



# High School Course Offerings

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## KAIS International School

### English

English at KAIS International School is taught through five key disciplines, two of which focus on reading (Reading Comprehension & Literature), two of which focus on writing (Academic Writing & Creative Writing), and one that focuses on building vocabulary.

Our high school English program illustrates a major component of our educational philosophy at KAIS: students will more willingly strive towards their potential when given the opportunity to express themselves and become engaged in the material. Creative Writing, for example, is designed to engage students in the act of writing and expression, which opens our students to the idea that they are “writers.” Students who consider themselves writers and take pride in their work are more apt to learning the “nuts and bolts” of writing (i.e. grammar, punctuation, spelling, syntax, etc.), which is a major focus in Academic Writing.

Our approach to the two reading disciplines embodies a similar philosophy. Literature is designed to feel more like a group of friends in a book club, with the hopes of changing student perception reading for our reluctant readers and reinforcing the love of reading in our avid readers. Students who enjoy reading are more apt to master the “nuts and bolts” of engaging with various texts, which is the central focus of Reading Comprehension.

#### **English 9**

Our 9th grade students read five to six grade-appropriate novels; complete reading comprehension exercises that focus on global awareness and current events, work to expand their vocabulary; review the fundamental elements of sentence structure; and create works in various genres of writing including poetry, memoir, persuasive essay, and literary response.

#### **English 10**

Our 10th grade students read six grade-appropriate novels; complete reading comprehension exercises that focus on societal structures and current events; expand their vocabulary by focusing on the spelling, parts of speech, definitions and syntax of increasingly more difficult words; review the fundamental elements of simple sentence structures and learn more complex structures; and create works in various genres of writing including poetry, memoir, comparative essay, and research papers.

#### **English 11**

In addition to the fundamental aspects of vocabulary and grammar, our 11th grade students focus on literary works by American authors. Emphasis is placed on

SAT readiness, as students focus on roots and prefixes to decipher unfamiliar vocabulary and on more complex sentence structures. Students gain further experience writing poetry, short stories, and research papers, and are also introduced to the argumentative essay.

### **English 12**

In addition to the fundamental aspects of vocabulary and grammar, our 12th grade students focus on literary works by British authors. Continued emphasis is placed on SAT readiness, as students focus on roots and prefixes to decipher unfamiliar vocabulary and on more complex sentence structures. Students gain further experience writing poetry, short stories, research papers, and argumentative essays.

## Mathematics

The emphasis of mathematics instruction at KAIS is placed on developing effective problem solving skills and good study habits. Real life applications are frequently explored. Students also present their solutions to their peers on a regular basis. Motivated students are invited to participate in honors and Advanced Placement courses. In rare cases, the exceptional student is allowed to progress at his/her own pace and explore those mathematics topics that most spark the student's imagination.

### **Algebra I**

This course serves to reinforce the basic arithmetic and algebraic manipulation skills learned in middle school. Students are gradually introduced to more difficult topics, including linear and quadratic functions, solving systems of linear equations and inequalities, graphing, and probability.

### **Geometry**

Geometry is perhaps the most unconventional mathematics course at KAIS. Rather than focusing on problem sets and frequent test and quizzes, Geometry teaches students how to be good math students. Reading and taking notes is an integral part of the course. Another major area of focus is the logical proof. All homework assignments involve multi-step word problems that require students to make connections between Algebra, Geometry, logic, and reading comprehension.

### **Algebra II**

Topics covered in this advanced Algebra course include conic sections, functions and transformations, quadratic functions, rational functions, exponential and logarithmic functions, sequences and series, complex numbers and the Fundamental Theorem of Algebra.

### **Pre-Calculus**

In this course, students review the many functions introduced in previous algebra courses, and survey a variety of topics that prepare students for the study of higher-level science and mathematics. Students study vectors and their applications in anticipation of Physics; asymptotes, limits and continuity in anticipation of Calculus; and matrices and mathematical induction in anticipation of Linear Algebra. Students also spend a semester exploring trigonometric functions, graphs, identities and their applications.

### **Advanced Placement (AP) Statistics**

AP Statistics is perhaps one of the most useful classes a student can take in high school. News reports regularly cite statistical studies. Political decisions affecting millions of people are often based on statistics. In this course, students learn the methods used to arrive at those conclusions, and the tools needed to test claims. Students focus both on the mechanics of statistical analysis and applications to real world settings, such as pharmaceutical experiments and quality control. The course draws on both current events and knowledge of mathematical concepts discussed in previous classes.

