

# AP PROGRAM BROCHURE



## The AP Program at the John F. Kennedy School

### AP Courses Offered:

**AP 2D Art & Design (4 hrs/wk):** Students develop an inquiry-based portfolio that is personalized to their interests and vision. The course introduces students to the creative process, decision making, critical thinking and presentation skills. Students explore and work with a range of 2D media including photography, graphic design, typography, collage and digital media.

**AP Art History (11th or 12th) (4 hrs/wk):** In this course, students examine and critically analyze major forms of artistic expression from the past and the present from a variety of cultures. While visual analysis is a fundamental tool of the art historian, art history emphasizes understanding how and why works of art function in context, considering such issues as patronage, gender, and the functions and effects of works of art.

**AP Biology (11th or 12th) (6 hrs/wk):** Students learn about the core scientific principles, theories, and processes governing living organisms, biological systems, and natural phenomena. Students will understand key science practices that can be used to develop explanations and predictions of natural phenomena, which is tested and refined through laboratory investigations. Participants develop advanced reasoning and inquiry skills as they design experiments, collect and analyze data using mathematics and other methods, and interpret that data to draw conclusions.

**AP Calculus AB (11th or 12th) (6 hrs/wk):** Explore the key concepts, methods, and applications of single-variable calculus including functions, graphs, and limits, derivatives, integrals, and the Fundamental Theorem of Calculus. Students become familiar with concepts, results, and problems expressed in multiple ways including graphically, numerically, analytically, and verbally. Use technology to help solve problems, experiment, interpret results, and support your conclusions.

**AP Calculus BC (12th) (4 hrs/wk):** Students cultivate their understanding of differential and integral calculus through engaging with real-world problems represented graphically, numerically, analytically, and verbally and using definitions and theorems to build arguments and justify conclusions as they explore concepts like change, limits, and the analysis of functions. **Required: Students must have already taken AP Calculus AB in order to take AP Calculus BC at JFKS.**

**AP Chemistry (11th or 12th) (6 hrs/wk):** Through inquiry based learning students develop critical thinking and reasoning skills. Students cultivate their understanding of chemistry and science practices as they explore topics such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium. Students must have at least a 2 in Algebra II.

**AP Comparative Government and Politics (11th or 12th) (4 hrs/wk):** Students compare economic/political challenges, trends and upheavals, and institutional characteristics across six nation states: China, Great Britain, Iran, Mexico, Nigeria, and Russia. Students also use the comparative method

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to analyze and assess the diversity of political life, institutional alternatives, differences in processes and policy outcomes, and the impact of global political and economic changes.

**AP Computer Science A (12<sup>th</sup> only) (3 hrs/wk):** AP Computer Science A introduces students to computer science through programming. Fundamental topics in this course include the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems. The course emphasizes object-oriented programming and design using the Java programming language.

**AP Computer Science Principles (11th or 12th) (3 hrs/wk):** This course will help you understand how computing and technology influence the world around you. In AP CSP, you will learn how to creatively address real-world issues while using the same tools and processes that artists, writers, computer scientists, and engineers use to bring ideas to life. CSP furthermore covers the fundamentals of computing, including problem solving, working with data, understanding the Internet, cybersecurity, and programming.

**AP Drawing (6 hrs/wk):** Students develop an inquiry-based portfolio that is personalized to their interests and vision. The course introduces students to the creative process, decision making, critical thinking and presentation skills. Students work primarily in various drawing and painting techniques.

**AP English Language and Composition (12th only) (5 hrs/wk):** This course engages students in becoming skilled readers of prose written in a variety of rhetorical contexts, and in becoming skilled writers who compose for a variety of purposes, with particular emphasis on argumentation. Both their writing and their reading should make students aware of the interactions among a writer's purposes, audience expectations, and subjects, as well as the way genre conventions and the resources of language contribute to effectiveness in writing.

**AP English Literature and Composition (11th &/or 12th) (5 hrs/wk):** This course engages students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students consider a work's structure, style and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism and tone.

**AP European History (11th and 12th grade) (6 hrs/wk):** This course introduces students to the political, cultural, economic, and social developments that played a fundamental role in shaping the world. We examine the development of contemporary political institutions, the continuity and change in society—including gender, race, and class— and the evolution of artistic expression and intellectual discourse. In addition to providing a basic narrative of historical events and movements, the goals of this course are to develop an ability to analyze historical evidence and express historical understanding in writing.

**AP French Language and Culture (varies):** Authentic French materials and sources are used in this course to develop language skills in multiple modes of communication, including two-way interactions in both

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writing and speaking, interpretation of audio, audiovisual, and print materials, and oral and written presentation of information and ideas. This course is also geared to meet the requirements as an Abitur "Leistungs" course (5 hours) or "Grundkurs" (3 hours). As such, students are prepared to achieve well on the AP exam.

**AP German Language and Culture (varies):** In this course, you will use authentic German materials and sources, exploring a variety of interdisciplinary themes that tie closely to German culture to develop your language skills in multiple modes of communication, including two-way interactions in both writing and speaking, interpretation of audio, audiovisual, and print materials, and oral and written presentation of information and ideas.

**AP Music Theory (11th or 12th grade) (2hrs/wk + extensive independent practice expected):** this course corresponds to one or two semesters of a typical introductory college music theory course that covers topics such as harmonic part-writing procedures of the common practice period, dictation and other listening skills, sight singing skills, score analysis, and extensive music vocabulary and written symbol systems.

