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**THE GEORGE  
WASHINGTON  
UNIVERSITY**

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WASHINGTON, DC

**ONLINE HIGH SCHOOL**

POWERED BY K12

2023-2024  
Course Catalog

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# Middle School

GWUOHS offers a full list of standard 8<sup>th</sup> grade courses as listed below. Eighth-grade students who are more advanced in one or more subject areas and wish to challenge themselves even further are eligible to enroll in high school courses, with the approval of our college counselor. The full list of high school courses can be found in the high school section of the catalog.

## ENGLISH and LANGUAGE ARTS

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### SUMMIT LANGUAGE ARTS 8

Throughout this course, students engage in literary analysis and close reading of short stories, poetry, drama, novels, and informational texts. The course focuses on the interpretation of literary works, analysis of informational texts, and the development of oral and written communication skills in standard (formal) English. Students read “between the lines” to interpret literature and go beyond the text to discover how the culture in which a work of literature was created contributes to the theme and ideas it conveys. Analysis of the structure and elements of informational texts and media helps students develop the skills needed for academic success and navigating the world. Students continue to acquire knowledge and skills in grammar, usage, mechanics, and vocabulary. Implementing reading strategies, self-monitoring progress, and reflecting on successes and challenges help students become metacognitive learners. The course includes discussion activities that engage students in the curriculum while creating a sense of community.

**Course Length:** Two Semesters

**Prerequisite:** Language Arts 7 or equivalent

## MATH

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### SUMMIT ALGEBRA 1

The Summit Algebra 1 course is intended to formalize and extend the mathematics that students learned in the middle grades. Because it is built to follow revised middle school math courses, the course covers slightly different ground than previous versions of algebra. In this course, students deepen their understanding of linear and exponential relationships by contrasting them with each other. Students also apply linear models to data that exhibit a linear trend. The course also covers analyzing, solving, and using quadratic functions.

**Course Length:** Two Semesters

## SCIENCE

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### SUMMIT PHYSICAL SCIENCE

The Physical Science curriculum introduces students to many aspects of the physical world, focusing first on chemistry and then on physics. The course provides an overview of the physical world and gives students tools and concepts to think clearly about matter, atoms, molecules, chemical reactions, motion, force, momentum, work and machines, energy, waves, electricity, light, and other aspects of chemistry and physics.

Among other subjects, students study the structure of atoms; the elements and the Periodic Table; chemical reactions; forces, including gravitational, motion, acceleration, and mass; and energy, including light, thermal, electricity, and magnetism.

**Course Length:** Two Semesters

## HISTORY

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### SUMMIT WORLD HISTORY II

Continuing a survey of World History from prehistoric to modern times, K12 online lessons and assessments complement the second volume of *The Human Odyssey*, a textbook series developed and published by K12. This course focuses on the story of the past from the fourteenth century to 1917 and the beginning of World War I. The course is organized chronologically and, within broad eras, regionally. Lessons explore developments in religion, philosophy, the arts, and science and technology. The course introduces geography concepts and skills as they appear in the context of the historical narrative.

**Course Length:** Two Semesters

# JOURNEYS SYMPOSIUM

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Entering a new school (and an on-line one to boot!) can be a difficult transition. The Journeys Symposium Middle and High School programs blend a robust on-line learning introduction with help in establishing academic, social, and emotional skills to best prepare students for success in middle school, high school, and beyond. Students meet in on-line classrooms with their Journeys instructor and classmates and build a sense of community and camaraderie as well as essential skill sets. The Journeys Symposium Middle School program is composed of two, consecutive year-long seminars.

## **GRADE 8: JUMPING INTO JOURNEYS**

Jumping into Journeys alludes to the 8th-grade transition into high school. This course challenges 8th graders to become leaders of the middle school community and actively map out their plan for academic success, including course scheduling and progression, career exploration, self-reflection, and preparing for the rigor of high school.

# Upper School

In comprehensive courses, students do more extensive writing and research projects and tackle problems that require more analytical thinking. Course projects and activities also demand more independent thinking and self-discipline than projects in core courses. Honors courses hold students to a greater degree of accountability and demand even greater independence and self-discipline. Students synthesize and evaluate information and concepts from multiple sources and read texts typically assigned in college-level courses. Students also demonstrate college-level writing in essays that require analysis of primary and secondary sources, responsible use of evidence, and comprehensive citation of sources. AP® courses are college-level courses that follow the curriculum specified by the College Board. These courses are designed to prepare students for success on AP® exams, providing students the opportunity to earn credit at most of the nation's colleges and universities.

## ENGLISH

[\(These courses fulfill the English Credit Requirement\)](#)

### ENG108E2: SUMMIT ENGLISH 9 (COMPREHENSIVE)

This Summit English 9 course includes engaging and interactive instruction about reading, writing, speaking, and listening, and language, with a focus on exploring a wide variety of genres and their elements. Students learn how to carefully read, interpret, and analyze literature and nonfiction works of cultural or historical significance appropriate to grade 9. Throughout the course, students practice narrative, informational, and argument writing. Students also develop and deliver presentations and participate in discussions with their peers.

**Course Length:** Two semesters

**Prerequisites:** Literary Analysis and Composition (Grade 8) or equivalent

### ENG109E2: SUMMIT ENGLISH 9 HONORS

The Summit English 9 Honors course includes engaging and interactive instruction about reading, writing, speaking, and listening, and language, with a focus on exploring a wide variety of genres and their elements. Students learn how to carefully read,

interpret, and analyze literature and nonfiction works of cultural or historical significance appropriate to grade 9. Throughout the course, students practice narrative, informational, and argument writing. Students also develop and deliver presentations and participate in discussions with their peers.

This course includes all the topics in ENG108 as well as several extension activities. Each semester also includes an independent honors project.

**Course Length:** Two semesters

**Prerequisites:** Literary Analysis and Composition (Grade 8) (or equivalent)

### ENG208E2: SUMMIT ENGLISH 10 (COMPREHENSIVE)

The Summit English 10 course includes engaging and interactive instruction about reading, writing, speaking, and listening, and language, with a focus on exploring a wide variety of genres and their elements. Students learn how to carefully read, interpret, and analyze literature and nonfiction works of cultural or historical significance appropriate to grade 10. Throughout the course, students practice narrative, informational, and argument writing. Students also develop and deliver presentations and participate in discussions with their peers.

**Course Length:** Two semesters

**Prerequisite:** Literary Analysis and Composition I (or equivalent)

### ENG209E2: SUMMIT ENGLISH 10 HONORS

The Summit English 10 Honors course includes engaging and interactive instruction about reading, writing, speaking, and listening, and language, with a focus on exploring a wide variety of genres and their elements. Students learn how to carefully read, interpret, and analyze literature and nonfiction works of cultural or historical significance appropriate to Grade 10. Throughout the course, students practice narrative, informative, and argument writing. Students also develop and deliver presentations and participate in discussions with their peers.

This course includes all the topics in Summit English 10, as well as an independent honors project in each semester.

**Course Length:** Two semesters

**Prerequisites:** Literary Analysis and Composition I (or equivalent)

### **ENG303E3: SUMMIT AMERICAN LITERATURE (COMPREHENSIVE)**

In this course, students read and analyze works of American literature from colonial to contemporary times, including poetry, short stories, novels, drama, and nonfiction. These works provide opportunities for text analysis, critical writing, creative projects, and online discussions. Students develop vocabulary skills and refresh their knowledge of grammar, usage, and mechanics in preparation for standards tests.

**Course Length:** Two semesters

**Prerequisite:** English 10 (or equivalent)

### **ENG304E3: SUMMIT AMERICAN LITERATURE HONORS**

In this course, students read and analyze works of American literature from colonial to contemporary times, including poetry, short stories, novels, drama, and nonfiction. The literary works provide opportunities for critical writing, creative projects, and online discussions. Students develop vocabulary skills and refresh their knowledge of grammar, usage, and mechanics. Students enrolled in this challenging course will also complete independent projects that deepen their understanding of the themes and ideas presented in the curriculum.

**Course Length:** Two semesters

**Prerequisites:** English 10 Honors (or equivalent) and teacher/school counselor recommendation.

### **ENG313: RHETORIC (COMPREHENSIVE)**

This course is designed for students who already have a basic understanding of the writing process in general and some experience with research writing. The course examines elements of various analytical writing patterns (expository, descriptive, compare and contrast, argument, etc.). After a refresher of these patterns, students will complete a series of research projects and begin compiling a writing portfolio showcasing their abilities as writers. The goal of this course is to prepare students for the writing challenges that exist for freshmen entering a typical four-year university.

**Course Length:** Two semesters. Semesters A and B should be taken consecutively and not simultaneously.

### **ENG403: SUMMIT BRITISH AND WORLD LITERATURE (COMPREHENSIVE)**

Students read selections from British and world literature in a loosely organized chronological framework. They analyze the themes, styles, and structures of these text and make thematic connections among diverse authors, periods, and settings. Students complete guided and independent writing assignments that refine their analytical skills. They have opportunities for creative expression in projects of their choice. Students also practice test-taking skills for standardized assessments in critical reading and writing.

