

## 2023-2024 AP OFFERINGS

### **AP Computer Science A 144**

Grade: 11, 12

Prerequisites: A in Algebra II or B in Advanced or Honors Algebra II

Quality Points: A = 5

Computer Science A emphasizes object-oriented programming methodology with an emphasis on problem solving and algorithm development. It also includes the study of data structures and abstraction. Students completing the AP Computer Science course will be able to:

- Code fluently in an object-oriented paradigm using the programming language Java. Students will be familiar with and be able to use standard Java library classes from the AP Java subset.
- Design and implement computer-based solutions to problems in a variety of application areas.
- Use and implement commonly-used algorithms and data structures.
- Develop and select appropriate algorithms and data structures to solve problems.
- Read and understand a large program consisting of several classes and interacting objects.
- Identify the major hardware and software components of a computer system, their relationship to one another, and the roles of these components within the system.

Students must take the AP Computer Science A exam given in May.

### **Advanced Placement English 11 English Language and Composition 233**

Grade: 11

Prerequisites: Honors English 10 with a **B- average** both semesters or Advanced English 10 with a **B+ average** both semesters. Evidence-Based Reading and Writing test scores from the PSAT are taken into consideration in order to place students where they will be most successful.

Quality Points: A = 5

This course comprises much of the material covered in English 11 Honors as well as the principles of rhetoric and argument. The course will prepare students for the required College Board Advanced Placement Test given in May. This demanding and challenging course will be offered to students who show the aptitude, desire, and work ethic for a college level course.

### **Advanced Placement English 12 English Language and Composition 244**

Grade: 12

Prerequisites: Honors English 11 with a **B- average** both semesters or English 11 with an **A average** both semesters. Evidence-Based Reading and Writing test scores from the PSAT are taken into consideration in order to place students where they will be most successful.

Quality Points: A = 5

This course comprises much of the material covered in English 12 Honors as well as the principles of rhetoric and argument. The course will prepare students for the required College Board Advanced Placement Test given in May. This demanding and challenging course will be offered to students who show the aptitude, desire, and work ethic for a college level course.

## **Advanced Placement English 12 English Literature and Composition 243**

Grade: 12

Prerequisites: AP English Language and Composition with a **B- average** both semesters or Honor English 11 with an **A- average** both semesters. Evidence-based reading and writing test scores from the PSAT, SAT, or ACT are taken into consideration in order to place students where they will be most successful.

Quality Points: A = 5

This course includes all the essentials of English 12 Honors with the addition of several sophisticated texts and will prepare the student for the required College Board Advanced Placement Test given in May. This very demanding course is offered only to the student who shows the aptitude for the challenge of a college equivalent course in high school.

## **Advanced Placement Statistics 646**

Grade: 11, 12

Prerequisites: See below

Quality Points: A = 5

The AP Statistics course is equivalent to a one-semester, introductory, non-calculus- based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding. (apcentral.collegeboard.org). Students must take the AP Statistics exam given in May.

Selection of students for this course will be based on the following:

1. A minimum B average in Honors Pre-Calculus, Honors Calculus, or AP Calculus or a minimum A average in Honors Algebra 2 for the first semester
2. Current Math teacher recommendation
3. PSAT Math score and PSAT Critical Reading score

## **Advanced Placement Calculus AB 645**

Grade: 12

Prerequisites: See below

Quality Points: A = 5

AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions. (apcentral.collegeboard.org). Students must take the AP Calculus AB exam given in May.

Selection of students for this course will be based on the following:

1. Honors Pre-Calculus teacher recommendation
2. Honors Pre-Calculus grade for the first semester
3. PSAT Math score

## **Advanced Placement Calculus BC 651**

Grade: 12

Prerequisites: See below

Quality Points: A = 5

AP Calculus BC is roughly equivalent to both first and second semester college calculus courses and includes the content learned in Calculus AB while extending it to different types of equations and introduces the topic of sequences and series. The AP course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions. ([apcentral.collegeboard.org](http://apcentral.collegeboard.org)). Students must take the AP Calculus BC exam given in May.

Selection of students for this course will be based on the following:

1. Honors Pre-Calculus teacher recommendation
2. Honors Pre-Calculus grade for the first semester
3. PSAT Math score

## **Advanced Placement Biology 841**

Grade: 11, 12

Prerequisites: Advanced Biology (with a B+ average), Honors Chemistry (with a B+ average), Honors Physics (may be taken concurrently) and the AP selection process.

