THE KNOX SCHOOL

Program Objectives
&
Course Catalogue

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www.knoxschool.org

From the Dean of Academics

Virginia Riccardi, Assistant Head of School

The Knox School enrolls an average of 200 students per year in grades 6-12 and Post Graduate and is accredited by the New York State Association of Independent Schools (NYSAIS) and the Middle States Association.

Instruction is conducted in English and the school offers a bilingual program staffed by certified TESOL instructors and aligned with Ed. Law §3204(2-a) and 8 NYCRR Part 154, to enable English Language Learners to develop academically while achieving competence in the English language. Additionally, we comply with NYS Special Education Law in meeting the needs of the small percentage of our students with IEP's or 504 plans. Our academic program is also in compliance with NCAA standards.

Our curriculum is college preparatory in nature, is guided by the New York State learning standards and includes courses that are credentialed by Suffolk Community College and Stony Brook University as dual enrollment for college credit. Our academic year is divided into 3 terms. Students take 8 classes in their schedules - 4 classes per day in 70 minute blocks with rotating Fridays. The school day begins at 8 a.m. and ends at 3 p.m. with competitive sports in the afternoons from 3:15 - 5 p.m. All students are entitled to three nutritious meals per day as part of their tuition.

Currently, 79% of the twenty-nine Knox teachers on staff hold advanced degrees (MA or higher) and 55% hold degrees in education. 39% of our Faculty attended the top 100 colleges and universities in the U.S. and 18% have attended Ivy League universities. 17% of our Faculty has taught at the college level and all are experts in their fields. Department Chairs lead year-round collaborative work on curriculum mapping and developing a standardized group of objectives/goals aligned with all classes and levels. Our curriculum reflects our Core Values of Respect, Responsibility, Integrity, Courage, Kindness and Scholarship.

Beginning in grade 8, all students sit yearly for the PSAT and Pre-ACT. Data from these standardized tests is analyzed to track student progress and drive teacher instruction. Our English Language Learners sit for the TOEFL exam twice annually and need to score a 92 or higher to test out of our ENL program. Our average SAT score is 1227 and our average ACT score is 26.

Our graduation rate is 100% with an average sized graduating class of 35 students. 100% of our students matriculate into selective 4 year college programs. A full list of college acceptances can be found on our website - www.knoxschool.org. You may also request a copy of our School Profile via email - vriccardi@knoxschool.org.

If you need further information or have questions, you may reach out to Assistant Head of School and Dean of Academics Virginia Riccardi at 631-686-1600 ext. 409.

Semper Ad Lucem!

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Please refer to our Student and Family Handbook for more specific Academic Policies & Procedures.

Courses are offered based on student interest and enrollment. Not every course listed herein is guaranteed to be offered in an academic year, and courses may be added or deleted after initial publication of this document.

**AP courses are offered based on student interest, enrollment and instructor availability and are subject to change at the discretion of Administration.*
Preferential enrollment will be given to Seniors.

Academic Program

The School's Mission, Purpose and Philosophy permeate all aspects of the academic program at Knox, from the design of the curriculum to the daily schedule and yearly calendar. Small class sizes, a challenging core curriculum and highly personalized instruction by caring and skilled teachers enable Knox students to develop the knowledge and confidence necessary to gain admission to and find success in selective colleges and universities. At Knox, learning extends beyond the classroom with numerous opportunities for intellectual stimulation and cultural enrichment. We believe that positive daily interaction shared by students, teachers and advisors fosters not only the acquisition of knowledge but a lifelong love of learning.

The Middle School serves students in grades six through eight and is a "cell phone free" student body. Students turn their cell-phones in to a secure space in the Dean of Student's office when they arrive at school and retrieve their phones at the end of the day. Day students may elect to leave their cell phones at home. Boarders may leave their cell phones in their dorm room during the school day.

The Middle School curriculum is essentially fixed, with the course of study designed to provide a solid foundation in both content and skills for a smooth transition into the Upper School College Preparatory Program. Some Middle School students may be eligible to pursue Upper School credit in math and world languages. The study of world languages begins in grades 6 and 7. Students at this level study one trimester each of French, Spanish and Chinese. Eighth grade students may choose a level I language course in French, Spanish or Chinese. The appropriate use of technology and developing effective organizational and study skills are stressed across the Middle School curriculum as are research and study skills. The academic day ends at 2:55 p.m. Enrichment, a study skills lab, and study hall runs until 5 p.m. when buses arrive for day students; however Middle School students have the option to leave at 3 p.m. as long as they have arranged transportation.

Middle School students in grades 7 and 8 have the option to compete in Upper School sports after school if they pass a qualifying physical exam, endurance test and are academically eligible. Sports run from 3:15 p.m. until 5:00 p.m. Some sports teams may hold mandatory practice outside of the regular school day and/or on weekends. It is the athlete's obligation to attend these practices.

The Upper School serves students in grades nine through twelve and provides a core curriculum of challenging college preparatory classes, Advanced Placement courses and a generous complement of electives in all departments. Knox is committed to offering classroom instruction that is both engaging and challenging and encourages students to go "above and beyond" in their quest for academic growth and success. To accomplish this goal, cell-phones are stored in an over-the-door, hanging pocket system during the class period to minimize distractions. Honors credits are available in most areas of study and highly qualified Upper School students may work with the faculty to develop an independent study that is aligned with his or her college goals.

College Preparatory Diploma Requirements

English	4 Credits
Math	3 Credits: Algebra I, Geometry, Algebra II/Trigonometry
Lab Science	3 Credits: Physical Science, Biology, + 1 more
History	4 Credits: World I, World II, U.S., plus one more
*World Languages	3 Credits: Consecutive in the same language
Visual and Performing Arts	2 Credits: one Visual, one Performing
Health and Wellness	½ Credit (2 consecutive terms)
Electives	3 Credits
Service Learning	1 Credit
Total Credits	**23 ½**

*May be exempt with appropriate documentation.

Scheduling

Knox follows a trimester system with exams at the end of each term. Class periods are 70 minutes long. Student schedules are filled with 8 classes – 4 periods a day. Supervised study halls are limited and not encouraged, but will be granted on an as-needed basis. A full credit is given for a one-year course, and up to two-thirds credit may be granted for approved courses taken for part of the school year. Credit will be accepted for courses taken at other institutions with the approval of the Assistant Head of School.

BOOST

The BOOST Department offers programs and support services designed to provide capable, college-bound students with the foundation and skills necessary to develop their abilities and to reach their personal goals for academic achievement and college admission. There are three BOOST courses: BOOST Language, BOOST Math and BOOST Executive Functioning and Organization. Students are enrolled upon recommendation of current documentation and/or parental request. BOOST classes are taught both individually or in a small (no more than 3 students) group setting by qualified learning specialists and meet during one period of the student's schedule. BOOST teachers often foster communication and share pedagogical methodologies within the school community to assist faculty with differentiating their instruction and fulfilling documented accommodations for our BOOST students.

