Students will learn the components of website design. Students will learn to write HTML and create web pages from "scratch." Once the foundations of HTML have been mastered, students will use programs like BBEdit and the Adobe Creative Suite to create original web sites.

ENRICHMENT COURSES

Advanced Journalism

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: This writing laboratory is an opportunity for students who want to work on Riordan's award-winning newspaper, *The Crusader*, but their schedule will not permit them to enroll in the class. The course is designed for students who have either taken the Journalism class before, or have experience writing for the newspaper.

Applied Entrepreneurship

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: An introduction to business principles, this course gives an overview of how to start a business and the different types of business entities that exist. Students will learn all aspects of launching a business, including how to secure a loan and create a financial plan, and the basics of business law, accounting, and budgeting.

Applied Vehicle Engineering - Intro

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: This course offers a hands-on, project-based approach to learning the scientific principles of automobile assembly and operation, everything from car safety, tools of the trade, fundamentals of maintenance, cars systems, and how to dismantle and rebuild a complete engine. This course sets you up to be self reliant when it comes to cars, and a team member for Advanced projects.

Applied Vehicle Engineering - Advanced

Credits: Variable

Open to Grades 10, 11 and 12

PREREQUISITES: Department Approval

DESCRIPTION: This course offers project-based learning at its most practical. For students who have successfully completed the introductory course in Applied Vehicle Engineering, the advanced course offers a more complex understanding of maintenance and repairs, as well as garage management and sales of parts and services (so you'll never get finessed by a car dealership when you own your own car!).

BBQ Cooking

Credits: Variable

Open to Grades 9, 10, 11 and 12

DESCRIPTION: Learn cooking skills for life and get trained in the culinary art of preparing, cooking, serving and eating BBQ! Every class includes a lesson in cuisine, the food "experience," and plate of whatever you create to eat.

College and Career Exploration

Credits: Variable

Open to Grade 12

DESCRIPTION: Seniors bound for four-year colleges will develop final college lists based on their academic/testing profile, extra curricular interests, geographical preferences and family budget. Students will learn what to ask during college rep visits to ARHS, college fairs, and on campus tours to help make their college decisions easier. We will dedicate critical time to draft, revise and edit personal statements and supplements and complete college applications. Students will research scholarship opportunities and participate in mock interviews.

Dance

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: Dance is a form of performance and personal expression. In this course students will discuss and practice theories of movement and choreography and learn about dance forms from multiple cultures. Class sessions will be active, with warm-up exercises and activities. Out of class, students will watch assigned video clips and may be required to attend a local professional dance performance. At the end of the year, students will perform a short dance piece.

Do You Even Lift, Bro? (Weightlifting)

Credits: Variable

Open to Grades 9, 10, 11 and 12

DESCRIPTION: Learn the right way to prepare your body for lifting and workouts. Train in High Intensity Interval Training, core power, slow-twitch and fast-twitch muscles for endurance and explosiveness. Know your body, find your weakness, improve, and maximize gains.

Fab Lab

Credits: Variable

Open to Grades 9, 10, 11 and 12

DESCRIPTION: Fab Lab is a project-based class that introduces students to the principles of 2D and 3D design, and computer- aided design using Autodesk 123D software. These skills, along with a solid foundation in algebra and geometry, are the building blocks for learning how to operate a CNC mill and 3D printer. In the first quarter students were assigned to build a chess set, using the 3D printer to fabricate the pieces, and then, after certification, the laser cutter to create the board.

Film Appreciation and Analysis

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: This course will provide a platform for the serious film enthusiast to examine the moral structure of our society as reflected in the American cinema (as well as its foreign influences) from the 1940s to the present day. Through class discussion, critical reviews, and written analysis, each student will leave the class with a true appreciation for the entire motion picture experience and the medium of film as a literary art form. Special emphasis, this year, will be placed upon the cinematic experience, public perception, groundbreaking directors, actors young and old, and questions of ethical integrity arising in performances, writing, directing, and photography. The philosophic basis for discussion and writing lies (though not entirely) in Immanuel Kant's Transition from the Popular Moral Philosophy to the Metaphysic of Morals.