**Course Length:** Two semesters

**Prerequisites:** ENG303: American Literature (or equivalent)

### **ENG404: SUMMIT BRITISH AND WORLD LITERATURE HONORS**

Students read selections from British and world literature in a loosely organized chronological framework. They analyze themes, styles, and structures of these texts and make thematic connections among diverse authors, periods, and settings. Students work independently on many of their analyses and engage in creative collaboration with their peers. Students also practice test-taking skills for standardized assessments in critical reading and writing.

**Course Length:** Two semesters

**Prerequisites:** ENG304: Honors Literary Analysis and Composition II (or equivalent) or ENG304: Honors American Literature (or equivalent); and teacher/school counselor recommendation

### **ENG500E4: AP® ENGLISH LANGUAGE AND COMPOSITION**

The course is structured into units, based on the College Board guide. Students will closely examine big ideas such as: rhetorical situation, claims and evidence, reasoning and organization and style. They will read a variety of non-fiction writings, including scientific, sociological, philosophical, and narrative texts. The students will read, annotate, and write synthesis essays (using several primary sources), as well as argument and rhetorical analysis essays. Students will work through the writing process using peer review and teacher feedback to complete several drafts of their work. This course is designed to be equivalent of a one-semester introductory college-or university-level survey course. This course meets guidelines outlined in the College Board's AP® English Language and Composition Course and Exam Description.

**Course Length:** Two semesters

**Prerequisites:** Success in ENG204: Honors Literary Analysis and Composition II (or equivalent) or ENG304: Honors American Literature (or equivalent), and teacher/school counselor recommendation

### **ENG510E4: AP® ENGLISH LITERATURE AND COMPOSITION**

The course is structure into units, based on the College Board Course and Exam Description. Students will closely examine big ideas such as: character, setting, structure, narration, figurative language, and literary argument. They will read fictional works, including short fiction, long fiction, poetry, and drama from a variety of countries and time periods. Students will practice analyzing works through an assortment of strategies. Students will write multiple essays encompassing prose fiction analysis, poetry analysis, and literary argument. They will also complete a full research paper that compares two works, utilizing secondary, as well as primary, sources. They will complete an annotated bibliography and work through the writing process using peer review and teacher feedback to complete several drafts of their paper. In addition, students will be given opportunities to practice for the AP® exam, with both multiple-choice questions and timed essays. This course is designed to be the equivalent of a one-semester introductory college-or university-level survey course.

**Course Length:** Two semesters

**Prerequisites:** Success in ENG204: Honors Literary Analysis and Composition II (or equivalent) or ENG304: Honors American Literature (or equivalent), and teacher/school counselor recommendation

# MATH

(These courses fulfill the Math Credit Requirement)

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## MTH128 SUMMIT ALGEBRA 1

The Summit Algebra 1 course is intended to formalize and extend the mathematics that students learned in the middle grades. Because it is built to follow revised middle school math courses, the course covers slightly different ground than previous versions of algebra. In this course, students deepen their understanding of linear and exponential relationships by contrasting them with each other. Students also apply linear models to data that exhibit a linear trend. The course also covers analyzing, solving, and using quadratic functions.

**Course Length:** Two semesters

## MTH129: SUMMIT ALGEBRA 1 HONORS

K12's Summit Algebra 1 course is intended to formalize and extend the mathematics that students learned in the middle grades. Because it is built to follow revised middle school math courses, the course covers slightly different ground than previous versions of Algebra. In this course, students deepen their understanding of linear and exponential relationships by contrasting them with each other. Students also apply linear models to data that exhibit a linear trend. The course also covers analyzing, solving, and using quadratic functions.

**Course Length:** Two semesters

## MTH307: SUMMIT PRACTICAL MATH

In this course, students use math to solve real-world problems—and real-world problems to solidify their understanding of key mathematical topics. Data analysis, math modeling, and personal finance are key themes in this course. Specific topics of study include statistics, probability, graphs of statistical data, regression, finance, and budgeting. In addition, students learn how to use several mathematical models involving algebra and geometry to solve problems. Proficiency is measured through frequent online and offline assessments as well as class participation. Units focused on projects also allow students to apply and extend their math skills in real-world cases.

**Course Length:** Two semesters

**Prerequisites:** Algebra I and Geometry

## MTH208: SUMMIT GEOMETRY (COMPREHENSIVE)

This Summit Geometry course builds on the geometry covered in middle school to explore more complex geometric situations and deepen students' ability to explain geometric relationships, moving

toward formal mathematical arguments. Specific topics include similarity and congruence, analytic geometry, circles, the Pythagorean theorem, right triangle trigonometry, analysis of three-dimensional objects, conic sections, and geometric modeling.

**Course Length:** Two semesters

**Prerequisite:** Algebra 1 (or equivalent)

## MTH209: SUMMIT GEOMETRY HONORS

This Summit Geometry Honors course builds on the geometry covered in middle school to explore more complex geometric situations and deepen students' ability to explain geometric relationships, moving toward formal mathematical arguments. Specific topics include similarity and congruence, analytic geometry, circles, the Pythagorean theorem, right triangle trigonometry, analysis of three-dimensional objects, conic sections, and geometric modeling. This course includes all the topics in MTH208 as well as several extension activities. Each semester also includes an independent honors project.

**Course Length:** Two semesters

**Prerequisites:** Algebra 1 (or equivalent)

## MTH308: SUMMIT ALGEBRA 2 (COMPREHENSIVE)

This Summit Algebra 2 course, students build on their work with linear, quadratic, and exponential functions, and extend their repertoire to include polynomial, rational, radical, and trigonometric functions. Students also expand their ability to model situations and solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. The course covers sequences and series, probability distributions, and more advanced data analysis techniques.

**Course Length:** Two semesters

**Prerequisites:** Algebra 1 and Geometry (or equivalents)

## MTH309: SUMMIT ALGEBRA 2 HONORS

This Summit Algebra 2 Honors course, students build on their work with linear, quadratic, and exponential functions, and extend their repertoire to include polynomial, rational, radical, and trigonometric functions. Students also expand their ability to model situations and solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. The course covers sequences and series, probability distributions, and more advanced data analysis techniques. This course includes all the topics in MTH308 as well as several extension activities. Each semester also includes an independent honors project.

**Course Length:** Two semesters

**Prerequisites:** Algebra 1 and Geometry (or equivalents)

### **MTH403: SUMMIT PRE-CALCULUS/TRIGONOMETRY (COMPREHENSIVE)**

Pre-calculus weaves together concepts of algebra and geometry into a preparatory course for calculus. The course focuses on the mastery of critical skills and exposure to new skills necessary for success in subsequent math courses. Topics include quadratic, exponential, logarithmic, radical, polynomial, and rational functions; matrices; and conic sections in the first semester. The second semester covers an introduction to infinite series, trigonometric ratios, functions, and equations; inverse trigonometric functions; applications of trigonometry, including vectors; polar equations and polar form of complex numbers; arithmetic of complex numbers; and parametric equations. Connections are made throughout the course to calculus and a variety of other fields related to mathematics. Purposeful concentration is placed on how the concepts covered relate to each other. Demonstrating the connection between the algebra and the geometry of concepts highlights the interwoven nature of the study of mathematics.

**Course Length:** Two semesters

**Prerequisites:** MTH203: Geometry and MTH303: Algebra II (or equivalents)

### **MTH413: SUMMIT PROBABILITY AND STATISTICS (COMPREHENSIVE)**

Students learn counting methods, probability, descriptive statistics, graphs of data, the normal curve, statistical inference, and linear regression. Proficiency is measured through frequent online and offline assessments, as well as asynchronous discussions. Problem-solving activities provide an opportunity for students to demonstrate their skills in real-world situations.

**Course Length:** One semester

**Prerequisite:** MTH303: Algebra II (or equivalent)

### **MTH433: SUMMIT CALCULUS**

This course provides a comprehensive survey of differential and integral calculus concepts, including limits, derivative and integral computation, linearization, Riemann sums, the fundamental theorem of calculus, and differential equations. Content is presented across ten units and covers various applications, including graph analysis, linear motion, average value, area, volume, and growth and decay models. In this course students use an online textbook, which supplements the instruction they receive and provides additional opportunities to practice using the content they've learned. Students will use an embedded graphing calculator applet (GCalc) for their work on this course; the software for the applet can be downloaded at no charge.

**Course Length:** Two semesters

**Prerequisites:** MTH403: Summit Pre-Calculus/Trigonometry (or equivalent)

### **MTH500E3: AP® CALCULUS AB**

In AP Calculus AB, students learn to understand change geometrically and visually (by studying graphs of curves), analytically (by studying and working with mathematical formulas), numerically (by seeing patterns in sets of numbers), and verbally. Instead of simply getting the right answer, students learn to evaluate the soundness of proposed solutions and to apply mathematical reasoning to real-world models. Calculus helps scientists, engineers, and financial analysts understand the complex relationships behind real-world phenomena. The equivalent of an introductory college-level calculus course, AP Calculus AB prepares students for the AP exam and further studies in science, engineering, and mathematics.

