

Lakehill Preparatory School Upper School Course Guide

Class of 2024

Academic Overview

At Lakehill Preparatory School, we take the word *preparatory* in our name very seriously. From kindergarten through high school, our curriculum is designed to instill in our students the importance of a well-rounded education. Throughout a student's academic career, we build on an educational program that achieves our goal of enabling graduates to attend the finest, most rigorous universities that best fit their needs and desires.

Lakehill challenges highly motivated students by providing them with a robust academic curriculum and by cultivating their unique talents. Whether these talents are in the writing lab, on the athletic field, in math, science, or the arts, every child is encouraged to strive for more and to discover new and exciting abilities along the way.

Lakehill is celebrated for the breadth of activities it provides. From kindergarten through high school, our extensive programs expose every child to new experiences. Students are encouraged to participate and challenged to excel where they may not have thought possible.

Lakehill is accredited by the Independent School Association of the Southwest (ISAS).



ACADEMIC REQUIREMENTS

Lakehill Preparatory School maintains a stimulating, challenging, and fully accredited college preparatory curriculum. The academic program provides broad training in the liberal arts and sciences and stresses independent thinking, writing, critical reading, discipline, and creativity.

Graduation Requirements

Students must complete a minimum of 26 credits to satisfy the requirements for graduation. The following courses are required for graduation:

Discip	line

English	4 Credits
Mathematics	4 Credits
Science	4 Credits
Social Studies	4 Credits

World Language	2 Credits
world Language	2 Credits

Computer Science	1 Credit
Fine Arts	1 Credit

Physical Education	1 Credit

Course Overview English

Electives

9 Contemporary Literature and Composition

Varies

- 10 Western World Literature and Composition
- 11 AP English Literature and Composition
- 12 AP English Language and Composition

Mathematics

Sequence A

- Algebra I 8 9 Geometry 10 Algebra II
- Pre-Calculus or AP Pre-Calculus 11
- Statistics, AP Statistics, AP Calculus AB, 12

AP Calculus BC

Sequence B

9	Algebra I
10	Geometry
11	Algebra II

12 Pre-Calculus, AP Pre-Calculus, Statistics, AP Statistics, Advanced Integrated Mathematics (AIM)

Science

9	Biology
10	Chemistry
11 and 12	Anatomy and Physiology, AP Biology,
	AP Chemistry, AP Environmental
	Science, Physics*, AP Physics I*, AP
	Physics C
	(*a physics course is required for

graduation)

Social Studies

9	AP Human Geography
10	AP World History
11	AP United States History
12	AP United States Government and Politics /
	Economics

World Language

Two years of either French or Spanish are required. Students are strongly encouraged to take more.

Computer Science

Two semesters of Computer Science (programming) are required.

Fine Arts

Students are required to choose at least two Fine Arts electives from among the following: Computer Graphic Design, Digital Production, Drama, Drawing, Musical Theater, Painting, Sculpture, Ceramics, Ceramics 2, Dance, Art History, Upper School Choir, or Yearbook.

Students are required to participate in two semesters of athletics.

Electives

Electives vary from year to year and are announced prior to Spring Advising.



Report Cards

Report Cards are issued each quarter, with semester reports issued at the end of each semester. These reports are intended to communicate to students and parents areas of strength and weakness. If a child is experiencing difficulty in a specific subject, the teacher will be happy to offer assistance.

Grading Scale for Grades 9 – 12

A+	97-100	4.0
A	94-96	3.85
A-	90-93	3.7
B+	87-89	3.5
B	84-86	3.25
B-	80-83	3.0
C+	77-79	2.8
C	74-76	2.4
C-	70-73	2.0
D+	67-69	1.8
D	64-66	1.4
D-	60-63	1.0
F	Below 6	50

Honor Roll

To qualify for the Headmaster's High Honor List, a student must receive an A in all courses each quarter. To earn Honor Roll status, a student must receive a B or above in all courses each quarter.