Advanced Placement and Honors

Students may request Advanced Placement study within certain disciplines. Students applying for a seat in an Advanced Placement course must have a minimum average of "A-" in previous relevant coursework. PSAT scores and/or other achievement exam scores may also be considered. The student's formal request will be reviewed by the Advanced Placement Committee, which is composed of the Assistant Head of School, the department chairs, and the respective Advanced Placement teachers. Once approved, the student must complete all course requirements and expectations. Failure to do so may result in being asked to leave the Advanced Placement course. Generally, students are allowed to pursue two Advanced Placement courses in a school year.

Our Academic Program is College Preparatory and as such all classes are taught at an accelerated pace; however Honors credit may be earned on an individual basis by students willing to pursue a more challenging syllabus and assessment process. Students desiring Honors credit must go through an approval process with the Assistant Head of School.

Honors students are required to meet the expectations of the Honors syllabus. Honors must be declared prior to or before the end of the add/drop period of the first mid-trimester of a course. Honors students are assessed at mid-trimester and at the end of each term. Three quality points for the Honors Program will be added to the student's GPA at the end of each trimester. Honors credit may not be available in every class.

Suffolk Community College's Beacon Program

Suffolk Community College's Beacon Program is a concurrent enrollment program that allows high school juniors and seniors to take college courses at The Knox School during their regular school hours, while simultaneously working toward high school graduation. With the assistance from the Assistant Head of School and College Counselor at Knox, students may plan their future education by creating a "pathway" of high school courses offered through the Beacon Program, affording them the opportunity to jump start their college education and enhance their college admissions application.

College credits earned through the Beacon Program can be applied toward high school graduation and accepted at a multitude of other colleges and universities. Enrollment in a course offered through the Beacon Program generates an official college academic transcript for each student. Acceptance of credit for college-level course work is under the domain of the receiving colleges and universities. Courses are taught using the college course syllabi and college-level learning resources and are delivered with the same high standards as the on-campus course to ensure a college-level experience. Knox students participating in the program are held to the same academic standards as the college students who take courses on the Suffolk Community College campus. Student grades in courses offered through the Beacon Program conform to Suffolk's grading policy and will be included on the student's permanent transcript.

The Knox School is currently credentialed to offer PHY 101 College Physics, ENG 101 Standard Freshman Composition, ENG 102 Literature and Composition and ART 122 Electronic Design.

WHO IS ELIGIBLE? High School Juniors and Seniors
WHERE ARE COURSES HELD? On The Knox School Campus
WHEN ARE COURSES HELD? During the school day as part of the students' regular academic schedules
COST? $218.00 per credit at Suffolk County Community College - $57.00 per credit at Knox

Please refer to our Student and Family Handbook for more specific Academic Policies & Procedures. Courses are offered based on student interest and enrollment. Not every course listed herein is guaranteed to be offered in an academic year.

Stony Brook University's ACE Program

The Accelerated College Education (ACE) program helps high school students develop the skills necessary for a successful college career, familiarizes them with the demands of university coursework, and introduces them to the learning environment and resources of a major university before they enter college full-time. Students enroll in Stony Brook University courses taught in their high school. Stony Brook tuition and fees are waived; students pay only a non-refundable $300 ACE Program Fee for each course.

Upon successful completion of ACE course requirements, students will receive credit from Stony Brook University for the course(s) in which they have enrolled and for which they have paid and an official Stony Brook University transcript so they may transfer the credit they earned to their four-year college institution.

Registering for this course also entitles Knox students to a Stony Brook University Student I.D., with free admission to Stony Brook University's NCAA Division I home games and access to the University's libraries.

The Knox School is currently accredited to EGL 192 Intro to Fiction through the ACE program.

WHO IS ELIGIBLE? High School Juniors and Seniors

WHERE ARE COURSES HELD? On The Knox School Campus

WHEN ARE COURSES HELD? During the school day as part of the students' regular academic schedules

COST $300 per course

Please refer to our Student and Family Handbook for more specific Academic Policies & Procedures. Courses are offered based on student interest and enrollment. Not every course listed herein is guaranteed to be offered in an academic year.

English Department

Requirements: Four years of English (grades 9-12)

Knox English classes give students the opportunity to read widely, think deeply, and communicate clearly. In every English classroom, you will find our students actively engaged in writing responses to a text, as well as vigorously discussing the nuances of what they read in terms of literary elements and personal connections. It is here that students learn how to listen respectfully to different opinions, as well as to express their own perspectives with clarity and logic. Throughout all Knox English courses, students are taught to support their written and spoken arguments with convincing evidence. The development of a strong and disciplined mind is the best way we can prepare our students for the rigors of college as well as the challenges they will face in higher education and beyond.

Program Objectives

As students progress through the stages of learning within the Knox English curriculum, students will demonstrate the ability to:

Program Objective 1: Understand works of literary merit by thinking critically and using essential ideas and questions to relate the text to real life and other subjects

- **1a**: Evaluate literature to infer or determine an author's purpose
- **1b**: Apply knowledge of literary devices to enhance their understanding of the text
- **1c:** Relate literary text to personal experience

Program Objective 2: Students will be able to apply knowledge of various writing styles to respond to literary works and support their arguments with evidence.

- **2a:** Analyze writing prompts and respond with supporting evidence
- **2b**: Engage in research methods and present a strong argument using various forms of supporting sources
- **2c:** Properly cite, summarize, and analyze sources within their writing using MLA or APA format

Program Objective 3: Apply the understanding of basic vocabulary and latin and greek roots

- **3a**: Define challenging words in their reading. (Figurative language, word relationships, and nuances in word meanings)
- **3b**: Build vocabulary in their written work.
- **3c:** Develop their vocabulary in their spoken work
- **3d:** Define unknown words using context clues

Program Objective 4: Apply and practice proper grammar and mechanics to their written and spoken assignments.

- **4a**: Apply their knowledge of grammar and mechanics on writing assignments.
- **4b**: Apply their knowledge of grammar and mechanics while peer and self-editing written work.
- **4c:** Apply their knowledge of grammar and mechanics to verbal and visual presentations.

Program Objective 5: Listen and communicate effectively

5a: Evaluate peers and instructor comments and critiques and respond to them in a professional and respectful manner.

5b: Engage in a productive discussion regarding literature in small and large groups.

5c: Communicate professionally in email and other digital platforms.

Full-Year Courses

English 6- Coming of Age

In English 6, students explore the theme of coming of age through classic literature. Through the use of grammar exercises, writing prompts, and course texts, students develop a deeper understanding of how to convey their ideas both orally and through their writing. The course provides students with opportunities to improve their written communication skills, develop critical thinking skills through reading and writing, and learn the proper mechanics for research-based writing.