**Course Length:** Two semesters

**Prerequisites:** MTH403: Summit Pre-Calculus/Trigonometry (or equivalent)

### **MTH510E3: AP® STATISTICS**

AP Statistics gives students hands-on experience in collecting, analyzing, graphing, and interpreting real-world data. They will learn to effectively design and analyze research studies by reviewing and evaluating real research examples taken from daily life. The next time they hear the results of a poll or study, they will know whether the results are valid. As the art of concluding imperfect data and the science of real-world uncertainties, statistics play an important role in many fields. The equivalent of an introductory college-level course, AP Statistics prepares students for the AP exam and further study in science, sociology, medicine, engineering, political science, geography, and business.

**Course Length:** Two semesters

**Prerequisites:** MTH303: Algebra II (or equivalent)

## **SCIENCE**

(These courses fulfill the Science Credit Requirement)

### **SCI113E3: SUMMIT EARTH SCIENCE (COMPREHENSIVE)**

This course provides students with a comprehensive earth science curriculum, focusing on geology, oceanography, astronomy, weather, and climate. The program consists of in-depth online lessons, an associated reference book, collaborative activities, virtual laboratories, and hands-on laboratories students can conduct at home. The course prepares students for further studies in geology, meteorology, oceanography, and astronomy courses, and gives them practical experience in implementing scientific methods.

**Course Length:** Two semesters

**Prerequisite:** Middle School Life Science (or equivalent)



### SCI114E3: SUMMIT EARTH SCIENCE HONORS

This challenging course provides students with an honors-level earth science curriculum, focusing on geology, oceanography, astronomy, weather, and climate. The program consists of online lessons, an associated reference book, collaborative activities, and hands-on laboratories students can conduct at home. The course prepares students for advanced studies in geology, meteorology, oceanography, and astronomy courses, and gives them more sophisticated experience in implementing scientific methods. Additional honors assignments include debates, research papers, and extended collaborative laboratories.

**Course Length:** Two semesters

**Prerequisites:** Middle School Earth Science (or equivalent) Middle School Physical Science (suggested, or equivalent); and teacher/school counselor recommendation

### SCI203E3: SUMMIT BIOLOGY (COMPREHENSIVE)

In this comprehensive course, students investigate the chemistry of living things: the cell, genetics, evolution, the structure and function of living things, and ecology. The program consists of in-depth online lessons, including extensive animations, collaborative explorations, virtual laboratories, and hands-on laboratory experiments students can conduct at home.

**Course Length:** Two semesters

**Prerequisites:** Middle School Life Science (or equivalent)

### SCI204E3: SUMMIT BIOLOGY HONORS

This course provides students with a challenging honors-level biology curriculum, focusing on the chemistry of living things: the cell, genetics, evolution, the structure and function of living things, and ecology. The program consists of advanced online lessons, including extensive animations, an associated reference book, collaborative explorations, and hands-on laboratory experiments students can conduct at home. Honors activities include debates, research papers, extended collaborative, and virtual laboratories.

**Course Length:** Two semesters

**Prerequisites:** Middle School Life Science (or equivalent), success in previous science course; and teacher/counselor recommendation.

### SCI303E3: SUMMIT CHEMISTRY (COMPREHENSIVE)

This course gives students a solid basis to move on to future studies. The course provides an in-depth survey of all key areas, including atomic structure, chemical bonding and reactions, solutions, stoichiometry, thermochemistry, organic chemistry, and nuclear chemistry. The course includes direct online instruction, virtual laboratories, and related assessments, used with a problem-solving book.

**Course Length:** Two semesters

**Prerequisites:** Satisfactory completion of either Middle School Physical Science or SCI102: Physical Science and a solid grasp of algebra basics, evidenced by success in Algebra 1 (or equivalent)

### SCI304E3: SUMMIT CHEMISTRY HONORS

This advanced course gives students a solid basis to move on to more advanced courses. The challenging course surveys all key areas of chemistry, including atomic structure, chemical bonding and reactions, solutions, stoichiometry, thermochemistry, organic chemistry, and nuclear chemistry, enhanced with challenging model problems and assessments. Students' complete community-based written research projects treat aspects of chemistry that require individual research and reporting and participate in online threaded discussions.

**Course Length:** Two semesters

**Prerequisites:** Success in a previous science course, MTH123 or MTH124: Honors Algebra I (or equivalents); and teacher/school counselor recommendation

### SCI403: SUMMIT PHYSICS (COMPREHENSIVE)

This course provides a comprehensive survey of all key areas: physical systems, measurement, kinematics, dynamics, momentum, energy, thermodynamics, waves, electricity, and magnetism, and introduces students to modern physics topics such as quantum theory and the atomic nucleus. The course gives students a solid basis to move on to more advanced courses later in their academic careers. The program consists of online instruction, laboratories, and related assessments, plus an associated problem-solving book.

**Course Length:** Two semesters

**Prerequisites:** MTH303: Algebra II and MTH403: Pre-Calculus/Trigonometry (or equivalents) (MTH403 strongly recommended as a prerequisite, but this course may instead be taken concurrently with SCI403)

### SCI404: SUMMIT PHYSICS HONORS

This advanced course surveys all key areas: physical systems, measurement, kinematics, dynamics, momentum, energy, thermodynamics, waves, electricity, and magnetism, and introduces students to modern physics topics such as quantum theory and the atomic nucleus. Additional honors assignments include debates, research papers, extended collaborative laboratories, and virtual laboratories. The course gives a solid basis for moving on to more advanced college physics courses. The program consists of online instruction, laboratories, and related assessments, plus an associated problem-solving book.

**Course Length:** Two semesters

**Prerequisites:** MTH303: Algebra II or MTH304: Honors Algebra II and MTH403: Pre-Calculus/Trigonometry (MTH403 strongly recommended as a prerequisite, but this course may instead be taken concurrently with SCI404); and teacher/ school counselor recommendation

## SCI500E5: AP® BIOLOGY

This course guides students to a deeper understanding of biological concepts, including the diversity and unity of life, energy, and the processes of life, homeostasis, and genetics. Students learn about regulation, communication, and signaling in living organisms as well as interactions of biological systems. Students carry out a number of learning activities, including readings, interactive exercises, extension activities, hands-on laboratory experiments, and practice assessments. These activities are designed to help students gain an understanding of the science process and critical-thinking skills necessary to answer questions on the AP® Biology exam. The content aligns to the sequence of topics recommended by the College Board.

**Course Length:** Two semesters

**Prerequisites:** SCI204: Honors Biology, SCI303: Comprehensive Chemistry, MTH124: Honors Algebra I (or equivalents), and teacher/school counselor recommendation required; MTH304

## SCI510: AP® CHEMISTRY

Students solve chemical problems by using mathematical formulation principles and chemical calculations in addition to laboratory experiments. They build on their general understanding of chemical principles and engage in a more in-depth study of the nature and reactivity of matter. Students focus on the structure of atoms, molecules, and ions, and then go on to analyze the relationship between molecular structure and chemical and physical properties. To investigate this relationship, students examine the molecular composition of common substances and learn to transform them through chemical reactions with increasingly predictable outcomes.

**Course Length:** Two semesters

**Prerequisites:** SCI304: Honors Chemistry, MTH304: Honors Algebra II (or equivalents), and teacher/school counselor recommendation

## SCI530E4: AP® ENVIRONMENTAL SCIENCE

The AP® Environmental Science is designed to engage students with the scientific principles, concepts, and methodologies required to understand the interrelationships within the natural world. The course requires that students identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving or preventing them. Environmental Science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography. The AP® Environmental course is designed to be the equivalent of a one-semester, introductory college course in environmental science.

**Course Length:** Two semesters

**Prerequisites:** Students must have taken at least one year of high school algebra and completed a high school earth science.

# HISTORY AND SOCIAL SCIENCES

(These courses fulfill the History Credit Requirement)

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## HST103: SUMMIT WORLD HISTORY (COMPREHENSIVE)

In this comprehensive survey of world history from prehistoric to modern times, students focus in depth on the developments and events that have shaped civilization across time. The course is organized chronologically and, within broad eras, regionally. Lessons address developments in religion, philosophy, the arts, science and technology, and political history. The course also introduces geography concepts and skills within the context of the historical narrative. Online lessons and assessments complement *World History: Our Human Story*, a textbook written and published by K<sup>12</sup>. Students are challenged to consider topics in depth as they analyze primary sources and maps, create timelines, and complete other projects—practicing historical thinking and writing skills as they explore the broad themes and big ideas of human history.