Prerequisite: Pre-Calculus

## **AP Calculus AB**

In Calculus, all of the parts from one's mathematics past come together to form both a conceptual and practical whole. Everything students have learned, from elementary operations to Pre-Calculus, are combined to help students understand everyday phenomena, such as the math behind a car whizzing by, how long it takes to drain the bath tub, and why carrying that heavy box up the stairs is so tiring. This course is divided into two parts, differentiation and integral calculus. There are certainly many new formulas and concepts to memorize and understand. However, the emphasis is always on understanding, as the many topics within Calculus are related and build upon each other.

Prerequisite: Pre-Calculus

## Science

### **Biology**

Biology is the study of living things and their environment. The course provides opportunities for students to develop scientific processing skills, laboratory techniques, and an understanding of the fundamental principles of living organisms. Students explore cell structure and function, genetics and heredity, evolution and classification, diversity of living organisms and their ecological roles, and are introduced to animal structure and function.

### **Chemistry**

Often called the “core science,” Chemistry is the study of the elements and the ways in which they interact. It is a fascinating science and one that affects everyone daily in many ways. Chemistry is dictated by logical ideas and concepts that string together in a way that is easy to comprehend. It is far less mathematical and formula based than physics and requires less memorization than Biology. Chemistry at KAIS is approached from a laboratory perspective. This means that concepts and ideas are illustrated through activities where students can “touch, hear, and smell” the science of Chemistry. Students follow up these lab activities with projects, discussions, lectures, and occasional tests to reinforce understanding of the material.

### **Physics**

Physics is the study of the physical world and the rules that govern it. Objects as small as electrons and as large as planets interact with each other in seemingly strange and random ways. It is the objective of Physics to shed light on these interactions and illuminate how the universe works as a whole. Both in the text and class, the focus is on grasping the underlying concepts and applying this knowledge to mathematical and practical problems. To the extent that advanced mathematics (e.g. Calculus) is required in the course, the basic concepts will be covered during this course.

All high school sciences courses at KAIS are offered with an Advanced Placement option for motivated students.

## Social Studies

### **Medieval History (grade 9)**

Medieval history is sometimes thought of as the forgotten history. We learn about the ancients, and we are fascinated by the Age of Exploration and the Renaissance—but what lies between? This course aims to survey one thousand years of history beginning from the fall of the western part of the Roman Empire, eschewing memorization of dates and names in favor of overarching themes such as societal structures, cultural norms, and the realities of daily life. Another important aim is to make connections between medieval times and the modern world through discussions and activities. Students participate in guided note-taking sessions and maintain vocabulary logs to assist them in navigating the difficult passages from our chosen text.

### **World History (grade 10)**

This course primarily, but not exclusively, focuses on modern European history. From its origins in Roman law and Greek philosophy, students trace the major developments in “western” culture, politics, and economics; along the way we compare and contrast our observations with what’s happening in other parts of the world. Students investigate historical developments in a variety of ways, such as projects, lectures, group work, and essay writing. Additionally, students are often asked to make personal connections as well as cross-cultural and cross-curricular connections. The main goals of World History include relating the moral and ethical principles in ancient Greek and Roman philosophy, in Judaism, and in Christianity to the development of Western political thought; analyzing the effect of the Industrial Revolution; exploring the causes and consequences of the World Wars; and exploring and analyzing globalization and modern nation-building.

### **U.S. History (grade 11)**

This course is designed to provide a solid overview of U.S. history from colonial times through the post-Cold War world. The base text for the course is *The American Pageant*, 14th edition. Rather than merely memorizing a long list of historical facts about the United States, students will learn how to do history. Class sessions will alternate between analysis, review and discussions of the main text, examinations of primary sources, and addressing through independent research overarching thematic questions as well as more specific questions generated by the students themselves. Dissenting historical analysis will be included in several class discussions and will be drawn from several sources. In addition to providing a firm grounding in the events of U.S. history, this course will challenge students to draw conclusions about historical events based on textual evidence, and to clearly express those conclusions and the evidence that supports them in written form. Because students taking this course hail from all around the world, the course will regularly make connections to global events and perspectives. Motivated students are invited to take Advanced Placement U.S. History.

### **U.S. Government/Economics (grade 12)**

U.S. Government is a semester-long case study that sheds light on how various forms of government work, using the U.S. government as the point of reference and comparison. Governments are often viewed as impenetrable monoliths, but by studying the nuts and bolts of one of the world’s oldest democracies we can

gain insight into how governments function and what their roles are in society. Through lectures, activities, discussions, and writing assignments, students explore the following topics: constitutional underpinnings of the United States government, political beliefs and behaviors and the effects of mass media, political parties and interest groups, policymaking, and civil rights.