English 7- World of Fiction

In English 7, students learn to appreciate the roots of English literature. Through the use of various genres, students develop a deeper understanding of the diverse forms fiction can take, from graphic novels to medieval epic poetry. Students explore the effects those different forms have on the reader. The course provides students with opportunities to improve their written communication skills, develop critical thinking skills through reading and writing, and learn the proper mechanics for research-based writing.

English 8- Survey of Fiction and Non-Fiction Texts

English 8 introduces non-fiction literature to the students along with fiction texts. They will be introduced to major authors and various genres to prepare for High School. Non-Fiction texts are consistently connected to other disciplines and will relate to the fiction works. Students will continue working on responding to texts in their writing and answering specific prompts in a 5-paragraph essay format. Included in this writing is creating a strong argument and supporting evidence with citations from texts or research. Additionally, students will continuously work on grade-appropriate grammar and vocabulary skills.

English I, H (9) - World Literature

The English I curriculum exposes students to a survey of world literature and the historical backgrounds that frame each reading. Through the analysis of fiction and nonfiction texts, poetry and plays, as well as through grammar exercises and writing prompts, students develop a deeper understanding of how to convey their ideas both orally and through the written word. The course provides students with opportunities to improve their written communication skills, develop critical thinking skills through reading and writing, and learn the proper mechanics for research-based writing in preparation for college academics.

English II, H (10) - American Literature
English II focuses on literature from American authors that focus on key events from American History. Poems, plays, essays, and novels directly correspond with lessons they learned in history previously and will continue to learn in their future History classes. The course encourages students to draw connections between fiction and history. Through the analysis of these texts and through grammar exercises and writing prompts, students develop a deeper understanding of how to convey their ideas both orally and through the written word. The course provides students with opportunities to improve their written communication skills, develop critical thinking skills through reading and writing, and learn the proper mechanics for research-based writing in preparation for college academics.

English III, H (11) - Survey of Non-Fiction Texts
The 11th grade English curriculum introduces students to non-fiction literature and focuses on analyzing the literature in both oral and written form. Through the examination of nonfiction texts, poetry and plays, as well as through grammar exercises and writing prompts, students develop a deeper understanding of how to convey their ideas both orally and through the written word. The course provides students with opportunities to improve their written communication skills, develop critical thinking skills through reading and writing, and learn the proper mechanics for research-based writing in preparation for college academics.

English IV, H (12) - College Prep Literary Analysis
The English IV curriculum exposes students to a survey of literature to prepare them for their college experience. Through the analysis of fiction and nonfiction texts, poetry and plays, as well as through grammar exercises and writing prompts, students develop a deeper understanding of how to convey their ideas both orally and through the written word. The course provides students with opportunities to improve their written communication skills, develop critical thinking skills through reading and writing, and learn the proper mechanics for research-based writing in preparation for college academics.

Honors English Designation, H (9-12)
Students who are interested in further challenging themselves and earning Honors credit may enroll in an English course with Honors Designation. The assignments demand deeper academic work and additional readings related to the material within the course curriculum. Students must maintain a grade of 85% or above to remain in Honors.

English Elective Courses

(full-year, unless noted otherwise)

Survey of College Freshman Texts (12-PG)

This course will allow students to explore fiction and non-fiction texts that they may encounter in a freshman-level college curriculum in English or Literature. Emphasis will be placed on reading and interpreting the works and creating compelling, written arguments on a prominent theme in the selected literature for the course. The drafting and revising process will also be stressed to prepare students for the rigors of college writing.

***AP English Literature and Composition (11-12)**

AP English Literature and Composition focuses on intensive reading and analysis of literature. Students are expected to understand how authors use language to provide meaning to the audience. Throughout the course, students master literary elements such as diction, figurative language, imagery, tone, theme and symbolism. AP Literature and Composition also incorporates advanced writing that focuses on critical analysis of texts. The goal of writing in AP Literature and Composition is to master the skills of interpreting college-level texts and writing clear and concise explanations and analyses of such texts.

***AP English Language and Composition (11-12)**

AP English Language and Composition is an intense reading and writing program with an emphasis on rhetoric and how language is used in a variety of texts from multiple time periods. Complex writing assignments will encourage students to develop their abilities to write various modes of essays at a collegiate level. The course is predominantly based on non-fiction texts, visuals and other sources including, but not limited to: pictures, films, music and advertisements. This course is designed to develop and build upon complex practices, and does not include the teaching of foundational skills. At the completion of this course, students are expected to have developed the following: effective use and understanding of rhetoric thorough understanding of AP Language vocabulary, effective writing skills, ability to analyze various sources for information, proper incorporation of sources in writing (attribution), and analytical reading skills.

Survey of Shakespearean Literature (10-12)

This course focuses on the close analysis of Shakespearean literature including the tragedies, histories, and comedies. Students learn how to deconstruct his language by examining his use of imagery, repetition, poetic style, prose, structure, and more. Throughout the course, we also explore his texts in performance including monologues, scenes, and a full production of a play. Our culminating projects will be a mixed collection of performances, written work, and even reviews of shows and adaptations of his plays.

Storytelling and Memoir (9-12)

This course focuses on the craft of telling powerful, engaging, and entertaining stories. Students learn about story structure, literary devices, and character and world-building through a wide array of lessons and activities. Students inspect the works of master storytellers as models, and use them to inform their own writings. At the end of the year, students have a portfolio full of creative stories, poems, personal narratives, and more.

Middle School Writing (6-8)

(1 term each)

Writing 6

This course focuses on creating the "perfect" paragraph. Students learn how to create a strong topic sentence, locate and provide supporting details and write effective concluding statements. Throughout the term, students develop their well-created paragraphs into short essays, which will help prepare them for other interdisciplinary writing pieces. (1 term; required).

Writing 7

In Writing 7, students focus on the structure of a well-developed essay. Students learn how to create attention-grabbing introductions ("hooks") with strong thesis statements. They also work on building transitions between paragraphs to improve the flow of their writing. By the end of the term, students will be able to write a complete, five-paragraph essay with a convincing thesis statement, proper evidence and supporting details. (1term; required).

Writing 8

This course introduces students to MLA format required to complete all of their current and future writing assignments. Incorporation of direct quotations from the texts and a completion of a works-cited page are stressed. Students practice and master the art of creating strong introductions and conclusions, and editing and revising their essays. (1 term; required).

Upper School Writing (9-12)

(full-year each)

Academic Writing (9-10)

This course focuses on MLA skills including preparing a works-cited page and incorporating in-text citations. Students practice and master the necessary skills to write a proper academic paper on dynamic topics. Practice includes analytical essays, response papers and research papers. This course prepares students to start thinking outside of the five-paragraph model and begin writing more advanced essays that require higher level thinking and the examination of outside sources.