**Course Length:** Two semesters

**Prerequisites:** K12 Middle School American History A, World History A or World History B (or equivalents)

## HST104: SUMMIT HONORS WORLD HISTORY

In this challenging survey of world history from prehistoric to modern times, students focus in-depth on the developments and events that have shaped civilization across time. The course is organized chronologically and, within broad eras, regionally. Lessons address developments in religion, philosophy, the arts, science and technology, and political history. The course also introduces geography concepts and skills within the context of the historical narrative. Online lessons and assessments complement *World History: Our Human Story*, a textbook written and published by K<sup>12</sup>. Students are challenged to consider topics in depth as they analyze primary sources and maps, create timelines, and complete other projects—practicing advanced historical thinking and writing skills as they explore the broad themes and big ideas of human history. Students complete an independent honors project each semester.

**Course Length:** Two semesters

**Prerequisites:** K12 Middle School American History A, World History A or World History B (or equivalents)

## HST303: SUMMIT U.S. HISTORY (COMPREHENSIVE)

This course is a full-year survey that provides students with a comprehensive view of American history from the first migrations of nomadic peoples to North America to recent events. Readings are primarily drawn from *Stride's The American Odyssey: A History of the United States*. Online lessons help students organize their studies, explore topics in depth, analyze events from multiple points of view, review in preparation for assessments, practice skills of historical thinking and analysis, and connect historical events to current events. Activities include analyzing primary sources and

maps, completing written assignments, and conducting research.

**Course Length:** Two semesters

**Prerequisite:** HST103: World History (or equivalents)

### **HST304: SUMMIT HONORS U.S. HISTORY**

This course is a challenging full-year survey that provides students with a comprehensive view of American history from the first migrations of nomadic people to North America to recent events. Readings are drawn from K12's *The American Odyssey: A History of the United States*. Online lessons help students organize their study, explore topics in-depth, review in preparation for assessments, and practice advanced skills of historical thinking and analysis. Activities include analyzing primary sources and maps, creating timelines, completing projects and written assignments, and conducting independent research. Students complete independent projects each semester.

**Course Length:** Two semesters

**Prerequisites:** HST103: World History, HST104: Honors World History (or equivalents), and teacher/school counselor recommendation

### **HST403: SUMMIT U.S. GOVERNMENT AND POLITICS**

Students study the history, organization, and functions of the U.S. government. Beginning with the Declaration of Independence and continuing through to the present day, students explore the relationship between individual Americans and their governing bodies. Students take a close look at the political culture of our country and gain insight into the challenges faced by citizens, elected government officials, political activists, and others. Students also learn about the roles of political parties, interest groups, the media, and the Supreme Court. They analyze current and historical issues from multiple points of view to practice and deepen their critical thinking skills.

**Course Length:** One semester

**Prerequisite:** HST303: U.S. History (or equivalent) is recommended but not required

### **HST413: SUMMIT U.S. AND GLOBAL ECONOMICS**

In this course on economic principles, students explore the choices they face as producers, consumers, investors, and taxpayers. Students apply what they learn to real-world simulation problems. Topics of study include markets from historic and contemporary perspectives; supply and demand; theories of early economic philosophers such as Adam Smith and David Ricardo; theories of value; money (what it is, how it evolved, and the roles of banks, investment houses, and the Federal Reserve); Keynesian economics; how capitalism functions, focusing on productivity, wages, investment, and growth; issues of capitalism, such as

unemployment, inflation, and the national debt; and the effects of globalization. Students also refine their critical thinking skills by analyzing economic issues from multiple perspectives.

**Course Length:** One semester

**Prerequisite:** HST403: U.S. Government and Politics (or equivalent) is recommended but not required

### **HST500: AP® U.S. HISTORY**

Students explore and analyze the economic, political, and social transformation of the United States since the time of the first European encounters. Students are asked to master not only the wide array of factual information necessary to do well on the AP® exam, but also to practice skills of critical analysis of historical information and documents. Students read primary and secondary source materials and analyze problems presented by historians to gain insight into the challenges of interpretation and the ways in which historical events have shaped American society and culture. The content aligns to the sequence of topics recommended by the College Board and to widely used textbooks. The course prepares students for the AP Exam.

**Course Length:** Two semesters

**Prerequisites:** Success in a previous history course and teacher/school counselor recommendation

### **HST510: AP® U.S. GOVERNMENT AND POLITICS**

This course is the equivalent of an introductory college-level course. Students explore the operations and structure of the U.S. government and the behavior of the electorate and politicians. Students gain the analytical perspective necessary to evaluate political data, hypotheses, concepts, opinions, and processes and learn how to gather data about political behavior and develop their own theoretical analysis of American politics. Students also build the skills they need to examine general propositions about government and politics, and to analyze specific relationships between political, social, and economic institutions. Students prepare for the AP® Exam and further study in political science, law, education, business, and history.

**Course Length:** One semester

**Prerequisites:** HST304: Honors U.S. History (or equivalent); and teacher/school counselor recommendation

### **HST520E3: AP® MACROECONOMICS**

This course is the equivalent of an introductory college-level course. Students learn why and how the world economy can change from month to month, how to identify trends in our economy, and how to use those trends to develop performance measures and predictors of economic growth or decline. Students also examine how individuals and institutions are influenced by employment rates, government spending, inflation, taxes, and production. Students

prepare for the AP® Exam and further study in business, political science, and history.

**Course Length:** One semester

**Prerequisites:** MTH309: Summit Algebra 2 Honors (or equivalent); and teacher/school counselor recommendation

### **HST530E3: AP® MICROECONOMICS**

This course is the equivalent of an introductory college-level course. Students explore the behavior of individuals and businesses as they exchange goods and services in the marketplace. Students learn why the same product can cost different amounts at different stores, in different cities, and at different times. Students also learn to spot patterns in economic behavior and learn how to use those patterns to explain buyer and seller behavior under various conditions. Lessons promote an understanding of the nature and function of markets, the role of scarcity and competition, the influence of factors such as interest rates on business decisions, and the role of government in the economy. Students prepare for the AP® exam and further study in business, history, and political science.

**Course Length:** One semester

**Prerequisites:** MTH309: Honors Algebra II (or equivalent); and teacher/school counselor recommendation

### **HST540E3: AP® PSYCHOLOGY**

AP® Psychology provides an overview of current psychological research methods and theories. Students will explore the therapies used by professional counselors and clinical psychologists and examine the reasons for normal human reactions: how people learn and think, the process of human development and human aggression, altruism, intimacy, and self-reflection. They will study core psychological concepts, such as the brain and sense function, and learn to gauge human reactions, gather information, and form meaningful syntheses. The course exposes students to facts, research, appropriate terminology, and major figures in the world of psychology. The equivalent of a 100-level college survey course, AP Psychology prepares students for the AP Exam and for further studies in psychology and life sciences. The content aligns to College Board Course and Exam Description for Psychology.

**Course Length:** One semester

**Prerequisites:** Success in a previous history course and teacher/school counselor recommendation

### **HST560E3: AP® WORLD HISTORY**

This course spans the Neolithic Age to the present in a rigorous academic format organized by chronological periods and viewed through fundamental concepts and course themes. Students analyze the causes and processes of continuity and change across historical periods. Themes include human-environment interaction, cultures, expansion and conflict, political and social structures, and economic systems. In addition, to mastering historical content, students cultivate historical thinking skills that involve crafting arguments based on evidence, identifying causation, comparing and supplying context for events and phenomena, and developing historical

interpretation. Students prepare for the AP® World History exam.

**Course Length:** Two semesters

**Prerequisites:** Success in a previous history course and teacher/school counselor recommendation

## **WORLD LANGUAGES**

(These courses fulfill the World Language Credit Requirement)

### **WLG100: SPANISH I (COMPREHENSIVE)**

Students begin their introduction to Spanish by focusing on the four key areas of world language study: listening, speaking, reading, and writing. The course represents an ideal blend of language learning pedagogy and online learning. Each unit consists of a new vocabulary theme and grammar concept, reading and listening comprehension activities, speaking and writing activities, multimedia cultural presentations, and interactive activities and practices which reinforce vocabulary and grammar. There is a strong emphasis on providing context and conversational examples for the language concepts presented in each unit. Students should expect to be actively engaged in their own language learning, become familiar with common vocabulary terms and phrases, comprehend a wide range of grammar patterns, participate in simple conversations and respond appropriately to basic conversational prompts, analyze and compare cultural practices, products, and perspectives of various Spanish-speaking countries, and take frequent assessments where their language progression can be monitored. The course has been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages).