Quality Points: A = 5

This course prepares the student to take the AP exam. It is designed for students who are strongly considering furthering their studies in the life sciences and/or medical fields. The course content includes in-depth study of biochemistry, energy flow and biochemical reactions, cellular metabolism, internal structure and organization of cells, heredity, evolution, population genetics, ecosystems and community interactions, and botanical and zoological diversity. AP labs and other labs are incorporated throughout the course. Students are involved in problem solving, doing experimentations, and writing essays on various topics. Students must take the AP Biology exam given in May. **The AP selection process will include consideration of PSAT scores, GPA, previous science grades, evaluation of current work and departmental guidelines.**

## Advanced Placement Chemistry 842

Grade: 11, 12

Prerequisites: Biology, Honors Chemistry, (with at least a B+) Honors Algebra II (with at least a B+) or Advanced Algebra II (with an A average) Honors Physics (may be taken concurrently); and the AP selection process.

Quality Points: A = 5

AP Chemistry is designed as a second year chemistry course. This is an elective science covering the topics usually included in a first-year college course in chemistry. The course content includes an in depth study of bonding, solutions, acids and bases, equilibrium, kinetics, thermodynamics, and descriptive chemistry. Laboratory activities comprise forty percent of course time. Students must take the AP Chemistry exam given in May. **The AP selection process will include consideration of PSAT scores, GPA, previous science grades, evaluation of current work and departmental guidelines.**

## Advanced Placement Environmental Science 843

Grade: 11, 12

Prerequisites: Biology, Honors Chemistry or Honors Physics and the AP selection process.

Quality Points: A = 5

This course covers topics usually included in a first year college course in environmental science. AP Environmental Science provides the student with the opportunity to understand interrelationships of the natural world, to investigate natural and man-made environmental problems and to explore ideas to prevent or solve these problems. Topics covered include renewable and nonrenewable resources, earth dynamics, cycling of matter, ecosystems, atmospheric dynamics, environmental quality, and energy production and development along with their local and global consequences. Students are involved in laboratory work, problem solving, research and fieldwork related to environmental issues. Environmental community service hours are required each quarter in addition to any service hours for religion. Students must take the AP Environmental Science exam given in May. **The AP selection process will include consideration of PSAT scores, GPA, previous science grades, evaluation of current work and departmental guidelines.**

## Advanced Placement Physics C: Mechanics 847

Grade: 12

Prerequisites: Biology, Honors Chemistry, Honors Physics, AP Calculus can be taken concurrently

Quality Points: A = 5

This course is a full year in-depth study of Newtonian mechanics. The content includes kinematics, Newton's laws of motion, work, energy and power, systems of particles and linear momentum, circular motion and rotation, and oscillations and gravitation. The course is heavily lab based. Students will be required to keep a lab notebook. Students will be involved in problem solving that will include the use of calculus. Students must take the AP Physics C: Mechanics exam given in May. **The AP selection process will include consideration of PSAT scores, GPA, previous science grades, evaluation of current work and departmental guidelines. Recommend: B+ in Honors Physics and strong math and reasoning skills.**

## **Advanced Placement African American Studies 534**

Grade: 11, 12

Prerequisites: PSAT/SAT verbal score consideration and Department Approval.

Quality Points: A = 5

AP African American Studies provides students the opportunity to study historical, political, social, philosophical, and literary figures and movements they may not have previously encountered in other courses. Students will engage in critical reading, writing, and thinking as they analyze, evaluate, and interpret primary and secondary source documents, develop essays, and engage in thought-provoking classroom discussions. This class meets daily for a semester.

## **Advanced Placement U.S. History 933**

Grade: 11

Prerequisites: Students must undergo the normal AP selection process including submission of their World History grade and Evidence Based Reading and Writing PSAT scores and teacher recommendation.

Quality Points: A = 5

This course includes the main topics that are taught in U.S. History, but will require much more reading including primary sources, and frequent short papers. The short papers are of two types: the Free Response Essay and the Document-Based Question. Students are required to take the Advanced Placement U.S. History Exam given in May. This course meets daily for a full year.

## **Advanced Placement Psychology 962**

Grade: 11, 12

Elective

Prerequisites: Rising juniors must have an A in their Honors English class. Rising seniors must have an A in their Honors English class unless they are in AP English, in which case they can have a B and still qualify for the course. Possible selection work may be required.