College Writing and Presentation (11-12)

This course is designed to prepare students for the rigors of college writing. Students continue to work with MLA format and are introduced to APA format. Students learn to enhance their writing skills by focusing on format and development of details. A writing workshop-style of teaching is used, requiring students to complete multiple steps including peer and self-edits. This course prepares students for public speaking and presentations that will be expected of them in college, and encourages students to overcome public speaking anxiety and develop strong delivery skills.

Graduate Capstone Project (12-PG)

This course is designed to develop college-level writing skills with a focus on research. Students will learn to be aware of the perspectives of others and use those perspectives to examine their own insights on strong topics. They will practice making intentional choices while learning to defend and justify their logic while connecting ideas and concepts across disciplines. Students will choose and explore a topic, issue, or idea of individual interest while designing a year-long study to answer a research question in 5,000 words or more.

Graduate Seminar (11-12)
Graduate Seminar is designed to allow PG students an opportunity to explore a wide variety of personal and academic topics that will assist them in their future academic and professional careers. Some topics include: test taking and college preparatory skills, collegiate learning strategies, time and stress-management skills, ethics, and conflict resolution. Mindfulness will be explored through real-world simulations and in-class exercises. Upon completion of this class, students will be prepared to enter their respective colleges and universities with an increased level of confidence in their organizational, academic, and life-management skills.

ENG 101: Standard Freshman Composition (11-12)
This course explores principles of rhetoric and stresses effective expository writing. ENG 101 is primarily a course in organization of ideas and development of these ideas through use of specific information. The course also deals with matters of style, sentence structure, paragraph development, punctuation and vocabulary, and introduces students to close reading of appropriate materials. *Available for college credit through the Suffolk Community College Beacon Program.*

ENG 102: Introduction to Literature (11-12)
This course is an introduction to imaginative works of literature: the short story, novel, poem, and drama. Close and analytical study of this literature introduces students to major literary themes and forms. This course continues training in effective prose writing and requires students to demonstrate maturity in thought and style. It is recommended for those who plan to continue their studies at a four-year institution. *Available for college credit through the Suffolk Community College Beacon Program.*

History Department

Requirements: Four years of History (grades 9-12)

The History Department at Knox strives to teach students to "think like a historian." The development of historical thinking skills aids students in their understanding of primary and secondary source research and encourages them to think independently and critically. The history department achieves this goal through critical analysis of sources, student-led discussions, and development of writing. The history department also works to create 21st century learners by encouraging a collaborative environment amongst students, and allowing students choice in creatively expressing their knowledge.

Program Objectives

As students progress through the stages of learning within the Knox History curriculum, students will demonstrate the ability to:

Program Objective 1- Writing

1a. Write a DBQ essay by analyzing primary and secondary documents in a minimum two page essay that supports its thesis with at least three sources

1b. Write a research paper in which they utilize sources to create a paper that effectively argues a thesis with supporting documents

1c. Construct essays using college-level writing skills, ie. proper spelling/grammar, proper citation, and a matching thesis and argument

Program Objective 2 - Reading

2a. Analyze primary source documents and demonstrate knowledge of purpose by correctly identifying at least two arguments made by the author

2b. Analyze secondary sources by finding at least two supporting details in order to answer a question

2c. identify authors' perspectives by properly compare the author's point of view against at least two historical facts

Program Objective 3 –Critical Thinking

3a. Conduct research to find valid sources and analyze them to pull out supporting details for their arguments

3b. Connect one unit to at least one other unit by showing how one event caused or affected the other

3c. Identify key concepts, historical figures, and time periods.

Program Objective 4 - Public Speaking

4a. Create a presentation based on research that effectively conveys their argument for at least ten minutes

4b. Independently research topics for a debate and effectively use at least two outside sources to formulate arguments within that debate

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Full-Year Courses

History 6/7: The Eastern Hemisphere
History 6/7 is an introductory course to United States History until 1865. In accordance with middle school goals, critical thinking and analytical interpretation are useful skills that are mastered during the course of the year. Students begin to explore essential questions about the foundation and growth of the United States on the North American continent, and how this history has influenced life in the United States today. Students explore the music, art, and literature of the eras in their political, social and economic context. Students come to understand and recognize changes and patterns in American culture from the colonial period to the present through readings, classroom discussion, projects and independent research.

History 8: U.S. History (1865 to 2001)
History 7 and 8 are designed as introductory courses to United States History broken into two time periods (see above). In accordance with middle school goals, critical thinking and analytical interpretation are useful skills that are mastered during the course of the year. Students begin to explore essential questions about the foundation and growth of the United States on the North American continent, and how this history has influenced life in the United States today. Students explore the music, art, and literature of the eras in their political, social and economic context. Students come to understand and recognize changes and patterns in American culture from the colonial period to the present through readings, classroom discussion, projects and independent research. Students stay up to date with current events and make comparisons between the past and the present.

World History I (9: Early Human History to 1500)
Students explore World History in grades 9 and 10 through the lens of recurring themes from the rise and fall of civilizations past and present. During the first year, students chronicle the human experience around the globe from prehistory in ancient India, China, the Fertile Crescent and along the Nile, up to the European Age of Exploration. Students examine global interactions between peoples and cultures, with particular emphasis on migration, warfare, religion, the arts, politics, and trade. Over the course of the year, students think critically about these and other issues, and in the process, develop important intellectual and analytical tools from structuring an argument and academic composition to research and oral presentation skills.

World History II, H (10: 1500 – Post-Middle Ages to present-day)
World History II is a course designed to enlighten students about past and present civilizations. Students learn about civilizations and events from the Post-Middle Ages to present-day. Students explore such topics as Early Modern Europe, Revolutions and nationalism, the Industrial Revolution, World War I and World War II, the Cold War, up to the modern world. While the course is a study in "world history" there will be special emphasis placed on European history. Students will continue to grow their analytical skills and develop higher level thinking skills. Prerequisite: World History I or equivalent 9th grade History class.

U.S. History, H/Pre-AP (11)
United States History is a survey course beginning with the European colonization of America through the 21st century. The

course concentrates on the development of American culture. Students study the major social, political, and religious developments in United States history, and are required to use a variety of intellectual skills and analytical tools to demonstrate their understanding of major ideas, eras, themes, developments and turning points. The development of reading, writing, and oral communication is emphasized through the preparation of written assignments and oral presentations. Prerequisite: World History II or equivalent 10th grade History class

American Government (12, PG)
This course introduces students to the world of politics, government, and legislation. Students learn about the origins and foundations of the American government system, as well as how it is structured to function and evolve throughout time. The class will delve into national as well as state and local governments, examining how the Federalist system works in America. Students will learn to be an active participant in a modern democracy, as well as increase their awareness of modern political issues and debates facing the country.