**Course Length:** Two semesters

*Note: Students who have already completed Middle School Spanish 2 should enroll in Spanish II rather than in Spanish I.*

### **WLG200: SPANISH II (COMPREHENSIVE)**

Students continue their study of Spanish by further expanding their knowledge of key vocabulary topics and grammar concepts. Students not only begin to comprehend listening and reading passages more fully, but they also start to express themselves more meaningfully in both speaking and writing. Each unit consists of a new vocabulary theme and grammar concept, reading and listening comprehension activities, speaking and writing activities, multimedia cultural presentations, and interactive activities and practices which reinforce vocabulary and grammar. There is a strong emphasis on providing context and conversational examples for the language concepts presented in each unit. Students should expect to be actively engaged in their own language learning, understand common vocabulary terms and phrases, use a wide range of grammar patterns in their speaking and writing, participate in conversations and respond appropriately to conversational prompts, analyze and compare cultural practices, products, and perspectives of various Spanish-speaking countries, and take frequent assessments where their language progression can be monitored.

**Course Length:** Two semesters

**Prerequisites:** WLG100: Spanish I or Middle School Spanish 1 and 2 (or equivalents)

### **WLG300: SPANISH III (COMPREHENSIVE)**

Students further deepen their understanding of Spanish by focusing on the three modes of communication: interpretive, interpersonal, and presentational. Each unit consists of a variety of activities which teach the students how to understand more difficult written and spoken passages, to communicate with others through informal speaking and writing interactions, and to express their thoughts and opinions in both formal and informal spoken and written contexts. Students should expect to be actively engaged in their own language learning, use correct vocabulary terms and phrases naturally, incorporate a wide range of grammar concepts consistently and correctly while speaking and writing, participate in conversations covering a wide range of topics, respond appropriately to conversational prompts, analyze and compare cultural practices, products, and perspectives of various Spanish-speaking countries, read and analyze important pieces of Hispanic literature, and take frequent assessments where their language progression can be monitored. The course is conducted almost entirely in Spanish. The course has been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages).

**Course Length:** Two semesters

**Prerequisite:** WLG200: Spanish II (or equivalent)

### **WLG500: AP® SPANISH LANGUAGE AND CULTURE**

Our online AP Spanish Language and Culture course is an advanced language course in which students acquire proficiencies that expand their cognitive, analytical and communicative skills. The AP Spanish Language and Culture course prepares students for the College Board's AP Spanish Language and Culture exam. It uses as its foundation the three modes of communication (Interpersonal, Interpretive and Presentational) as defined in the Standards for Foreign Language Learning in the 21st Century. The course is designed as an immersion experience and is conducted almost exclusively in Spanish. In addition, all student work, practices, projects, participation, and assessments are in Spanish. The course is based on the six themes required by the College Board, namely, 1. Global challenges 2. Science and technology 3. Contemporary life 4. Personal and public identities 5. Families and communities 6. Beauty and aesthetics The course teaches language structures in context and focuses on the development of fluency to convey meaning. Students explore culture in both contemporary and historical contexts to develop an awareness and appreciation of cultural products, practices, and perspectives. In addition, students participate in a forum where they are able to share their own opinions and comments about various topics and comment on other students' posts. The course also makes great use of the Internet for updated and current material.

**Course Length:** Two semesters

**Prerequisites:** Strong success in WLG300: Spanish III (or equivalent) and teacher/school counselor recommendation

### **WLG110: FRENCH I (COMPREHENSIVE)**

Students begin their introduction to French by focusing on the four key areas of world language study: listening, speaking, reading, and writing. The course represents an ideal blend of language-learning pedagogy and online learning. Each unit consists of a new vocabulary theme and grammar concept, reading, and listening comprehension activities speaking and writing activities, multimedia cultural presentations, and interactive activities and

practices that reinforce vocabulary and grammar. There is a strong emphasis on providing context and conversational examples for the language concepts presented in each unit. Students should expect to be actively engaged in their own language learning; become familiar with common vocabulary terms and phrases; comprehend a wide range of grammar patterns; participate in simple conversations and respond appropriately to basic conversational prompts; analyze and compare cultural practices, products, and perspectives of various French-speaking countries; and take frequent assessments where their language progression can be monitored.

**Course Length:** Two semesters

*Note: Students who have already completed Middle School French 2 should enroll in French II rather than in French I.*

### **WLG210: FRENCH II (COMPREHENSIVE)**

Students continue their study of French by further expanding their knowledge of key vocabulary topics and grammar concepts. Students not only begin to comprehend listening and reading passages more fully, but they also start to express themselves more meaningfully in both speaking and writing. Each unit consists of a new vocabulary theme and grammar concept, reading, and listening comprehension activities speaking and writing activities, multimedia cultural presentations, and interactive activities and practices that reinforce vocabulary and grammar. There is a strong emphasis on providing context and conversational examples for the language concepts presented in each unit. Students should expect to be actively engaged in their own language learning; understand common vocabulary terms and phrases; use a wide range of grammar patterns in their speaking and writing; participate in conversations and respond appropriately to conversational prompts; analyze and compare cultural practices, products, and perspectives of various French-speaking countries; and take frequent assessments where their language progression can be monitored. By semester 2, the course is conducted almost entirely in French.

**Course Length:** Two semesters

**Prerequisites:** WLG110: French I or Middle School French 1 and 2 (or equivalents)

### **WLG310: FRENCH III (COMPREHENSIVE)**

Students further deepen their understanding of French by focusing on the three modes of communication: interpretive, interpersonal, and presentational. Each unit consists of a variety of activities that teach the students how to understand more difficult written and spoken passages, to communicate with others through informal speaking and writing interactions, and to express their thoughts and opinions in both formal and informal spoken and written contexts. Students should expect to be actively engaged in their own language learning; use correct vocabulary terms and phrases

naturally; incorporate a wide range of grammar concepts consistently and correctly while speaking and writing; participate in conversations covering a wide range of topics; respond appropriately to conversational prompts; analyze and compare cultural practices, products, and perspectives of various French-speaking countries; read and analyze important pieces of literature, and take frequent assessments where their language progression can be monitored.

**Course Length:** Two semesters

**Prerequisite:** WLG210: French II (or equivalent)

## **WLG510: AP® FRENCH LANGUAGE AND CULTURE**

The AP® French Language and Culture course is an advanced language course in which students prepare for the AP® French Language and Culture exam. It uses as its foundation the three modes of communication: interpersonal, interpretive, and presentational. The course is conducted almost exclusively in French. The course teaches language structures in context and focuses on the development of fluency to convey meaning. Students explore culture in both contemporary and historical contexts to develop an awareness and appreciation of cultural products, practices, and perspectives. Students should expect to listen to, read, and understand a wide variety of authentic French language materials and sources; demonstrate proficiency in interpersonal, interpretive, and presentational communication using French; gain knowledge and understanding of the cultures of the Francophone world; use French to connect with other disciplines and expand knowledge in a wide variety of contexts; develop insight into the nature of the French language and its culture, and use French to participate in communities at home and around the world. The AP® French Language course is a college-level course.

**Course Length:** Two semesters

**Prerequisites:** Strong success in WLG310: French III (or equivalent) and teacher/school counselor recommendation

## **ADDITIONAL ENTREPRENEURIAL ELECTIVES**

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### **BUS045: ENTREPRENEURSHIP I**

In this introductory business course, students learn the basics of planning and launching their own successful business. Whether they want to start their own money-making business or create a nonprofit to help others, this course helps students develop the core skills they need to be successful. They learn how to come up with new business ideas, attract investors, market their business, and manage expenses.

**Course Length:** One semester

### **BUS055: ENTREPRENEURSHIP II**

Students build on the business concepts they learned in Entrepreneurship I. Students continue to explore the different functions of business, while refining their technology and communication skills in speaking, writing, networking, negotiating, and listening. The purpose of this course is to prepare students to launch a small business venture.

**Course Length:** One semester

**Prerequisite:** BUS045 Entrepreneurship I

### **BUS065: MARKETING 1**

Students find out what it takes to market a product or service in today's fast-paced business environment. They learn the fundamentals of marketing using real-world business examples. They learn about buyer behavior, marketing research principles, demand analysis, distribution, financing, pricing, and product management.

**Course Length:** One semester

### **BUS075: MARKETING 2**

Students build on the skills and concepts learned in Marketing 1 to develop a basic understanding of marketing principles and techniques. The course encourages students to think like an entrepreneur and begin preparing for a career in business and marketing. By the end of the course, students will understand what it takes to start a small business venture.

**Course Length:** One semester

**Prerequisite:** BUS065 Marketing 1

### **BUS080: INTERNATIONAL BUSINESS**

From geography to culture, global business is an exciting topic in the business community today. This course helps students develop the appreciation, knowledge, skills, and abilities needed to live and work in the global marketplace. It takes a global view on business, investigating why and how companies go international and are more interconnected. The course further provides students a conceptual tool by which to understand how economic, social, cultural, political, and legal factors influence both domestic and cross-border business. Students explore business structures, global entrepreneurship, business management, marketing, and the challenges of managing international organizations. They also cultivate a mindfulness of how history, geography, language, cultural studies, research skills, and continuing education are important in twenty-first-century business activities.