**AP Physics 1 and AP Physics 2 (11th or 12<sup>th</sup>) (6 hrs/wk):** AP Physics 1 and AP Physics 2 are the successor courses to the AP Physics B algebra-based physics course. In the first semester, students explore AP Physics 1 topics such as kinematics, Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory simple circuits. In the second semester, students study AP Physics 2 topics such as fluid dynamics; thermodynamics; electrostatics; electrical circuits; magnetic fields and electromagnetism; physical and geometric optics; and quantum, atomic, and nuclear physics. In May students generally take both the AP Physics 1 and AP Physics 2 exams.

**AP Physics C: Mechanics (M) and Electricity & Magnetism (E&M) (11th or 12<sup>th</sup>) (6hrs/wk):** AP Physics C: M and E&M are combined into one full year course. A calculus-based course meeting six periods per week where students use calculus to deepen their study of kinematics, Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound. Co-requisites: students should have completed or be enrolled in AP Calculus. In May students may sign up for the AP Physics C: Mechanics exam and the AP Physics C: Electricity & Magnetism exam (two separate exams).

**AP Psychology (11th or 12th) (4 hrs/wk):** While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, analyze bias, evaluate claims and evidence, and effectively communicate ideas.

**AP Seminar and AP Research\* (10th and 11th) (3 hrs/wk):** In AP Seminar, students investigate real-world issues from multiple perspectives, gathering and analyzing information from various sources in order to develop credible and valid evidence-based arguments. In AP Research, students cultivate the

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skills and discipline necessary to conduct independent research in order to produce and defend a scholarly academic thesis.

*\*AP Seminar is the first of two courses in the AP Capstone™ program. AP Research is the second course. If you earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of your choosing, you will receive the AP Capstone Diploma™. This signifies outstanding academic achievement and attainment of college-level academic and research skills. Alternatively, if you earn scores of 3 or higher in AP Seminar and AP Research only, you will receive the AP Seminar and Research Certificate™. JFKS offers AP Seminar in 10<sup>th</sup> grade and AP Research in 11<sup>th</sup> grade.*

**AP Spanish Language and Culture (varies):** Students utilize authentic materials and sources in Spanish to develop language proficiency and the ability to understand the products, practices and perspectives of the cultures where Spanish is spoken. Students also demonstrate language proficiencies in multiple modes of communication, including Interpersonal Communication (two-way written interactions and conversations), Interpretive Communication (interpretation of written, audio, and audiovisual materials), and Presentational Communication (oral and written presentations of information, opinions, and ideas).

**AP US History (11th or 12th) (6hrs/wk):** Students learn about the developments that have shaped U.S. history through the critical analysis of historical events and materials and learn to weigh evidence and interpretations as they build their factual knowledge of U.S. history. Students learn to draw conclusions and use informed reasoning to present arguments clearly and persuasively in essay format. Events of U.S. history are examined through the use and analysis of documents, images, cartoons, quantitative data, and other primary sources. Understanding of major themes in U.S. history is developed including American identity, economic and social life, political change and continuity, and the U.S. role in the world.

**AP Statistics (12th grade) (6hrs/wk):** Students develop analytical and critical thinking skills as they learn to describe data patterns and departures from patterns, plan and conduct studies, use probability and simulation to explore random phenomena, estimate population parameters, test hypotheses, and make statistical inferences.

***Please note that some courses may or may not be offered each year at JFKS depending on a variety of factors including but not limited to availability, scheduling, and class size***

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*If you are considering studying in Germany with the US High School diploma, please read the “College Applications” document on the website. The following APs are recognized in combination with the diploma – please review specific requirements in detail.*

**ANERKANNT** : recognized by German application office anabin/uniassist

**NICHT ANERKANNT** : not recognized by anabin/uniassist

AP Art History -- **NICHT ANERKANNT**

AP Art Studio—Drawing & Painting and/or 2-D Design -- **NICHT ANERKANNT**

AP Biology -- **ANERKANNT**

AP Calculus AB -- **ANERKANNT**

AP Calculus BC -- **ANERKANNT**

AP Chemistry -- **ANERKANNT**

AP Comparative Government and Politics -- **NICHT ANERKANNT**

AP Computer Science A -- **ANERKANNT**

AP Computer Science Principles -- **NICHT ANERKANNT**

AP English Language and Composition -- **ANERKANNT**

AP English Literature and Composition -- **ANERKANNT**

AP Environmental Science -- **NICHT ANERKANNT**

AP European History -- **ANERKANNT**

AP French Language and Culture -- **ANERKANNT**

AP German Language and Culture -- **ANERKANNT**

AP Music Theory -- **NICHT ANERKANNT**

AP Physics 1 and AP Physics 2 -- **NICHT ANERKANNT**

AP Physics C -- **ANERKANNT** \*Must take both parts: AP Physics C: M and E&M

AP Psychology **NICHT ANERKANNT** (may depend on field of study – possibly accepted but not guaranteed)

AP Seminar and AP Research -- **NICHT ANERKANNT**

AP Spanish Language and Culture -- **ANERKANNT**

AP US History -- **ANERKANNT**

AP Statistics -- **NICHT ANERKANNT**

*Not offered at JFKS, but recognized by anabin/uniassist:*

*AP Macroeconomics, AP Microeconomics, AP Latin*