Graphic Design and Laser Printing

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: Introduction to vector graphic design and wood laser printing. Explore design concepts, learn basic Adobe Illustrator, and create your projects in the Makerspace laser printer. Both personal and fun seasonal projects, as well as group projects for school promotions and scholarship donor gifts. You take home what you make - perfect handmade gifts!

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Leadership

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: For elected student body officers, this course will investigate the many styles of leadership, how to become a leader in small communities (school and friend groups) and what it means to be a leader in the real world (workplaces and global societies). Through involvement in Student Government and participating in events throughout the year sponsored by the Office of Student Activities, students will gain a better understanding of time management and develop their own leadership abilities. Topics that will be covered include but are not limited to Speech / Presentation Giving, Interview Skills, Leadership Building, Problem Solving and Personal Growth. At the end of the year, students will have a better understanding of how to be Christian leaders and leaders in our school community.

Life Skills

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: Students often lament that they cannot use the skills they have learned in high school in the outside world. This course will teach students important skills to be independent young men while at Riordan and beyond, how to write a resume, how to pay bills, how to create and follow a budget, how to file taxes, how health insurance works and more. After completing this course, students will be able to not only navigate these important parts of adulthood, but will have the confidence to do so.

Literary Magazine

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: This course is for students who want to contribute to the school's literary magazine, *The Grail*, by giving them the time and opportunity to write, design, and determine other aspects of the publication such as theme and layout. In this class, creativity is paramount. Categories for publication include poems, short stories, lyrics, plays, artwork, nonfiction, and written work in other languages. The course is designed for students who can work independently, with guidance from the instructor, to meet deadlines.

Outdoor Education

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: Through camping and field trips students will experience the beauty of Northern California, and learn to appreciate the natural world and the impact humans have on this earth. By learning different methods such as "leave no trace" and fire safety, students may become nature enthusiasts or at least gain an appreciation for the Lord's gift of nature.

Photography Skills and Blogging

Credits: Variable

Open to Grades 9, 10, 11 and 12

DESCRIPTION: Everyone takes a picture- but how many pictures are actually good? Learn to take professional style pictures by learning how your camera works, fundamentals of composition, lighting techniques, and how to use photo editing software. Use your photography skills and present your work in a creative and practical way by building a digital portfolio through a blog.

SAT Math Prep

Credits: Variable

Open to Grades 11

DESCRIPTION: Focusing on practice questions and strategies, this class is designed for improving a student's SAT Math score. The goals of the class are: to have each student improve his SAT math score by at least 70 points (i.e., an increase of 7 or more correct questions); to enhance student awareness of nuances in SAT questions, the appreciation of which would improve his score; to provide practice and discussion with sample SAT tests; to increase student confidence.

Speech and Debate

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: In this course students will learn about and practice structured speeches with an emphasis on verbal and nonverbal delivery skills (organization, projection, inflection, eye-contact, hand gestures, and more). Students will then build a foundation for effective argumentation and advocacy (claim/warrant/evidence) by participating in debates and ultimately presenting one research-based persuasive speech. This class is for students who want to explore debate and participate on Riordan's debate team.

Sports Psychology

Credits: Variable

Open to Grades 10, 11 and 12

DESCRIPTION: This course examines how the human mind influences sports, athletic performance, exercise, and physical activity. Some sports psychologists work with professional athletes and coaches to improve performance and increase motivation. Other professionals utilize exercise and sports to enhance people's lives and wellbeing throughout the entire lifespan. Sports psychology will help student-athletes cope with the intense pressure that comes from competition, overcome problems with focus and motivation, and acquire the skills to help them improve performance and recover from injuries.

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