**Course Length:** One semester

## **BUS090: SPORTS AND ENTERTAINMENT MARKETING 1**

The bright lights. The roaring crowds. The chants and cheers and applause. If you are drawn to the electricity of large events and the challenge of making events successful, a career in sports and entertainment marketing may be for you! In this course, you will trace the development of these industries, dissect their dual nature, and discover what it takes to pitch, promote, and deliver on these services. You'll also explore the necessary steps to chart your own career path from among the professional roles that these industries need to operate. Let's get off the sidelines and hop into the primetime of the sporting and entertainment worlds!

**Course Length:** One semester

## **BUS091: SPORTS AND ENTERTAINMENT MARKETING 2**

"Five, four, three, two, one—rest." You've learned what it looks like to work one-on-one with clients as a sports medicine professional, and now it's time to focus on the group. In this course, you will be introduced to teaching group exercise classes and providing rehabilitation services to clients facing injury and disease. You will also learn about laws that govern the work of sports medicine professionals, business concerns like insurance and staffing, and what you need to consider if you start your own fitness facility. It looks like it's time for the next set! Let's get started!

**Course Length:** One semester

## **BUS113: ACCOUNTING 1**

This is the first semester of a two-semester course. The course teaches accounting while placing emphasis on conceptual understanding and financial statement analysis to encourage students to apply accounting concepts to real-world situations and make informed business decisions. Topics include transactions and methods of accounting for both service and merchandising businesses. Accounting 1 prepares students for the NOCTI Accounting-Basic credential.

**Course Length:** One semester

## **BUS114: ACCOUNTING 2**

This is the first semester of a two-semester course. The course teaches accounting while placing emphasis on conceptual understanding and financial statement analysis to encourage students to apply accounting concepts to real-world situations and make informed business decisions. Topics included transactions and methods of accounting for both service and merchandising businesses. Accounting 2 prepares students for the NOCTI Accounting-Advanced credential. *Note: Levels 1 and 2 must be taken in sequential order.*

**Course Length:** One semester

**Prerequisite:** BUS113 Accounting 1

## **MTH322: SUMMIT CONSUMER MATH**

In Consumer Math, students study and review arithmetic skills they can apply in their personal lives and in their future careers. The first semester of the course begins with a focus on occupational topics; it includes details on jobs, wages, deductions, taxes, insurance, recreation and spending, and transportation. In the second semester, students learn about personal finances, checking and savings accounts, loans and buying on credit, automobile expenses, and housing expenses. Narrated slideshows help illustrate some of the more difficult content. Throughout the course, students participate in online discussions with each other and their teacher.

**Course Length:** Two semesters

## **BUS030: SUMMIT PERSONAL FINANCE**

In this introductory finance course, students learn basic principles of economics and best practices for managing their own finances. Students learn core skills in creating budgets, developing long-term financial plans to meet their goals, and making responsible choices about income and expenses. They gain a deeper understanding of capitalism and other systems so they can better understand their role in the economy of society. Students are inspired by experiences of finance professionals and stories of everyday people and the choices they make to manage their money.

**Course Length:** Two semesters

# **ADDITIONAL STEM ELECTIVES**

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## **TCH083-DYN: ANIMATION 1 & 2**

Have you ever watched a cartoon or played a video game where the animation of characters captivated you so much you wanted to create your own? If so, it's time to immerse yourself in the world of animation. Meet the industry players such as directors, animators, and 3D modelers. Develop your story by exploring design, the 12 principles of animation, creating a storyboard, and leveraging the tools of the trade. Let's bring your story to life with animation!

**Course Length:** Two semesters

## **TCH076E2: 3D MODELING 1**

Heart valves, cars, cartoons, and buildings may not seem to have much in common, but they all share one spectacular attribute: all originated as a 3D model. 3D modeling has changed the way the world makes things, and in this course, you'll learn the basics to begin creating in 3D! You'll learn how different 3D models are built and how to practice using a variety of modeling methods. By the end of the course, you'll walk away with a portfolio of your ingenious modeling ideas. 3D modeling is an essential part of the modern world and soon, you'll be able to contribute yourself!

**Course Length:** One semester

## TCH076E2: 3D MODELING 2

Many buildings that are rendered in the real world first are constructed in a digital 3D world that depicts the aesthetics, environment and conditions of what will come to be. In this course, you will be introduced to the tools and techniques needed to create works of 3Dart. You will bring your objects to life with color, texture lighting, and shadow all while simulating the movement of the world around. Are you ready to bring beautiful objects to life in a 3D world? Let's get started today!

**Course Length:** One semester

## TCH028: DIGITAL ARTS I

In this exploratory course, students learn the elements and principles of design and foundational concepts of visual communication. While surveying a variety of media and art, students use image editing, animation, and digital drawing to put into practice the art principles they've learned. They explore career opportunities in the design, production, display, and presentation of digital artwork. They respond to the artwork of others and learn how to combine artistic elements to create finished pieces that effectively communicate their ideas.

**Course Length:** One semester

## TCH029: DIGITAL ARTS II

Students build on the skills and concepts they learned in Digital Arts I as they develop their vocabulary of digital design elements. By the end of the course, they will have created a collection of digital art projects for their digital design portfolio.

**Course Length:** One semester

**Prerequisite:** TCH028: Digital Arts I (or equivalent)

## TCH110-CEN: INTRODUCTION TO COMPUTER SCIENCE

This course is designed to introduce students to a contemporary overview of today's computer science. The course is non-language-specific and provides a solid foundation using an algorithm-driven approach. To keep the course in touch with current issues, the material on emerging topics are included, such as privacy, drones, cloud computing, and net neutrality. Traditional computer science topics such as binary numbers, Boolean logic, system software, networking, information security, and language programming are also included.

**Course Length:** One semester

## TCH323AE2: INTRODUCTION TO JAVA PROGRAMMING

TCH323 Introduction to Java 1 is a CodeHS course that teaches students the basics of object-oriented programming with a focus on problem-solving and algorithm development. Students learn basic Java, methods, data structures, classes, and object-oriented programming in this course. It is the first course in a two-course sequence and should be completed before TCH324 Introduction to Java 2. Lessons consist of video tutorials, short quizzes, example programs to explore, and written programming exercises, adding up to over 100 hours of hands-on programming practice in total. Several units have free-response questions that have students consider the applications of programming and incorporate examples from their own lives. At the end of each unit, students take a summative multiple-choice unit quiz that assesses their knowledge of the Java concepts covered in the unit. Included in each lesson is a formative short multiple-choice quiz.

**Course Length:** One semester

**Prerequisites:** TCH220-PBL Computer Science Principles or other introduction to computer science, Algebra 1 Knowledge of basic English and algebra including functions and function notation, such as  $f(x) = x + 2$  and  $f(x) = g(h(x))$

## TCH323BE2: INTRODUCTION TO JAVA PROGRAMMING

TCH324 Introduction to Java 2 is a CodeHS course that teaches students the basics of object-oriented programming with a focus on problem-solving and algorithm development. Students learn basic Java, methods, data structures, classes, and object-oriented programming in this course. It is the second course in a two-course sequence and should be completed after TCH323 Introduction to Java 1. Lessons consist of video tutorials, short quizzes, example programs to explore, and written programming exercises, adding up to over 100 hours of hands-on programming practice in total. Several units have free-response questions that have students consider the applications of programming and incorporate examples from their own lives. At the end of each unit, students take a summative multiple-choice unit quiz that assesses their knowledge of the Java concepts covered in the unit. Included in each lesson is a formative short multiple-choice quiz.

**Course Length:** One semester

**Prerequisites:** TCH323AE2 Introduction to Java 1

Recommended : TCH220-PBL Computer Science Principles or other introduction to computer science, Algebra 1

Knowledge of basic English and Algebra including functions and function notation, such as  $f(x) = x + 2$  and  $f(x) = g(h(x))$

## TCH342E2: PYTHON PROGRAMMING 1

TCH342 Python Programming 1 is a CodeHS course that teaches the fundamentals of computer programming as well as some advanced features of the Python language. Student will develop an appreciation for how computers store and manipulate information by building simple console-based games. It is final course in a two-course sequence and should be completed before TCH343 Introduction to Python Programming 2. Once students complete the Introduction to Python course, they will have learned materials



equivalent to a semester college introductory course in Computer Science and able to program in Python. Lesson consists of video tutorials, short quizzes, example programs to explore, and written programming exercises, adding up to over 100 hours of hands-on programming practice in total. Several units have free responses questions that have students consider the applications of programming and incorporate examples from their own lives.

**Course Length:** One semester

### **TCH343E2: PYTHON PROGRAMMING 2**

TCH342 Python Programming 1 is a CodeHS course that teaches the fundamentals of computer programming as well as some advance features of the Python language. Student will develop an appreciation for how computers store and manipulate information by building simple console-based games. It is the second course in a two course in a two-course sequence and should be completed after TCH342 Introduction to Python Programing 1. Once students complete the Introduction to Python course, they will have learned material equivalent to a semester college introductory course in Computer Science and be able to program in Python. Lesson consists of video tutorials, short quizzes, example programs to explore, and written programming exercises, adding up to over 100 hours of hands-on programming practice in total. Several units have free responses questions that have students consider the applications of programming and incorporate examples from their own lives.