AP Courses

Advanced Placement (AP) courses provide skills that are critical for college success. In addition to the knowledge gained in an AP subject, students will learn time-management, study skills, and problem-solving techniques. With the support of AP teachers, students will build confidence to succeed

National Advanced Placement (AP) examinations are given in May to all students enrolled in AP classes. Students enrolled in AP courses who have diagnosed learning differences with accompanying documentation from a physician and/or psychologist may apply to the College Board for permission to take the examination with accommodations.

Transfer Credits

Students with special interests and talents are encouraged to pursue outside studies, keeping in mind that core educational requirements must be met within the confines of the course offerings at Lakehill. Exceptions are limited to transfer students who are unable to meet the requirements for graduation or placement, and these exceptions must meet with the approval of the school.

Cumulative Grade Point Average

The cumulative grade point average is calculated using semester grades. Grades for all high school courses except non-academic electives (i.e., study hall and athletics) will be averaged into the GPA, including those courses that were repeated. Cumulative grade point averages will be rounded out to four decimal places as needed.

Ranking

Lakehill does not rank; however, for Texas public institutions Lakehill will report rank up to the Top 10% according to the university's admission policy in relation to Texas House Bill 588.

Valedictorian and Salutatorian

The Valedictorian will be the graduating senior who has the highest GPA for four years. The Salutatorian will be the graduating senior who has the second highest GPA for four years. Students are eligible if they have attended Lakehill for more than one year. Students who have attended Lakehill for less than four years, but more than one year of high school will be eligible if their previous school is comparable to Lakehill in curriculum and accreditation.



ENGLISH DEPARTMENT

CONTEMPORARY LITERATURE AND COMPOSITION - grade 9

This course exposes the student to a variety of texts, including contemporary masterpieces. Students will demonstrate their ability to analyze prose fiction and non-fiction in a variety of writing assignments including formal essays. Research skills and an introduction to MLA documentation style are integrated into many of the writing assignments. Grammar, usage, punctuation, and composition skills are refined by teaching prescriptively from writing assignments. Vocabulary enrichment continues with a structured course of study, application in writing, and recognition in reading. Students are required to write continuously both in and out of class in a journal. Full year, 1 credit.

WESTERN WORLD LITERATURE AND COMPOSITION - grade 10

This course emphasizes the full integration of composition and literature. Grammar and usage skills are taught prescriptively from writing assignments, with greater critical emphasis on mastery in composition. There will be several essays with a continued emphasis on the development of analytical writing skills. The study of literature aims at an increased understanding of poetry and fiction through a chronological survey of masterpieces of Western world literature, from *The Epic of Gilgamesh* to contemporary works. A formal research paper using MLA documentation is required. Vocabulary enrichment continues through regular study and application. Full year, 1 credit.

AP ENGLISH LITERATURE AND COMPOSITION – grade 11

The AP English Literature and Composition course aligns to an introductory college-level literary analysis course. The course engages students in the close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, symbolism, and tone. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. Full year, 1 credit.

AP ENGLISH LANGUAGE AND COMPOSITION – grade 12

The AP English Language and Composition course aligns to an introductory college-level rhetoric and writing curriculum, which requires students to develop evidence-based analytic and argumentative essays that proceed through several stages or drafts. Students evaluate, synthesize, and cite research to support their arguments. Throughout the course, students develop a personal style by making appropriate grammatical choices. Additionally, students read and analyze the rhetorical elements and their effects in non-fiction texts, including graphic images as forms of text, from many disciplines and historical periods. Full year, 1 credit.



MATH DEPARTMENT

ALGEBRA I – grade 8 or 9

Precision of language, algebraic structure, processes, and operations are stressed, as are the acquisition of necessary manipulative skills and an adequate understanding of algebraic concepts. Content includes solving and graphing equalities and inequalities in one and two variables, linear or quadratic; the quadratic equation; functions and relations; and radical and exponent laws. Applications of algebra to problem solving are emphasized. Full year, 1 credit.

