

ADVANCED PLACEMENT CLASSES

BIOLOGY This curriculum is the equivalent of an introductory college biology course. Students are admitted to the course by recommendation only and must have successfully completed underclassman Advanced Biology and Chemistry. The AP Biology course differs significantly from the first high school biology course in the depth of topics covered, the types of laboratories done and a shifting of the impetus for assimilating the material from the teacher to the student. Students are required to take the national AP exam in lieu of the final for the course.

CALCULUS AB AND BC Two semester AP Calculus courses covering the requirements set forth by the College Board. Calculus AB covers all the material in college Calculus I over two semesters. Calculus BC covers college Calculus I in the first semester and Calculus II in the second semester. The AP exam for both courses is taken in May.

CHEMISTRY This course is designed for students who have mastered course work in Chemistry or Advanced Chemistry during their sophomore or junior year. Students are prepared to successfully complete the national AP examination for college credit.

COMPUTER SCIENCE A **New this year**, this is a fast-paced introduction to the Java programming language. Students learn problem-solving skills alongside basic programming structures such as loops, conditionals and arrays. Students learn advanced computer science concepts including user interfaces, searching, sorting, recursion and working with classes which is a feature of object-oriented programming. The AP exam is taken in May.

ENGLISH LANGUAGE AND COMPOSITION This course focuses primarily on development of the well-organized, clear, coherent analytical and persuasive essay through a survey of American literature from colonial times to the present. Students will present their analyses of prose and poetry in writing as well as orally. Coordination with American history emphasizes the importance of literature as a primary source for historical interpretation. Special emphasis on rhetorical strategies helps prepare students for the Advanced Placement Exam in the spring. Credit for passing scores on the exam is awarded in the form of credit hours at most universities in the U.S.

ENGLISH LITERATURE AND COMPOSITION This course is designed to satisfy requirements of a survey of literature course at the university level. In order to develop analytical skills to understand the author's purpose, students read widely from prose, poetry, drama, and nonfiction literature. They are expected to write cogently about the literature they study. The primary goal of the course is to prepare students to write for the Advanced Placement Examination in the spring.

FRENCH LANGUAGE and CULTURE Students will be challenged to explore in depth the target language with more emphasis on communication and cultural understanding, using the three communication modes of interpersonal, interpretive and presentational. Pre-requisite: 87 in French III, 90 or above is preferred; recommendation.

MUSIC THEORY This course is designed to provide a college level Music Theory course including aural, written and performance-based components. Students develop the ability to sing melodies on sight and to notate music that they hear. They will learn the grammar of musical notation and analysis, how to meaningfully analyze melodic, rhythmic, harmonic and structural elements of music in words and with symbolic notation. Students will take the national AP exam in May. Pre-requisite: a background in instrumental or vocal music and recommendation.

PHYSICS 1 This course is the equivalent of a first semester college course in algebra-based physics. The course covers Newtonian mechanics, work, energy and power, mechanical waves and sound. It also introduces electrical circuits. Students will take the national AP Physics 1 examination in May.

PHYSICS 2 This course is the equivalent to a second semester college course in algebra-based physics. Topics include magnetism and electromagnetic induction; fluids, pressure and buoyancy; heat temperature and thermal physics, thermodynamics and ideal gas behaviour; optics; nuclear physics and modern physics. Students will take the national AP Physics 2 exam in May.

SPANISH LANGUAGE and CULTURE Students who have complete Advanced Spanish III are well prepared for this course. Instruction and classroom conversation are entirely in Spanish. Students thoroughly review Spanish grammar; several short stories and poems by major Hispanic authors are studied. Feature films in Spanish are viewed and there is a reading of a complete Spanish play. Only students who have completed Advanced Spanish III are eligible.

UNITED STATES HISTORY Selected students in this course will study the conceptual aspects of the growth of the United States from the colonial period to the 1990's. Preparation for success on the U.S. History AP Exam for college credit is approached through analysis of primary and secondary materials. A formal research paper emphasizing techniques and writing skills is required.

UNITED STATES GOVERNMENT Offered to selected students, this course is designed to meet all of the objectives of the regular government/economics course and to challenge the students' analytical abilities by presenting a variety of opinions on the basic concepts of government and economic systems. Preparation for success on the U. S. Government AP Exam for college credit is approached through analysis of primary and secondary materials.

AP WORLD HISTORY coming in 2017-18.