Quality Points: A = 5

The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students will be exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They will also learn about the ethics and methods psychologists use in their science and practice. Students are required to take the AP Psychology exam given in May. This class meets daily for a full year.

## **Advanced Placement Microeconomics 948**

Grade: 12

Prerequisites: B+ in Honors Pre-calculus or an A in Advanced Pre-calculus, Departmental Approval, and Math and Evidence Based Reading and Writing SAT scores will be considered and utilized for selection

Quality Points: A = 5

The purpose of the AP course in microeconomics is to give students a thorough understanding of the principles of economics that apply to the functions of individual decision makers, both consumers and producers, within the economic system. It places primary emphasis on the nature and functions of product markets and includes the study of factor markets and of the role of government in promoting greater efficiency and equity in the economy. Students are required to take the Advanced Placement Microeconomics exam given in May. This class meets daily for a semester.

## **AP Microeconomics and AP Macroeconomics 951**

Grade: 12

Prerequisites: B+ in Honors Pre-calculus or an A in Pre-Calculus, Departmental Approval, and Math and Evidence Based Reading and Writing SAT scores will be considered and utilized for selection. Quality

Points: A=5

This class covers topics in both microeconomics and macroeconomics. The microeconomics portion of the class will emphasize the nature and functions of product markets and includes the study of factor markets and the role of government in the economy. The macroeconomics portion of the class will emphasize the study of national income and price-level determination and also develop students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth and international economics. Students must take both the Advanced Placement Microeconomics and Advanced Placement Macroeconomics exams given in May. This class meets daily for a full year.

## **Advanced Placement United States Government 944**

Grade: 12

Prerequisites: Students must participate in the AP selections process that includes Departmental Approval after submission of their U.S. History and English grades. PSAT evidence based reading and writing scores and overall GPA will also be considered in the selection process. At a minimum, students must have an A- both semesters in Honors English or B both semesters in AP English. Also, students must have an A- both semesters in Honors U.S. History or a B both semesters in AP U.S. History.

Quality Points: A = 5

This is an advanced course in American government and political systems. Students will study the same topics as the traditional government class, but will have additional reading and writing assignments. This course enables the student to develop an understanding of the main principles and philosophies behind our modern political system, as well as an understanding of national and state governments and the constitutional and legal system. Students will be required to take the AP U.S. Government test in May. This course meets daily for a semester.

## **Advanced Placement U.S. Government and Comparative Government 952**

Grade: 12

Prerequisites: Students must participate in the AP selections process that includes Departmental Approval after submission of their U.S. History and English grades. PSAT evidence based reading and writing scores and overall GPA will also be considered in the selection process. At a minimum, students must have an A- both semesters in Honors English or B both semesters in AP English. Also, students must have an A- both semesters in Honors U.S. History or a B both semesters in AP U.S. History. Quality Points: A = 5

In addition to the topics covered in AP U.S. Government, in this class students will develop an understanding of political theory and of global studies through specific analysis of different political entities. Students will learn the process that political scientists use to analyze and evaluate political systems. Upon completion of the Comparative Government portion of this class, students will be equipped to understand and evaluate geopolitical issues in an informed manner and will have developed the tools and methodology to understand and evaluate geopolitical issues that will arise in the future. Students must take both the AP U.S. Government and AP Comparative Government exams given in May. This class meets daily for a full year.

## **AP Studio Art 358**

Grade: 12

Prerequisites: Honors Portfolio Prep or Photo II with portfolio submission and department approval Portfolio Prep is recommended.

Quality Points: A = 5

AP Studio Art is a college equivalent course in which students create a 2D Design or a Drawing portfolio to be evaluated by the College Board. The AP portfolio submission focuses on the student's ability to recognize quality in her or his work, as well as drive a sustained investigation of a particular question through artmaking. Furthermore, students will be evaluated on their artistic growth, development of ideas, and will describe his or her artistic choices in writing. Self-evaluation, class critique, artist research, experimentation, artmaking, and revision of artwork are key components of this class. Students must score a 3 or above to be awarded college credit. This class meets daily for a full year.

## **Advanced Placement French V 445**

Grade: 12

Prerequisites: An A in Honors French III or B in Honors French IV in both semesters, and exams, and/or teacher recommendation and a strong work ethic.

Quality Points: A = 5

This course is equivalent to a college course. AP French is designed to advance the student's communicative ability in French within a culturally rich setting. Its main objectives are to further develop the ability to understand spoken French in a variety of contexts; to develop a vocabulary base for reading newspapers, literary text and other media without depending upon a dictionary; to improve the ability to express oneself in written and spoken French with reasonable fluency and accuracy. This class is taught by content where linguistic skills can be practiced and reviewed. Students enrolled in this course are required to take the AP French test in May.