GEOMETRY – grade 9 or 10

This course emphasizes two-dimensional geometry, but elements of three-dimensional geometry are introduced as well. Main topics include inductive and deductive reasoning, congruent and similar polygons, coordinate geometry, and areas and volumes of solids. The student is expected to learn the relationship between algebra and geometry, the role of logical thinking in mathematics through the use of formal geometric proofs, and the necessity for clarity and precision of language in mathematics. When appropriate, relevant material from the PSAT and SAT will be covered in class. Prerequisite: Completion of Algebra I. Full year, 1 credit.

ALGEBRA II - grade 10 or 11

This required course reintroduces and reinforces the algebraic properties of the real number line, as well as the concepts and skills associated with linear and quadratic equations and inequalities. The concept of functions, particularly polynomial, rational, logarithmic, exponential functions and irrational functions will be introduced. Conic sections, complex numbers, probability theory, and matrices will be integrated throughout the year. The use of graphing calculators will supplement the learning process. Prerequisite: Completion of Geometry. Full year, 1 credit.

ADVANCED INTEGRATED MATHEMATICS (AIM) – grade 11 or 12

In this course, students explore linear, polynomial, exponential, logarithmic, and trigonometric functions, and apply these functions to investigate and model a variety of mathematical and real world problems. Students will work with probability, data collection, descriptive and inferential statistics, and technological tools to analyze statistics. Students learn in Integrated Mathematics the existence of rich connections among number systems, algebra, geometry and measurement, probability, and statistics as they are used to model the world and solve problems. Along with how to view mathematics as a way of understanding the world about them and how mathematics allows one to predict and control outcomes in a variety of applications. The content of this course provides a foundation for the further study of mathematics and related subjects, for career paths that make significant use of mathematics, and for solving problems and making decisions throughout students' adult lives. Prerequisite: Completion of Algebra II. Full year, 1 credit.

PRE-CALCULUS – grade 11 or 12

This course is especially designed to prepare students for college mathematics and advanced mathematical study. It gives students a sound understanding of the concepts required in the study of Calculus. Principle topics include analytic geometry; elementary analysis; trigonometric, exponential, polynomial, and rational functions; advanced graphing techniques; sequences and series; probability, matrices, polar coordinates, determinants; vectors; the complex number field; and an introduction to differential calculus. The use of graphing calculators will supplement the learning process. Prerequisite: Completion of Algebra II. Full year, 1 credit.

AP PRE-CALCULUS - grade 11 or 12

This course is equivalent to an introductory college course in precalculus. It gives students a sound understanding of the concepts required in the study of Calculus. Principle topics include polynomial and rational functions, exponential and logarithmic functions, trigonometric and polar functions, and functions involving parameters, vectors, and matrices. The use of graphing calculators will supplement the learning process. Prerequisite: Completion of Algebra II. Full year, 1 credit.

STATISTICS – grade 11 or 12

This course will introduce the student to statistical concepts that would be highly useful in a scientific or business type setting through real-life examples and exercises. Topics covered will include measures of central tendency, probability, the normal distribution, hypothesis testing, estimates and sample sizes, and a basic introduction to non-parametric statistics.



The use of graphing calculators will supplement the learning process. Prerequisite: Completion of Algebra II. Full year, 1 credit.

AP STATISTICS - grade 11 or 12

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. The use of graphing calculators will supplement the learning process. Prerequisite: Completion of Algebra II. Full year, 1 credit.

AP CALCULUS AB - grade 12

AP Calculus AB is an introductory college-level calculus course. 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. Prerequisite: Pre-Calculus and permission from the instructor of the course. Full year, 1 credit.

AP CALCULUS BC - grade 12

AP Calculus BC is roughly equivalent to both first and second semester college calculus courses. The 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.. It extends the content to different types of equations (polar, parametric, vector-valued) and new topics (such as Euler's method, integration by parts, partial fraction decomposition, and improper integrals), and introduces the topic of sequences and series. Prerequisite: Pre-Calculus and permission from the instructor of the course. Full year, 1 credit.