Micro Economics (11) / Macro Economics (12)
Beginning with the basic principles of Economics, students are introduced to the fundamental tools of micro and macroeconomic analysis. Microeconomics deals with consumers, firms, markets and income distribution. Macroeconomics deals with national income, employment, inflation and money. Students apply their knowledge to problem-solve issues facing today's economy via individual and group project-based assessments. Students visit Wall Street and the NYSE.

Introduction to Philosophy (10-12)
Students in Introduction to Philosophy will be asked to think like a philosopher and develop critical thinking and logical skills. This course will survey main questions and arguments in Western and Eastern Philosophy. Employing the **Socratic** method, students will be confronted with examples from regional, local and global issues. Students will learn to apply the techniques of philosophy in order to think critically and make more sound and informed decisions. The course will begin with students discussing questions in moral philosophy exploring the influential Western philosophers. While examining theories of virtue and vice, consequentialism, and deontology, students will be taught to read, explicate, analyze, and evaluate philosophical literature. Students will also be confronted with other classic questions in different fields of philosophy. We will discuss the natures of knowledge, reality and being. We will also discuss freewill and how our examination of moral philosophy in many ways hinges on this debate. The course will end with a survey of Eastern philosophical concepts mostly categorized as the "Asian understanding of self" to further develop one's own cosmopolitan competency and appreciation of alternative views.

Philosophy, Ethics, and World Religions (12, PG)
This course will survey three core characteristics of human pursuits: meaning, justice, and the foundations of knowledge. Textual analysis, critical thinking and communication skills will be emphasized. In the first part of this course, students will study texts of major Western philosophers from Plato to the present. Topics will examine and critically reflect on philosophy's 9 core areas: Ethics, Political Philosophy, Aesthetics, Epistemology,

Philosophy of Mind, Metaphysics, Philosophy of Science, Philosophy of Religion and the Meaning of Life. In Ethics students will be exposed to basic ethical frameworks provided by global secular and religious systems. This course will use a multicultural approach to various Universalist (Utilitarian, Rights Ethics, Virtue Ethics for example) and Relativist theories and apply their reasoning skills in class discussions/debates. This course will use classical texts and personal and literary stories, students will develop a common vocabulary with which to understand and critically evaluate their moral experience. Religion will critically explore the phenomenology of Religion through a multi-disciplinary and global approach. The course will examine the complex and challenging nature of defining 'religion.' Using the classic method of religious studies - history, anthropology, and sociology - students will be able to critically analyze the theory and practice of religion by developing a clearer understanding of the plurality and sincerity of religion. The course will then survey a few of the basic major global religious traditions which will enable students to appreciate and understand the richness and vastness of different religious worldviews.

AP Psychology (11, 12)

AP Psychology is a social science course recognized by the College Board and gives students a foundation in the major areas of study in psychology, including, but not limited to: scientific methods, biopsychology, human development, cognition, and individual and group behavior variation. The focus of this course is to help students understand psychology as a scientific discipline, as well as to increase the student's confidence in discussing and writing about psychological principles in a scientific manner. This class will be an intense reading and writing program, at times. It is designed to the equivalent of a College Psychology class. Expectations for this class will be high and the assignments are meant to be challenging. At times, this will require exceptional time management skills and additional hours outside of class to complete assignments and meet grade expectations. This course is designed to develop and build upon complex practices and learn collegiate level foundational skills. At the completion of this course, students are expected to have developed the following:

-An understanding of theoretical perspectives in psychology, research methods, terminology, and concepts in psychology.

-An improved writing skill with regard to psychological content and technical aspects of writing.

-Critically evaluate psychological issues presented to them in class.

Intro to Legal Studies (11, 12)

This course will offer students a foundation in the American legal system. Students will learn and master the basics of reading and analyzing laws and applying them properly to relevant cases. This will springboard into reading and analyzing cases for important and key details to make a proper case based on the applicable laws and write case decisions. Once the basic analytical and writing skills are mastered, the class will move on to learn an understanding of the sources of law and a clarification between local, state, and federal laws and differences between criminal trials and civil litigations.

Once basics have been taught and mastered, the class will move through the various areas of law including, but not limited to: constitutional law, civil liabilities contract law, business law, family law and criminal law. We will also touch upon various ethical

issues faced by legal professionals and review legal procedures. Throughout our studies, we will review historical cases that fit our area of study in addition to more recent cases. We will engage in various debates over these trials as we write our own court opinions after deciding whether we concur or dissent with the original presiding judges. The last aspect of this course will include an application of all skills learned to apply to a thorough legal analysis, breaking down each part of the case, evidence, and laws.

Mathematics Department

Requirements: Three years of Mathematics (Algebra I, Algebra II, Geometry)

The Knox School Mathematics Department recognizes the need for strong mathematics skills in all students' lives, and strives to provide a comprehensive foundation of knowledge. Every Knox student graduates with an understanding of the role that mathematics plays in his/her life, as well as the ability to use mathematics to solve everyday problems. Course offerings range from middle-school Math 6 through AP Calculus BC. Middle School students who qualify may enroll in beginning Upper School Mathematics courses.

Program Objectives

As students progress through the stages of learning within the Knox Mathematics curriculum, students will demonstrate the ability to:

Program Objective 1– Build/Strengthen Foundations of Problem Solving

- **1a.** Solve equations in one or two steps
- **1b.** Write and simplify expressions
- **1c.** Use ratios to solve problems
- **1d.** Connect ratios to fractions, decimals and percentages
- **1e.** Identify simple statistics (mean, median, mode) and use them to build charts
- **1f.** Solve simple problems in Geometry involving scale, measurement, area and angles

Program Objective 2– Build/Strengthen Foundations of Algebra and Geometry

- **2a.** Recognize and develop patterns using tables, graphs and equations
- **2b.** Apply operations to algebraic expressions
- **2c.** Use equations, graphs and tables to solve problems and investigate linear relationships
- **2d.** Understand the use of congruence and similarity to solve problems
- **2e.** Understand Pythagorean Theorem and its converse and why the theorem holds
- **2f.** Apply the Pythagorean Theorem to find distances between points on the coordinate plane,to find lengths, and to analyze polygons.
- **2g.** Investigate and understand relationships between multi-dimensional objects while establishing an axiomatic process for developing proof

Program Objective 3– Master All Levels of Algebra in Preparation for Pre-Calc/Calculus

- **3a.** Solve inequalities
- **3b.** Understand functions, linear functions, systems of equations and inequalities

3c. Know the purpose of exponents and exponential functions
3d. Make connections between polynomials and factoring and quadratic functions, radical expressions and equations
3e. Explore data analysis and probability and apply these concepts to appropriate mathematical problems
3f. Solve and graph quadratic equations
3g. Master the understanding of using absolute values, radicals, exponents and logarithmic functions
3h. Gain proficiency in solving trigonomic equations and in graphing their solutions

Program Objective 4– Prepare Students for First-Year College Mathematics

4a. Master the study of functions and their graphs (linear functions, absolute value, square roots, quadratics, polynomials, rational expressions, and exponential, logarithmic, and trigonometric)
4b. Understand analytical trigonometry, inverses, and sequences.
4c. Learn the concepts of derivation and limits

Full-Year Courses

Math 6
As our 6th grade students arrive excited to start middle school, Math 6 introduces them to middle school math in fun and exciting ways. The purpose of Math 6 is to enhance basic math skills that were taught throughout elementary school and allow students the time to become comfortable with and master these skills. Students explore topics such as number sense and operations, using formulas, problem solving, basic geometry, and interpreting graphs and data.