On the cultural level, the student will continue to learn about geographical, historical, artistic, and everyday life and societal concepts of the French-speaking world; a Catholic component is also included. Aspects from the culture will be studied with reference to Catholic Social Teachings.

## **Advanced Placement German V 451**

Grade: 12

Prerequisites: An A in Honors German III or B in Honors German IV in both semesters and on exams. A teacher recommendation is also required.

Quality Points: A = 5

This course is equivalent to a college course. AP German is designed to advance the student's proficiency in all four language skills: listening, speaking, reading and writing. Materials used come from the Internet, magazines and newspapers, poetry, screenplays, biographies, etc. Current events as well as political, economic and social systems are discussed. The AP German Language and Culture course is structured around six themes: Global Challenges, Science and Technology, Beauty and Aesthetics, Families and Communities, Contemporary Life, Personal and Public identities. Students enrolled in this course are required to take the AP German exam in May.

On the cultural level, the student will continue to learn about geographical, historical, artistic, and everyday life and societal concepts of the German-speaking world; a Catholic component is also included. Aspects from the culture will be studied with reference to Catholic Social Teachings.



## **Advanced Placement Latin 448**

Grade: 11, 12

Prerequisites: Minimum of an A- in both semesters of Honors Latin III or Honors Latin IV, placement exam & Teacher Recommendation.

Quality Points: A = 5

Students taking this course study the prescribed AP Latin Vergil and Caesar curriculum. The main objectives are to further widen the student's range of vocabulary, grammar, and syntax and to implement this range in order to appreciate the richness of the Latin epic and the writings of Julius Caesar. By speaking and discussing the readings in the target language, the students will learn to express the vocabulary and the grammar concepts that they have been taught. Students taking this course are required to take the AP Vergil/Caesar exam at the end of the school year. It is also recommended that they take the Latin SAT II exam.

On the cultural level, the student will learn about geographical, historical, artistic, and everyday life and societal concepts of ancient Rome; a Catholic component is also included. Aspects from the culture will be studied with reference to Catholic Social Teachings.

## **Advanced Placement Spanish V: 444 Language and Culture**

Grade: 11, 12

Prerequisites: Minimum of an A- in Spanish III or a B in Honors Spanish III or Honors Spanish IV in both semesters. In addition to the grade requirements, a student must take the AP Spanish assessment and have Departmental approval to be selected.

Quality Points: A = 5

AP Spanish Language and Culture is designed for the student who has the ability to pursue a college level study in Spanish. Consideration will be given to exceptional students on a case by case analysis. Students will develop proficiencies across the full range of communication modes (interpersonal, presentational and Interpretive). It is a demanding and challenging course in which all students are required to take the AP exam at the end of the school year. This course is equivalent to a third year college course; therefore, the students are required to dedicate a considerable amount of time on a daily basis. It will follow guidelines provided by the College Board. It is also recommended that they take the Spanish SAT II exam.

On the cultural level, the student will continue to learn about geographical, historical, artistic, and everyday life and societal concepts of the Spanish-speaking world; a Catholic component is also included. Aspects from the culture will be studied with reference to Catholic Social Teachings.

## **Advanced Placement Spanish VI: 446 Literature and Culture**

Grade: 12

Prerequisites: Minimum of an A- in AP Spanish V Language and Culture. In addition to the grade requirements, a student must take the AP Spanish assessment (if needed) and have Departmental approval to be selected.

Quality Points: A = 5

This course uses a thematic approach to introduce students to representative texts (short stories, novels, poetry and essays) from Peninsular Spanish, Latin America, and the United States Hispanic Literature. Students will develop proficiencies across the full range of communication modes (interpersonal, presentational and Interpretive), thereby honing critical reading and analytical writing skills. Literature is examined within the context of its time and place, as students reflect on the many voices and culture present in the required readings. The course also includes a strong focus on cultural connections and comparisons, including exploration of various media (e.g. art, film, articles, literary criticism). All students are required to take the AP exam at the end of the school year. It will follow guidelines provided by the College Board.

On the cultural level, the student will continue to learn about geographical, historical, artistic, and everyday life and societal concepts of the Spanish-speaking world; a Catholic component is also included. Aspects from the culture will be studied with reference to Catholic Social Teachings.