SCIENCE DEPARTMENT

BIOLOGY – grade 9

This required lab course progresses from an understanding of life on a cellular-molecular level to unicellular and more complex life forms. The five kingdoms, biochemistry, genetics, microbiology, physiology, and ecology are some of the topics explored. The approach allows students to see organisms as a whole, with all systems functioning together. Labs, demonstrations, field trips, and outside speakers enhance the understanding of inter-relationships and biological studies. Critical thinking skills are developed as students are confronted with situations that make it necessary to synthesize facts, make observations, and form conclusions and opinions. Full year, 1 credit.

AP BIOLOGY - grade 11 or 12

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes - energy and communication, genetics, information transfer, ecology, and interactions. Prerequisite: Completion of 1 year of Biology and 1 year of Chemistry. Full year, 1 credit.

CHEMISTRY - grade 10

Chemistry is the study of the composition of matter and the changes that matter undergoes. This course focuses on the basic principles of general chemistry, with a strong emphasis on problem solving, critical thinking, and laboratory skills. Laboratory investigation using the scientific method will be a major part of the course. Full year, 1 credit.

AP CHEMISTRY – grade 11 or 12

The AP Chemistry course provides students with a college-level foundation to support future advanced course work in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore topics such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium. Prerequisite: Completion of 1 year of Chemistry. Full year, 1 credit.

AP ENVIRONMENTAL SCIENCE – grade 11 or 12

The goal of this course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. This course examines a variety of natural science fields (e.g. environmental science, ecology, geology, chemistry, geography) and several social science disciplines (e.g. economics, politics, ethics). This course is designed to fully acquaint students with the many topics and subject areas within the environmental science field and to provide them with opportunities to apply their knowledge to their daily lives. Additionally, the course promotes environmental science literacy so that students will be better prepared to make decisions on issues impacting the environment. Other course objectives include establishing a sense of stewardship for the environment and illustrating that one person can make a difference. Prerequisite: Biology and Chemistry. Full year, 1 credit.

PHYSICS - grade 11 or 12 *One Physics Class is Required*

Physics is an algebra-based, introductory physics course. Students cultivate their understanding of physics through inquiry-based investigations as they explore these topics: kinematics; dynamics; circular motion and gravitation; energy; momentum; simple harmonic motion; torque and rotational motion; electric charge and electric force; DC circuits; and mechanical waves and sound. Prerequisite: Completion of Algebra II. Full year, 1 credit.

AP PHYSICS 1 - grade 11 or 12 *One Physics Class is Required*

AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through inquiry-based investigations as they explore these topics: kinematics; dynamics; circular motion and gravitation; energy; momentum; simple harmonic motion; torque and rotational motion; electric charge and electric force; DC circuits; and mechanical waves and sound. Prerequisite: Completion of Algebra II. Full year, 1 credit.

AP PHYSICS C – grade 12

AP Physics C: Mechanics is equivalent to a one-semester, calculus-based, college-level physics course, especially appropriate for students planning to specialize or major in physical science or engineering. The course explores topics such



as kinematics; Newton's laws of motion; work, energy and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation. Introductory differential and integral calculus is used throughout the course. Students should have taken or be concurrently taking Calculus. Full year, 1 credit.

HUMAN ANATOMY AND PHYSIOLOGY, grade 11 or 12

Anatomy and Physiology is the study of the structural and functional characteristics of living things. The course will begin at the microscopic level with atoms and cells and proceed through each of the organ systems so that a full understanding of the human body can be gained. Student will gain knowledge of anatomical and physiological concepts through lecture and hands-on lab activities and dissections. Full year, 1 credit.



SOCIAL STUDIES DEPARTMENT

AP HUMAN GEOGRAPHY – grade 9

The AP Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socio-economic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards (2012). Full year, 1 credit.