Pre-Algebra (7)
All units of study for Pre-Algebra coincide with the core content for assessment for middle grade mathematics. The major units of study for this course are: Integers, expressions and operations, factors and fractions, rational numbers, equations and inequalities, ratio, proportion, percent, functions, linear equations, and graphing. Students who excel in Pre-Algebra may be exempted from Math 8 and have the option to enroll in Algebra I. Prerequisite: Math 6.

Math 8
Students are enrolled in Math 8 to solidify the foundation needed to excel in Algebra I. This year-long course focuses on the number system, expressions and equations, functions, geometric principals, and bivariate statistics. Students who excel in Pre-Algebra may be exempted from Math 8 and have the option to enroll in Algebra I. Prerequisite: Pre-Algebra.

Algebra I (Accelerated 8 or 9)
Students in Algebra I are introduced to basic algebraic topics including real numbers, linear relations and functions, linear equations, linear inequalities, polynomials, and factoring. This is a manually-intensive course that does not require the use of a calculator, which allows students to fully understand mathematical concepts. **Prerequisite:** Pre-Algebra or similar course.

Algebra II (10,11)
Students in Algebra II analyze and identify relationships among functions. They become proficient in solving and graphing quadratic functions and equations. Students also firm up their understanding of using absolute values, radicals, exponents, and logarithmic functions. Students become comfortable and proficient in solving trigonometric equations and in graphing their solutions. This course is cross-listed with Pre-Calculus. **Prerequisite:** Algebra I.

Geometry (10, 11)
Geometry is a branch of mathematics that addresses questions of shape, size, relative position of figures, and the properties of space. During the first and second terms, spatial relationships are introduced and include an in-depth study of triangles and quadrilaterals. Students explore volume, surface area, and the ability to use logic and geometric reasoning to prove mathematical relationships during the third term. **Prerequisite:** Algebra I.

Calculus (12)
Calculus is designed to prepare students for AP Calculus (AB or BC) and AP Statistics, and includes the study of a variety of functions and their graphs: linear functions, absolute value, square roots, quadratics, polynomials, rational expressions, and exponential, logarithmic, and trigonometric functions. It also includes analytical trigonometry, inverses, and sequences. Students will begin to learn the concepts of derivation and limits. This course is cross-listed with Algebra II. **Prerequisites:** Algebra II and/or Pre-Calculus.

Mathematics Elective Courses

(full-year, unless noted otherwise)

Statistics, AP Statistics (241)
Statistics develops appreciation for, and skill in, applying statistical techniques in the decision-making process. Topics include: Descriptive statistics, probability, inference, methods of data collection, organization of data, and graphical techniques for exhibiting data together with measures of central tendency and variation. Specific subjects include binomial and normal distributions, hypothesis testing, and confidence intervals. Students will use multiple representations to present data including written descriptions, statistics, formulas, and graphs. Estimating with confidence, testing a claim, comparing two population parameters, inferences for regression, and chi-square procedures are also included. Students will work on extensive and comprehensive word problems, including actual AP questions on a regular basis. **Prerequisites:** Pre-Calculus and Departmental approval.

AP Calculus AB
AP Calculus AB is designed to prepare students for the Advanced Placement exam. Students learn functions, derivatives, integrals, limits and the ability to use this knowledge to solve geometric, numerical, algebraic, and verbal problems. Differential equations, exponential functions, application of the integral, and summations will also be introduced. Students will work on extensive and comprehensive word problems including AP questions on a regular basis. **Prerequisites:** Pre-Calculus and Departmental approval.

AP Calculus BC

AP Calculus BC is designed to develop and expand students' understanding of Calculus and provide experience with its methods and applications. Students review concepts presented in Calculus AB in greater detail and expand their study of Calculus to include concepts presented in the AP Calculus BC program and beyond. Students will learn how to apply Calculus using extensive and comprehensive word problems that will appear on the AP exam. **Prerequisite:** Successful completion of AP Calculus AB.

Introduction to Finance

This course is designed to educate students about the impact their individual financial choices and habits will have on their occupational goals and future earnings potential. Topics covered will include, but are not limited to: budgeting for college, income and interest, money management, spending and credit, as well as saving and investing. Students will apply real-world scenarios to major project assignments each trimester.

Science Department

Requirements: Three Credits of Lab Science (grades 9-12)

The Knox School Science Department strives to spark curiosity in its students about the wonders of the scientific world around them. Our curriculum is driven by the processes of inquiry, problem-solving and discovery, and learning is intentionally relevant. Knox students become scientifically literate and learn to be effective problem solvers. Through hands-on, engaging activities that extend beyond the walls of the classroom, they come to realize that science is more than facts - it is using a computer to program a robot to complete a series of tasks, exploring our campus waterfront as a living, learning lab during Biology class, using CAD software and 3D printers to engineer and design a multitude of projects, or even competing in a Science Bowl at Brookhaven National Laboratory, or a LEGO FIRST Robotics Competition.

Program Objectives - Science/Engineering (Next Generation)

As students progress through the stages of learning within the Knox Science curriculum, students will demonstrate the ability to:

Program Objective 1: Ask questions about the natural and human built world and define problems

- **1a:** Distinguish scientific questions from non-scientific questions
- **1b:** Formulate and refine questions that can be answered empirically in a science classroom
- **1c:** Ask probing questions that seek to identify the premises of an argument, request further elaboration, refine a research question or engineering problem, or challenge the interpretation of a data set
- **1d:** Note features, patterns, or contradictions in observations and ask questions about them.

Program Objective 2: Develop and use models

- **2a:** Construct drawings or diagrams as representations of events or systems and use them as the basis of an explanation or to make predictions about how the system will behave in specified circumstances.
- **2b:** Make and use models to test a design and to compare the effectiveness of different design solutions.
- **2c:** Represent and explain phenomena with multiple types of models and move flexibly between model types when different ones are most useful for different purposes.
- **2d:** Use (provided) computer simulations or simulations developed with simple simulation tools as a tool for understanding and investigating aspects of a system, particularly those not readily visible to the naked eye.