**Course Length:** One semester

**Prerequisite:** TCH342 Python Programming 1

### **TCH031E2: DIGITAL PHOTOGRAPHY I**

Have you wondered how professional photographers manage to capture that perfect image? Gain better understanding of photography by exploring camera functions and the elements of composition while putting theory into practice by taking your own spectacular shots! Learn how to display your work for exhibitions and develop skills important for a career as a photographer.

**Course Length:** One semester

### **TCH032E2: DIGITAL PHOTOGRAPHY II**

Building on the prior prerequisite course, further develop your photography skills by learning more professional tips, tricks, and techniques to elevate your images. Explore various photographic styles, themes, genres, and artistic approaches. Learn more about photojournalism and how to bring your photos to life. Using this knowledge, build a portfolio of work to pursue a career in this field!

**Course Length:** One semester

**Prerequisite:** TCH031E2: Digital Photography I

### **TCH047: WEB DESIGN**

TCH047 Web Design is a CodeHS course that teaches students how to build their own web pages. Students will learn the languages HTML and CSS and will create their own live homepages to serve as portfolios of their creations. By the end of this course, students will be able to explain how web pages are developed and viewed on the Internet, analyze and fix errors in existing websites, and create their very own multi-page websites. Students will learn the foundations of user interface design, rapid prototyping, and user testing, and will work together to create professional, mobile responsive websites. Each unit of the course is broken down into lessons. Lessons consist of video tutorials, short quizzes, example web pages to explore, and web design exercises in which students develop and publish their own web sites. Each lesson includes at least one formative short multiple-choice quiz. At the end of each unit, students take a summative multiple choice unit quiz that assesses their knowledge of the concepts covered in the unit.

**Course Length:** Two semesters

### **TCH520: DATA STRUCTURES IN C++1**

TCH520 Data Structures in C++ 1 focuses on different ways to store data, beyond traditional variables and lists. In this course, students will learn about advanced data structures, such as queues, while applying them in larger, real-world assignments and projects. The Data Structures in C++ 1 course is designed for students that have previously completed a full year computer science course, such as AP CSA. While C++ is used as the language for the course, the focus of the course is on understanding and applying advanced data structures. Prior C++ knowledge is not a prerequisite, however students should have a working knowledge of basic computer science concepts such as variables, control structures, and functions/methods in at least one programming language. The course utilizes a blended classroom approach. The content is fully web-based, with students writing and running code in the browser. Teachers utilize tools and resources provided by CodeHS to leverage time in the classroom and give focused 1-on-1 attention to students. Each unit of the course is broken down into lessons. Lessons consist of tutorials, short quizzes, example programs to explore, and written programming exercises, adding up to over 100 hours of hands-on programming practice and projects in total. Each unit ends with a comprehensive unit test that assesses a student's mastery of the material from that unit. Students write and run C++ programs in the browser using the CodeHS editor.

**Course Length:** One semester

## TCH521: DATA STRUCTURES IN C++2

TCH521 Data Structures in C++ 2 focuses on different ways to store data, beyond traditional variables and lists. In this course, students will learn about advanced data structures such as maps, sets, etc. while applying them in larger, real-world assignments and projects. The Data Structures in C++ 2 course is designed for students that have previously completed Data Structures in C++ 1. The course utilizes a blended classroom approach. The content is fully web-based, with students writing and running code in the browser. Teachers utilize tools and resources provided by CodeHS to leverage time in the classroom and give focused 1-on-1 attention to students. Each unit of the course is broken down into lessons. Lessons consist of tutorials, short quizzes, example programs to explore, and written programming exercises, adding up to over 100 hours of hands-on programming practice and projects in total. Each unit ends with a comprehensive unit test that assesses a student's mastery of the material from that unit. Students write and run C++ programs in the browser using the CodeHS editor.

**Course Length:** One semester

**Prerequisite:** TCH520 Data Structures in C++1

## TCH071: GAME DESIGN 1

With this course, students will learn about different video game software and hardware; various gaming platforms; the technical skills necessary to design games; troubleshooting and Internet safety techniques; the history of gaming; and students will even have the opportunity to create their own plan for a 2D video game! With the knowledge and skills, students will gain in this course, they can take their hobby and turn it into a potential career.

**Course Length:** One semester

**Note:** Software is a free download called "Unity"

**System Requirement:** Microsoft Windows 7 or higher, 64bit versions only; macOS 10.11 or higher.

## SCI030E2: FORENSIC SCIENCE

This course surveys key topics in forensic science, including the application of the scientific process to forensic analysis, procedures and principles of crime scene investigation, physical and trace evidence, and the law and courtroom procedures from the perspective of the forensic scientist. Through online lessons, virtual and hands-on labs, and analysis of fictional crime scenarios, students learn about forensic tools, technical resources, forming and testing hypotheses, proper data collection, and responsible conclusions.

**Course Length:** One semester

**Prerequisites:** Successful completion of at least two years of high school science, including SCI203: Biology (or equivalent). SCI303:

Chemistry is highly recommended

## SCI010: SUMMIT ENVIRONMENTAL SCIENCE

This course surveys key topic areas, including the application of scientific process to environmental analysis; ecology; energy flow; ecological structures; earth systems; and atmospheric, land, and water science. Topics also include the management of natural resources and analysis of private and governmental decisions involving the environment. Students explore actual case studies and conduct five hands-on, unit-long research activities, learning that political and private decisions about the environment and the use of resources require accurate application of scientific processes, including proper data collection and responsible conclusions.

**Course Length:** One semester

**Prerequisites:** Success in previous high school science course and teacher/school counselor recommendation

## SCI020: ASTRONOMY 1

Follow your enthusiasm for space by introducing yourself to the study of astronomy. This course will include topics such as astronomy's history and development, basic scientific laws of motion and gravity, the concepts of modern astronomy, and the methods used by astronomers to learn more about the universe. Further knowledge is gained through the study of galaxies, stars, and the origin of the universe.

**Course Length:** One semester

## SCI021: ASTRONOMY 2

Building upon the prior prerequisite course, dive deeper into the universe and develop a lifelong passion for space exploration and investigation. Become familiar with the inner and outer planets of the solar system as well as the sun, comets, asteroids, and meteors. Additional topics include space travel and settlements as well as the formation of planets.

**Course Length:** One semester

**Prerequisites:** SCI020 Astronomy 1

## OTH033: VETERINARY SCIENCE

As animals play an increasingly important role in our lives, scientists have sought to learn more about their health and well-being. Taking a look at the pets that live in our homes, on our farms, and in zoos and wildlife sanctuaries, this course examines some of the common diseases and treatments for domestic animals. Toxins, parasites, and infectious diseases affect not only the animals around us, but at times, us humans as well! Through veterinary medicine and science, the prevention and treatment of diseases and health issues are studied and applied.

**Course Length:** One semester

### **AGR105: AGRISCIENCE 1: INTRODUCTION**

The word “agriculture” often evokes images of farms, fields, and livestock, and while all of these representations are correct and essential, the field of Agriculture is so much more! In Agriscience I: Introduction, you’ll explore how agriscientists play key roles in improving agriculture, food production, and the conservation of natural resources along with the technologies used to keep the field thriving. Are you ready to explore the diverse careers in agriscience and how you can prepare to positively impact the planet? Let’s get growing!

**Course Length:** One semester

### **HLT213: MEDICAL TERMINOLOGY 1**

This course simplifies the process of memorizing complex medical terminology by focusing on the important word parts—common prefixes, suffixes, and root words—that provide a foundation for learning hundreds of medical terms. Organized by body systems, the course follows a logical flow of information: an overview of the body system’s structures and functions, a summary of applicable medical specialties, and ultimately pathology, diagnostic, and treatment procedures.

**Course Length:** One semester, offered fall semester only

### **HLT214: MEDICAL TERMINOLOGY 2**

This course simplifies the process of memorizing complex medical terminology by focusing on the important word parts—common prefixes, suffixes, and root words—that provide a foundation for learning hundreds of medical terms. Organized by body systems, the course follows a logical flow of information: an overview of the body system’s structures and functions, a summary of applicable medical specialties, and ultimately pathology, diagnostic, and treatment procedures.

**Course Length:** One semester, offered spring semester only

**Prerequisite:** HLT213 Medical Terminology 2

### **SCI330: ANATOMY AND PHYSIOLOGY**

Starting with the relationship between anatomy and physiology, students will then learn about cell structure and their processes. Learners will also discover the functions and purposes of the skeletal, muscular, nervous, and cardiovascular systems, as well as diseases that affect those systems. Students will learn about the structure, function, and interrelation between the lymphatic, immune, respiratory, digestive, urinary, and the endocrine systems.

The reproductive system is also discussed along with hereditary traits and genetics. Finally, students will explore the importance of accurate patient documentation as well as technology used in the industry.