AP WORLD HISTORY - grade 10

In AP World History, students investigate significant events, individuals, developments, and processes in six historical periods from approximately 8000 B.C.E. to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. The course provides five themes that students explore throughout the course in order to make connections among historical developments in different times and places: interaction between humans and the environment; development and interaction of cultures; state building, expansion, and conflict; creation, expansion, and interaction of economic systems; and development and transformation of social structures. Full year, 1 credit.

AP UNITED STATES HISTORY – grade 11

In AP United States History, students investigate significant events, individuals, developments, and processes in nine historical periods from approximately 1491 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. The course also provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: American and national identity; migration and settlement; politics and power; work, exchange, and technology; America in the world; geography and the environment; and culture and society. Full year, 1 credit.

AP UNITED STATES GOVERNMENT AND POLITICS – grade 12

AP United States Government and Politics provides a college-level, nonpartisan introduction to key political concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States. Students will study U.S. foundational documents, Supreme Court decisions, and other texts and visuals to gain an understanding of the relationships and interactions among political institutions, processes, and behaviors. They will also engage in disciplinary practices that require them to read and interpret data, make comparisons and applications, and develop evidence-based arguments. In addition, they will complete a political science research or applied civics project. One semester, ½ credit.

ECONOMICS – grade 12

This required course provides a basic survey of topics related to the study of both microeconomics and macroeconomics. Students will explore how various institutions chose to use their scarce resources. Graphical analysis and application of ideas are heavily emphasized. In addition, students complete simulations in personal finance, business development, and stock investment. One semester, ½ credit.



ELECTIVES

JAPANESE HISTORY - grade 11 or 12

This course will be a survey of the history of Japan, all the way from the very early Jōmon Period to the modern day. Students will learn about the founding of the longest-reigning imperial family in human history, the rise of the famous samurai warrior class, World War II, and the modern world-influencing culture of Japan. One semester, ½ credit.

MILITARY STRATEGY - grade 11 or 12

Much of history was decided on the battlefield, and in this course, students will learn the fundamentals of how battles and wars were fought and won. Students will read the writing of Sun Tzu and Clausewitz and learn how to analyze strategic and tactical decisions of great battles and wars of the past. One semester, ½ credit.

MODERN BLACK HISTORY - grade 11 or 12

This course will examine in detail the experience of African Americans throughout the history of the United States. In general, the course will begin with a discussion of the Middle Passage and end with a look at the Civil Rights Movement as it extends into the new millennium. Along the way, we will touch on numerous issues facing blacks in America today, and examine how those issues are products of unique historical circumstances. The course will focus on how the experience of blacks in America has differed from that of Americans of European descent, what those different experiences imply about America as a whole, and what impact African American culture has had on American society at large. Through an extensive study of primary sources and scholarly writings and frequent responses to those readings in both written and discussion form, students will further refine their abilities to analyze, understand, and articulate history. One semester, ½ credit.



WORLD LANGUAGE DEPARTMENT

FRENCH I/SPANISH I

These courses provide an introduction to the language and culture of French and Spanish-speaking countries. Students will be introduced to the basics of grammar, vocabulary, pronunciation, and culture. Students are expected to develop a general understanding of the nature and function of the language in preparation for the second year of study. Instruction in this course will provide a balanced focus on the following four language skills: reading, writing, listening, and speaking. Students will be able to comprehend and produce limited, meaningful compositions and dialogues. Their reading and listening skills will be practiced through the use of scaffolded, authentic sources. Lessons are centered on communication in order to accomplish practical tasks in familiar situations. No prerequisite. Full year, 1 credit.

FRENCH II/SPANISH II

Second-year French/Spanish instruction solidifies and expands the instructional concepts of the previous year and adds complexity, thus helping students form a complete and firm base in the language. Instructors help students develop the skills to interpret chunks of information and complete longer texts. As their vocabulary grows and their grammatical structures move to more complex structures, students will express themselves through connected ideas with growing fluidity. Students continue to acquire and enhance their understanding of culture through short class discussion and project-based learning. Prerequisite: French I/Spanish I. Full year, 1 credit.