Program Objective 3: Plan and carry out investigations

- **3a:** Formulate a question that can be investigated within the scope of the classroom, school laboratory, or field with available resources and frame a hypothesis based on a model or theory
- **3b:** Decide what data are to be gathered, what tools are needed to do the gathering, and how measurements will be recorded

3c: Plan experimental or field-research procedures, identifying relevant independent and dependent variables and, when appropriate, the need for controls.

3d: Consider possible confounding variables or effects and ensure that the investigation's design has controls for them.

Program Objective 4: Analyze and interpret data

4a: Analyze data systematically, using grade-level-appropriate understanding of mathematics and statistics either to look for salient patterns or to test whether data are consistent with an initial hypothesis

4b: Recognize when data are in conflict with expectations and consider what revisions in the initial model are needed

4c: Use spreadsheets, databases, tables, charts, graphs, statistics, mathematics, and information and computer technology to collate, summarize, and display data and to explore relationships between variables, especially those representing input and output

4d: Evaluate the strength of a conclusion that can be inferred from any data set, using appropriate grade-level mathematical and statistical techniques

4e: Recognize patterns in data that suggest relationships worth investigating further. Distinguish between causal and correlational relationships

4f: Collect data from physical models and analyze the performance of a design under a range of conditions

Program Objective 5: Construct explanations (for science) and design solutions (for engineering)

6a: Construct their own explanations of phenomena using their knowledge of accepted scientific theory and linking it to models and evidence.

6b: Use primary or secondary scientific evidence and models to support or refute an explanatory account of a phenomenon.

6c: Offer causal explanations appropriate to their level of scientific knowledge.

6d: Identify gaps or weaknesses in explanatory accounts (their own or those of others).

6e: Solve design problems by appropriately applying their scientific knowledge.

6f: Undertake design projects, engaging in all steps of the design cycle and producing a plan that meets specific design criteria.

6g: Evaluate and critique competing design solutions based on jointly developed and agreed-on design criteria.

Program Objective 6: Engage in argument from evidence

7a: Construct a scientific argument showing how data support a claim.

7b: Identify possible weaknesses in scientific arguments, appropriate to the students' level of knowledge, and discuss them using reasoning and evidence.

7c: Recognize that the major features of scientific arguments are claims, data, and reasons and distinguish these elements in examples.

7d: Explain the nature of the controversy in the development of a given scientific idea, describe the debate that surrounded its inception, and indicate why one particular theory succeeded.

7e: Explain how claims to knowledge are judged by the scientific community today and articulate the merits and limitations of peer review and the need for independent replication of critical investigations.

7f: Read media reports of science or technology in a critical manner so as to identify their strengths and weaknesses.

Program Objective 7: Obtain, evaluate, and communicate information

8a: Use words, tables, diagrams, and graphs (whether in hard copy or electronically), as well as mathematical expressions, to communicate their understanding or to ask questions about a system under study.

8b: Read scientific and engineering text, including tables, diagrams, and graphs, commensurate with their scientific knowledge and explain the key ideas being communicated.

8c: Recognize the major features of scientific and engineering writing and speaking and be able to produce written and illustrated text or oral presentations that communicate their own ideas and accomplishments.

8d: Engage in a critical reading of primary scientific literature (adapted for classroom use) or of media reports of science and discuss the validity and reliability of the data, hypotheses, and conclusions.

Full-Year Courses

6th Grade - Physical Science

Sixth-grade science students begin their Knox careers as "mini-scientists." Class time includes instruction, hands-on activities and labs, and group projects that allow students to

be introduced to the basics of chemistry and physics. Students also study and experiment with the fundamental laws of motion, allowing them to define the movement of universal forces such as gravity, acceleration, and friction. The successful completion of the course prepares the sixth-grade students for their future science courses.

7th Grade - Life Science

This fundamental introduction to life sciences increases seventh-grade students' awareness of the natural world and introduces them to basic principles of scientific inquiry. The course covers a variety of topics, starting with microscopic cells and building to the larger principles of the ecology and natural systems. Throughout the course, students will be utilizing the basic principles of scientific inquiry and lab experiments as a means to prepare them for later courses of study.

8th Grade - Earth Science

Throughout the year, eighth-grade students engage in a variety of activities designed to introduce them to the larger-than-life processes that influence everything from tides, to the destructive volcanoes of the Ring of Fire. The course covers a wide array of topics, including the geological processes that shaped the world around us, and the astronomical processes of the universe. Upon successful completion of the middle-school science sequence, students are well-prepared to enter the Upper School and succeed in the sciences.

Health (9-12)

Upper School Health is designed to allow teens to discuss issues that affect them in a safe environment with trained educators and professionals. Units covered include physical fitness, psychological health, the dangers of drug and alcohol use, sexuality, and infectious diseases. Students examine contemporary public health problems through the news and media and will be encouraged to make positive lifestyle changes. *This course is two terms and is required for graduation in New York State.*

Biology (9-10 - lab course)
Biology is the larger umbrella under which the study of living things occurs. This course serves as a gateway to understanding scientific interactions throughout the living environment, and gives students the tools to make predictions about the natural world. By utilizing the scientific method, students investigate the natural world, both conceptually and through hands-on and in-the-field lab work. Throughout the course, students gain exposure to the many branches of biology, and work towards understanding the role and impact of humans on the natural world. The primary skill of scientific investigation is one of the most important and basic skills; this course serves to cultivate that, and teach students to purposefully engage with the world. **Prerequisite:** Physical Science or similar 9th grade science course; fulfills lab course requirement.

Chemistry (11 - lab course)
Chemistry touches our lives almost everywhere and every day - in medicine, the clothes we wear, the games we play, as well as the industries that produce consumables used by people on a regular basis. In Chemistry, students design and conduct experiments using a variety of laboratory techniques and technology, apply stoichiometric concepts to chemical reactions, analyze atomic structure and how it relates to bonding and periodicity, and apply chemical concepts to reactions and apply gas laws to explain natural phenomena. **Prerequisite:** Biology; fulfills lab course requirement. *Note: Chemistry is strongly recommended for college-bound students and is a must for future study in any science or health-related field.*

Physics (11-12)
Physics is the study of *why* the universe is the way it is and <u>not</u> some other way. Physics is not just a series of facts and formulae that you memorize. This hands-on, inquiry-led introduction to physics allows students to take a formal look at many of the physical aspects of our universe: from basic fundamentals all the way up through counter-intuitive but experimentally-confirmed principles. Conceptual Physics is dedicated to the study of Modern Physics, including discoveries, theories, and current research. Students explore Newtonian Mechanics and the various aspects of matter in motion and energy, then delve into Waves and Light. The course concludes with a study of Electricity and Magnetism.
Open to eleventh and twelfth grade students who have successfully completed a lab science and Algebra I.