**Course Length:** Two semester

### **OTH092: HEALTH SCIENCES I**

Will we ever find a cure for cancer? What treatments are best for conditions like diabetes and asthma? How are illnesses like meningitis, tuberculosis, and measles identified and diagnosed? Health sciences provide the answers to questions such as these. This course introduces students to the various disciplines within the health sciences, including toxicology, clinical medicine, and biotechnology. Students explore the importance of diagnostics and research in the identification and treatment of diseases.

The course presents information and terminology for the health sciences and examines the contributions of different health science areas.

**Course Length:** One semester

### **OTH094-DYN: HEALTH SCIENCES II**

Challenging. Variable. Rewarding. These three words can be used to describe many careers in the health sciences. In this course, you will learn more about what it takes to be successful health science professional, including how to communicate with patients. You’ll explore the rights and responsibilities of both patients and health science professionals in patient care and learn more about how to promote wellness among patients and health care staffs. Finally, you learn more about safety in health science settings and the challenges and procedures of the emergency care, infection control, and blood-borne pathogens.

**Course Length:** One semester

## **ADDITIONAL LIBERAL ARTS ELECTIVES**

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### **OTH091: LAW AND ORDER**

Every society has laws that its citizens must follow. From traffic laws to regulations on how the government operates, laws help provide society with order and structure. Our lives are guided and regulated by our society’s legal expectations. Consumer laws help protect us from faulty goods; criminal laws help protect society from individuals who harm others, and family law handles the arrangements and issues that arise in areas like divorce and child custody. This course focuses on the creation and application of laws in various areas of society. By understanding the workings of our court system, as well as how laws are carried out, students become more informed and responsible citizens.

**Course Length:** One semester

## ENG010: SUMMIT JOURNALISM

Students are introduced to the historical importance of journalism in America. They study the basic principles of print and online journalism as they examine the role of printed news media in our society. They learn investigative skills, responsible reporting, and journalistic writing techniques as they read, respond to, and write their own news and feature articles. Students conduct interviews, research, write and design their own publications.

**Course Length:** One semester

## HST010: APL ANTHROPOLOGY

Anthropologists research the characteristics and origins of the cultural, social, and physical development of humans and consider why some cultures change and others come to an end. In this course, students are introduced to the five main branches of anthropology: physical, cultural, linguistic, social, and archeological. Through instruction and their own investigation and analysis, students explore these topics, considering their relationship to other social sciences such as history, geography, sociology, economics, political science, and psychology. Emulating professional anthropologists, students apply their knowledge and observational skills to the real-life study of cultures in the United States and around the world. The content in this course meets or exceeds the standards of the National Council for the Social Studies (NCSS).

**Course Length:** One semester

**Prerequisite:** HST103: World History (or equivalent) recommended as a prerequisite or co-requisite but not required

## HST020: PSYCHOLOGY

In this one-semester course, students investigate why human beings think and act the way they do. This is an introductory course that broadly covers several areas of psychology. Instructional material presents theories and current research for students to critically evaluate and understand. Each unit introduces terminology, theories, and research that are critical to the understanding of psychology and includes tutorials and interactive exercises. Students learn how to define and use key terms of psychology and how to apply psychological principles to their own lives. Unit topics include: Methods of Study, Biological Basis for Behavior, Learning and Memory, Development and Individual Differences, and Psychological Disorders.

**Course Length:** One semester

## OTH031: ARCHAEOLOGY

George Santayana once said, "Those who cannot remember the past are condemned to repeat it." The field of archaeology helps us better understand the events and societies of the past that have helped shape our modern world. This course focuses on the techniques, methods, and theories that guide the study of the past. Students learn how archaeological research is conducted and

interpreted as well as how artifacts are located and preserved. Finally, students learn about the relationship of material items to culture and what we can learn about past societies from these items.

**Course Length:** One semester

## ART010: SUMMIT FINE ART

This course combines art history, appreciation, and analysis while engaging students in hands-on creative projects. Lessons introduce major periods and movements in art history while focusing on masterworks and the intellectual, technical, and creative processes behind those works. Studio lessons provide opportunities for drawing, painting, sculpting, and other creative endeavors.

**Course Length:** Two semesters

**Prerequisite:** HST103: World History (or equivalent) recommended as a prerequisite or co-requisite but not required

## ART020: SUMMIT MUSIC APPRECIATION

This course introduces students to the history, theory, and genres of music. The first semester covers basic music theory concepts as well as early musical forms, classical music, patriotic and nationalistic music, and twentieth-century music. The second semester presents modern traditions, including American jazz, gospel, folk, soul, blues, Latin rhythms, rock and roll, and hip hop. The course explores the history of music, from the surviving examples of rudimentary musical forms through to contemporary pieces from around the world. To comply with certain state standards for the arts, a student "performance practicum" is required for full credit each semester. The performance practicum requirement can be met through participation in supervised instrumental or vocal lessons, church or community choirs, community musical performances, or any other structured program that meets at regular intervals and provides opportunities for students to build vocal and/or instrumental skills. Parents or guardians will be required to present their student's proposed practicum to the student's teacher for approval and validate their student's regular participation in the chosen performance practicum.

**Course Length:** Two semesters

## ENG030: SUMMIT CREATIVE WRITING

In this course, students explore a range of creative writing genres, including fiction, poetry, creative nonfiction, drama, and multimedia writing. They study examples of classic and contemporary selections, apply what they learn to their own writing, and develop proficiency in the writing process. They learn to evaluate the writings of others and apply evaluation criteria to their own work. By the end of the course, students will have created a well-developed portfolio of finished written works.

**Course Length:** Two semesters

## ENG020: SUMMIT PUBLIC SPEAKING

Students are introduced to public speaking as an important component of their academic, work, and social lives. They study public speaking occasions and develop skills as fair and critical listeners, or consumers, of spoken information and persuasion. Students study types of speeches (informative, persuasive, dramatic, and special occasion), read and listen to models of speeches, and prepare and present their own speeches to diverse audiences. Students learn to choose speaking topics and adapt them to specific audiences, to research and support their ideas, and to benefit from listener feedback. They study how to incorporate well-designed visual and multimedia aids in presentations and how to maintain a credible presence in the digital world. Students also learn about the ethics of public speaking and about techniques for managing communication anxiety.

**Course Length:** One semester

## JOURNEYS SYMPOSIUM

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Entering a new school (and an online one to boot!) can be a difficult transition. The Journeys Symposium Middle and High School programs blend a robust online learning introduction with help in establishing academic, social, and emotional skills to best prepare students for success in middle school, high school, and beyond. Students meet in online classrooms with their Journeys instructor and classmates, building a sense of community and camaraderie as well as essential skill sets. The Journeys Symposium High School program is composed of two, consecutive year-long seminars.

### GRADE 9: CAREER PLANNING: ENVISIONING, EXPLORING, EVALUATING

Students explore and evaluate their interests, habits, and preferences through career exploration tools and guided experiences that give them greater insight themselves and each other. Part of this “immersion in self-awareness” is an assessment of their learning styles and needs. Each student emerges with a concrete set of goals as well as an initial career preference.

**Course Length:** Two semesters

### GRADE 10: SERVICE TO A CAUSE: COMMUNITY, COMPASSION, COMMITMENT

Incorporating their developing self-awareness into the realm of team and community, students engage in a direct, hands-on service experience of their choice. Critical to this endeavor is in-depth analysis and reflection on the dynamics that lead to effective team action and community involvement. The result is a blueprint that

students can use for skillful and responsible stewardship in the future.

**Course Length:** Two semesters

### GRADE 11: LAYING THE POST-SECONDARY FOUNDATION: VISUALIZING, PREPARING, PLANNING

Students continue to apply their sense of self and community by building—and telling—their own unique stories. This year in the Symposium stresses the conviction that every individual adds a distinctive, vital chapter to the whole human story. Through an iterative series of writing challenges, presentations, and discussions, each student crafts a powerful personal narrative that can be used as his or her college essay. Additionally, each student’s journey culminates in 11th grade with their postsecondary plan.

**Course Length:** Two semesters

### GRADE 12: THE CAPSTONE PROJECT: ACHIEVEMENT INTO ACTION

This final journey includes a practical focus on the college application process as well as a completion and defense of a senior year Capstone project. Students research, examine and report on various examples of courage, motivation, influence, triumph, and legacy fulfillment—current and historical—made more immediate and relevant through their pursuit of a self-selected, hands-on leadership opportunity in their area of concentration.

**Course Length:** Two semesters

## ORIENTATION

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### ONLINE LEARNING

The Online Learning course explains to students how the K12 high school program works and provides tips on successful online learning. Students are introduced to the online tools they will use during their high school experience, including the Learning Management System that delivers course assignments. Students take part in online discussions and practice submitting computer-scored assessments and other assignments to teachers. Lifelong learning skills, such as time management and study habits, are also covered. By the end of the course, students will be fully prepared to begin their K12 high school courses.

**Course Length:** 6–8 hours