FRENCH III/SPANISH III

The third year is for students with a strong base in the language who consistently demonstrate the interest and skills to handle the rigor of the course. Students will work toward mastery of interpersonal, presentational, and interpretative communication skills while they explore new facets of the culture, thus developing a more sophisticated mode of communication. Through the incorporation of limited idioms and cohesive devices, students increase vocabulary and develop a more fluid and organized means of self-expression. Grammar instruction at this level focuses on compound tenses and adds dimension to students' pre-existing capabilities in the target language. The incorporation of increasingly complex authentic sources helps students move beyond the recognizable and familiar to the independent exploration of the new and advanced. Prerequisite: French/Spanish II. Full year, 1 credit.

FRENCH IV/SPANISH IV

These courses are for those students who would like to deepen their knowledge of the target language at an advanced level without the rigor and limitations of the AP curriculum. It is designed to help students further their level of proficiency so they may communicate with ease and increased fluidity in a native-speaking environment. On a daily basis, students will engage with authentic materials in order to strengthen their recognition of and competency with advanced grammar concepts. Interaction with professional, academic, and culturally relevant authentic sources naturally expands each student's vocabulary base in a personalized manner. Finally, students will explore the intricacies of the native speakers' culture, drawing valuable inferences and insights. The course is conducted in a seminar, discussion-based format that challenges students to synthesize their learning. Prerequisite: French/Spanish III. Full year, 1 credit.

AP SPANISH LANGUAGE AND CULTURE

The AP Spanish Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP Spanish Language and Culture course strives not to overemphasize grammatical accuracy at the expense of communication. To best facilitate the study of language and culture, the course is taught almost exclusively in Spanish. The AP Spanish Language and Culture course engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions). Prerequisite: Spanish III. Full year, 1 credit.

AP FRENCH LANGUAGE AND CULTURE

Prerequisites: French III. Full Year. 1 credit.



COMPUTER SCIENCE AND TECHNOLOGY DEPARTMENT

COMPUTER SCIENCE I *Required

In Computer Science I, students will develop a foundation of computer science knowledge and learn new approaches to problem solving that harness the power of computational thinking to become both users and creators of computing technology. Students are encouraged to think creatively while using computer software and other technology to explore questions that interest them. They will also develop effective communication and collaboration skills, work individually and collaboratively to solve problems, and discuss and write about the importance of these problems and the impacts to their community, society, and the world. Students will learn these concepts using the Code.org platform. One semester, ½ credit.

COMPUTER SCIENCE II *Required

Computer Science II is a continuation of Computer Science I and provides students with a rigorous foundation in Java for the AP Computer Science class. Students will continue to broaden their knowledge of computing topics including developing a well-rounded and balanced view about data in the world around them, the positive and negative effects of technology, and understanding the basics of how and why modern encryption works. Students will learn these concepts using the Code.org, Greenfoot, and other platforms. Prerequisite: Completion of Computer Science I. One semester, ½ credit.

ELECTIVE COURSES

AP COMPUTER SCIENCE

Advanced Placement Computer Science is a full-year, college-level course covering application software design and development using the Java language. As the Internet has become a way of communication, Java has become the world's programming language of choice, with its cross-platform, "write once, run anywhere," functionality. This course, approved by the College Board, provides a thorough coverage of the AP-specified core subset of the Java language and prepares students to take the College Board Exam. Prerequisite: Completion of Computer Science II with a grade of A- or better and permission of the instructor required. Full year, 1 credit.

ROBOTICS (First Tech Challenge)

This course will foster students' creativity and innovation through the design and implementation of a robot to compete in the FIRST Tech Challenge (www.firstinspires.org). FIRST Tech Challenge teams are challenged to design, build, program, and operate robots to compete in a head-to-head challenge in an alliance format. Teams will also learn entrepreneurial skills such as fundraising, brand design and marketing, and community outreach. Students will gain an understanding of the principles of robotics through the study of programming and engineering design concepts. Requires outside participation on Lakehill's FIRST Challenge team. Full year, 1 credit.