It is a commonly accepted fact that individuals and nations strive to produce wealth, but how is the production of wealth best achieved, and how should the wealth that is produced be managed? In Economics, students answer these essential questions by exploring the following topics through lectures, problem sets, discussions, and activities: basic economic concepts, measurements of economic performance, national income price determination, stabilization policies, economic growth, and international trade and finance.

## Electives

Being able to select courses of interest beyond the core curriculum is an important part of a well-rounded high school education. This year, KAIS students are able to take the elective of their choice through Coursera, an online suite of college-style courses that introduces students to topics not typically covered at the high school level. Example courses available to KAIS students include Introduction to Music Production, Machine Learning, and Marketing in a Digital World.

### **Leadership**

This course is designed to introduce students to the concept of leadership—from the personalities and attributes of great leaders to the methodologies and theories used to inspire and guide individuals and groups to success. Practically speaking, the objective of this class is for students to develop and become comfortable with using their skills from the five spheres of leadership (self-awareness, group process, managerial skills, communication, and human relations). When applied to one's daily life, these skills help to create a pattern of success and achievement.

### **Robotics**

This year KAIS is offering Robotics as a class as well as an after school club. In this class, students design, program, build and drive their own robots. Members also have the opportunity to compete against other international schools in the Vex Robot Tournaments in Tokyo and Taiwan. The Robotics program provides a great chance for students to get creative with some hands-on building and learn the basics of robotics and programming.

## Foreign Language

### **Japanese**

The Japanese program at KAIS is split into two main tracks. The track for native speakers focuses on improving literary fluency and introducing students to high-level academic Japanese used in university classes and publications. The lower level track equips new arrivals to Japan, or those with developing Japanese skills, with the ability to function in Japanese society smoothly and enjoy interacting with a new culture. In addition to regular kanji and vocabulary quizzes, students in both tracks participate in discussion sessions—often based on Japanese cinema or cultural documentary—and complete projects that explore cross-cultural currents. The classroom experience is enhanced by the annual all-school trip where students are exposed to the various regions and traditions of Japan.

## Kinetics

### **Fitness**

This class aims to provide students with the academic and practical knowledge needed to achieve and maintain a desired level of fitness. Students learn about the fundamentals of health and fitness and the proper technique for essential exercises. Students engage in constantly varied, high intensity, functional movements that

develop their physical skills. Students have the opportunity to apply these skills in a variety of sports, including cross-country, basketball, volleyball, and futsal. Throughout the course, significant emphasis is placed on cooperation, teamwork, and good sportsmanship. In the nutrition component of the course, students examine the culture and patterns that exist around food and discover why the question of “how we eat” is just as important as “what we eat.” Students investigate government involvement in the current food climate, explore different arguments in the sustainable food debate, and investigate the connection between food and bodily imbalance.

### **Yoga**

In many ways, yoga embodies the environment we strive to create at KAIS and the values we wish to impart on our students. Students do not merely go through the motions of the poses, but instead focus on controlled physical movements, connectedness, controlled breathing, and meditation. Students are sometimes called upon to complete projects related to the study of yoga. It has been a core part of our offering since the founding of KAIS, and we are proud to be one of the few schools in Tokyo offering the course.

## **Creative Studies**

Familiarity with the creative arts is an essential part of a well-rounded education and a fully developed sense of self and self-expression. In addition to affording students an occasional break from core classes, the Creative Studies program at KAIS introduces students to a variety of creative media with the hope that they will find something that sparks a passion that can be sustained for a lifetime. At the very least, students develop a respect, appreciation, and deeper understanding of the arts. Course offerings change yearly and are based on student interest.

### **Visual Journal – Sketching Everyday Life**

This class covers the basics of creating an art journal with water-based color pencils in a sketchbook. Students learn color theory and explore fun techniques of sketching and drawing – shadowing, stippling (dots), lining and washing, and scratching (graffito). Every other week students go outside to sketch and try out the techniques learned in the class.

### **Music Performance**

In this class, students learn valuable communication and group management skills in the context of a performing band. Though music theory and technique are addressed, the main focus of the class is how to play music as a band, selecting songs the students choose. The final project will be a live performance of one or more songs. On several occasions, the class will visit a professional music studio to practice. All levels of musical proficiency are welcome