FINE ARTS DEPARTMENT

COMPUTER GRAPHIC DESIGN

Learn how to use Adobe Creative Suite including Photoshop, Illustrator, InDesign, and MORE! Learn the fundamentals of good graphic design and photography manipulations to create content to communicate ideas that inspire, inform, and captivate. We also will have a unit on creating digital art where you can learn how to make repeating patterns, or take your own digital art to the next level. Students need to have an ipad or laptop able to run Adobe Creative Suite. An Apple pencil is also recommended. One semester, ½ credit.

DRAWING

A one-semester course devoted to drawing, using pencil, charcoal, and ink. Areas of concentration include life drawing, landscape (one- and two-point perspective), and still life. One semester, ½ credit.

AP STUDIO ART: DRAWING

The AP Studio Art portfolios are designed for students who are seriously interested in the practical experience of art. Students submit portfolios for evaluation at the end of the school year. The portfolios correspond to the most common college foundation courses. Students create a portfolio of work to demonstrate the artistic skills and ideas they have developed, refined, and applied over the course of the year to produce visual compositions. Full year, 1 credit.

PAINTING

A one-semester course devoted to painting, using acrylic, watercolors, and oils. Areas of concentration include self-portraits, landscape, and still life. One semester, ½ credit.

SCULPTURE

A one-semester course devoted to sculpture. Media involved include ceramics, constructivism, and papier-mâché. One semester. ½ credit.

CERAMICS

This semester-long course will focus on the basics of handbuilding with clay. Learn to make art that is also a utilitarian object. Students will learn (or review) the basics of working with clay and be able to choose projects provided or create one from their imagination. Make your own mug or bowl. Make a ceramic sculpture of your favorite animal or an abstract wonder. We will also learn about glazing and finishing our pieces. This class is perfect for a beginner or someone who has lots of experience with ceramics. Lets see what you can create! One semester, ½ credit.

PORTFOLIO DEVELOPMENT

Portfolio development class is for students that wish to eventually take AP Drawing as a senior. This class will also help students build an art portfolio for admission to colleges of art. The primary focus will be on the sustained investigation part of the AP Drawing curriculum. Each student will need to develop an idea for the sustained investigation then create work that shows the development of this idea. Any mark making medium is allowed including painting, drawing, and digital work. One semester, ½ credit or one year, 1 credit.

YEARBOOK

This course solely works toward the completion of a large finished product, the Lakehill Yearbook. In this course, students will gain skills in page design, advanced publishing techniques, copywriting, editing, and photography, while producing a creative, innovative yearbook which records school memories and events. Students will identify and report news-making events, while incorporating journalistic forms, techniques, and knowledge to document a year in the history of Lakehill and its community. Participants gain useful, real-world skills in time management, marketing, teamwork, and design principles. Students also learn Adobe Photoshop and InDesign. Out of class and after school, students will "shoot" digital photos, sell and design advertising, and create and analyze student polls. Students are responsible for the proper care and handling of digital cameras. Full-year class only, 1 credit.



DIGITAL FILM PRODUCTION

Focusing on the importance of organization and experimentation within the digital production process, this course will prepare students for the planning, production, and post-production of quality films, newscasts, music videos, and documentaries, and will allow students to tell a story. With the technology of smartphones, tablets, and digital camcorders, students will be able to create digital productions ranging from fiction to non-fiction, from reality to fantasy, from local happenings to the far reaches of outer space. To successfully create, students will need to focus on the five areas of digital production: development, pre-production, production, post-production, and distribution. Each area poses its own challenges and allows for collaboration with other students, faculty, and community members. One semester, 1/2 credit.

DRAMA

This elective is a formal introduction to drama, including the study of character analysis via discussion, television, and films. Emphasis is placed on students developing creative expression and confidence through participation in a full rehearsal process which concludes with the performance of a play. One semester, ½ credit.

MUSICAL THEATER

Musical Theater is a one-semester course. Students will produce a full musical or musical revue which involves dancing, singing, and acting. Students must be present at all out-of-school rehearsals and all performances. One semester, ½ credit.

UPPER SCHOOL CHOIR

The choir will perform at the Upper School Winter Concert, ISAS, and the Spring Choir Concert. Music performed ranges from classical choral music to pop choral styles. Choir may be mixed with boys and girls or a separate girls choir (Women's Chorale) and boys choir (Man Choir) depending on schedules. One semester or Full year, ½ or 1 credit.

CERAMICS 2

This is a project based class where students will use their beginning knowledge of ceramics to dive deeper into exploring the functional and sculptural side of clay! Students will learn to center and learn the basics of throwing on a potter's wheel. Students will learn to explore a deeper understanding of glaze and how to use it. Prerequisite: Ceramics. One semester, ½ credit. One semester, ½ credit.

DIGITAL PHOTOGRAPHY

Learn composition, effective use of light, file management, digital image manipulation and developing a photographic vision. Students entering the course must have a digital camera. This is a project based class focused on learning the techniques to make your photographs a true piece of art as well as using Adobe Photoshop to manipulate your images. One semester, ½ credit.

DANCE

This class is open to all levels focusing on movement patterning, strength, and flexibility through classic, contemporary, and street dance forms. Strongly suggested for those interested in the musical theatre elective. There will be an informal showing at the end of the quarter. One semester, ½ credit.

ART HISTORY

Whether you are an art enthusiast who would like to know more about the history behind your favorite works and artists, or somebody who could not tell a Titian from a De Kooning—but would like to—the Art History elective is for you. You will take a tour of thirty millennia of artistic expression, covering artistic movements, major artists, and indispensable masterworks, and the world events and cultural trends that helped spawn them. With the help of informative film series like "How the Pyramids Were Built", "Art of the Western World ", and "Godfather's of the Renaissance " you will see how and why art of the past evolved. Although your textbook is titled "Art History for Dummies" you do not have to be one to enroll in this fun and informative class. One semester, ½ credit.



GENERAL ELECTIVES

FILM APPRECIATION

This course concentrates on the viewing, analysis, and criticism of a wide range of films. Students will explore movies from the early silent period to classic Hollywood genres including musicals, thrillers, westerns, sci-fi fantasy, European, and Japanese anime cinema. One semester, ½ credit.

PERSONAL FINANCE – grade 11 or 12

The course presents essential knowledge and skills to make informed decisions about real world financial issues. Students will learn how choices influence occupational options and future earning potential. Students will also learn to apply decision-making skills to evaluate career choices and set personal goals. The course content is designed to help the learner make wise budgeting, spending, saving, and credit decisions and to make effective use of income to achieve personal financial success. Based on student interest, the course may also include information about investing (stocks, bonds, commodities, real estate, IRAs, etc), college financing, introductory information about creating a small business, or other student financial interests. One semester, ½ credit.

SURVEY OF MATHEMATICS - grade 10 or 11 or 12

This course will explore unique systems of mathematics not typically explored in traditional math classes. These include other-than base 10 number systems (binary, base five, base twenty - Mayan mathematics), non-euclidean geometries (Lobachyskian and Reimannian geometry), history of math, as well as additional topics of student interest. The only requirements are Algebra 1 and Geometry (could be concurrent with Geometry). One semester, ½ credit.

PSYCHOLOGY - grade 11 or 12

Students study the science of behavior and mental processes. Students examine the full scope of the science of psychology such as the historical framework, methodologies, human development, motivation, emotion, sensation, perception, personality development, cognition, learning, intelligence, biological foundations, mental health, and social psychology. One semester, ½ credit.

SOCIOLOGY - grade 11 or 12

Sociology, an elective course, is an introductory study in social behavior and organization of human society. This course will describe the development of the field as a social science by identifying methods and strategies of research leading to an understanding of how the individual relates to society and the ever changing world. Students will also learn the importance and role of culture, social structure, socialization, and social change in today's society. One semester, ½ credit.