Fundamentals of Equine Science (9-12)
This course allows students to explore equine history, breeds, identification, conformation, and judging. As the year progresses, students learn concepts in anatomy, physiology, nutrition, health, equine facilities and management and career opportunities. This course promotes the development of cross-curricular skills in Math, English and History. Students learn to communicate effectively through writing and language as well as develop and use critical thinking skills. *Open to Upper School students who are equine enthusiasts, equestrians, or simply curious about horses.*

Equine Science II (10-12)
In Equine Science II, students will take a more in- depth look at the following equine topics: fundamentals of riding, teaching riding methods, judging trends, therapeutic riding, purposes of different riding equipment and tack, equine health and

management with specific focus on equine anatomy, diseases, first aid, emergency procedures, pharmaceuticals, senior horse health management, diagnosing lameness and nutrition as related to performance and health. Our third term will focus on working in the equestrian world and exploring the topics of veterinarian, vet technician, farrier, research, event managers, stable managers, massage, chiropractic and acupuncture therapists, equestrian marketing, professional trainer and judging competitions. Students will develop cross curricular skills dealing with math, English, and social studies which coincide with the topics focused on during class. Skills will include writing and language as well as continue to develop and use critical thinking skills. **Prerequisite:** Fundamentals of Equine Science.

AP Biology (11-12)
AP Biology is an upper school elective offered for students who meet The Knox School AP criteria, and who have demonstrated a strong interest and dedication to life sciences. Students in AP Biology work towards successful completion of the College Board curriculum and sit for the AP Biology Exam. The class uses the framework laid out by the College Board in tandem with investigative labs. The goal of the course it to prepare students for a university-level Biology class, and if eligible, test results may be used as an exemption from introductory Biology in college.

AP Chemistry (11-12)
This course will demonstrate how chemistry is related to our daily lives, develop problem solving skills, and also develop a student's ability to think clearly and express their ideas. It is designed to be the equivalent of a general chemistry course which is normally taken during the first year of college. Depending on your AP exam score and choice of majors in college, you may or may not fulfill the laboratory science requirement at the higher education level. Advanced Placement Chemistry provides a basis for the development of the fundamentals of chemistry with an emphasis on inquiry and critical thinking skills. Laboratory work is a vital portion of the course and uses a variety of different technology and lab ware. The technology will include graphing calculators, LabPro devices, graphing and data analysis software and various chemistry apparatus. This course requires a working knowledge of chemistry and algebra II. The pace will be quicker than a typical high school chemistry course, uses a college level text and lab work, and also requires more time than the typical high school course.

AP Environmental Science (11-12)
The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. **Prerequisite:** Two years of high school laboratory science, specifically, one year of life science and one year of physical science.

AP Physics I: Mechanics
AP Physics I follows the most recent description as noted by the AP College Board and is equivalent to a first-year college Physics class for Science and Engineering students. It is intended to prepare students for the AP Physics C Exam and explores topics such as Mechanics, Electromagnetism, Waves and Fields, Optics, and Modern Physics, including discoveries, theories, and current research.

The development of critical thinking skills is an integral part of Physics, therefore, most labs are open-ended and inquiry-based. In addition, students will be required to present solutions to problems during peer instruction activities. *Open to Upper School students who have successfully completed Physics and Pre-Calculus*

AP Physics II: Electricity and Magnetism
The Physics II Electricity and Magnetism course is a calculus-based, college-level physics course, especially appropriate for students planning to specialize or major in physical science or engineering. The course explores topics such as electrostatics; conductors, capacitors, and dielectrics; electric circuits; magnetic fields; and electromagnetism. Introductory differential and integral calculus is used throughout the course.

Anatomy & Physiology
Anatomy and Physiology is designed for students who are interested in pursuing a career in fields related to the human biological system. This course covers the basics of human anatomy and physiology, including anatomical terminology, basic biochemical function, cells and tissues, and the skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, excretory and reproductive systems. The course includes lab work, but does not fulfill a lab requirement. Students work individually and in groups to prepare themselves for college-level sciences. Preferential enrollment will be given to Seniors. **Prerequisite:** Biology; Juniors and Seniors only.

PHY 101 College Physics I (11, 12)
First course of a full year algebra/trig-based college physics sequence for liberal arts, life science, and physical therapy majors designed to acquaint students with basic concepts of physics. Topics covered include linear and rotational kinematics, dynamics, conservation of energy and momentum. *Available for college credit through the Suffolk Community College Beacon Program.*

STEM Courses

Introduction to Robotics
This course introduces students to the world of robotics and programming. Beginning with the history of robotics, students come to an understanding of how robots function as an integral part of today's society. Working in our STEM lab, students take a hands-on approach to the fundamentals of machine logic and automated problem solving with an emphasis on the basics of movement and physical interaction with the local environment. *Open to Upper School Students.*

Advanced Robotics
Advanced Robotics further explores robotic assembly, architecture, and capability, and careers available in the field. Through understanding the diversity and power of each area of robotics, students work collaboratively in a competitive proposal-solution environment. Learning will be fast-paced and hands-on, with real world problem solving at the center of the coursework. *Open to Upper School Students who have successfully completed Introduction to Robotics.*

Intro to Engineering/Design
Students are introduced to mechanical, electrical, civil, and environmental engineering in this practical, innovative course designed to pique student interest in the field. Through investigation and exploration, students will complete basic engineering projects using hands-on training and real-life engineering solutions.

Engineering - Statics
Statics is the study of methods for quantifying the forces between non-moving bodies. Every interaction between objects has multiple forces acting upon them and this course teaches how to analyze them. This is an essential prerequisite for many branches of engineering, such as mechanical, civil, aeronautical, and biomedical engineering. This course will use algebra, trigonometry, and physics. Some basic calculus might come into play but it is not required.

3-D Printing
The 3D printing course will provide students with the opportunity to use technology that is growing in the world around them. Students will gain an understanding of how these technologies can benefit us in our day-to-day lives. Students will explore a variety of 3-D design software programs from free and web-based to industry standard and advanced software. The course will be broken down by terms into 3 units, programming and 3D design, learning and using 3D printers, and final project planning and production.

Engineering - CAD
Computer Aided Design: Most designs will incorporate 3D modeling to make parts for testing as well as simulate mathematical concepts in the 3rd dimension. There are many different programs that can be used for CAD but this course will use AutoCAD. This will be an introductory course showing the basics of 3D modeling as well as how to make engineering sketches which are essential to any true design. No prior knowledge is required but basic knowledge of computers is recommended.

Introduction to Coding
Introduction to Coding will introduce students to the world of Computer Science. We will cover some introductory content which includes the history of computers and how computers work. Over the course of the year, students will learn a whole new language called Java, which they will be using to write their very own programs that they can take with them from the class. The final projects for this course will require the students to create their very own replica of a retro videogame such as Frogger, Pong, Space Invaders, etc, or design their own games.

STEAM Capstone
In this course, students will discover and research a problem, propose, develop and execute a solution, then design, construct and present their solutions. Students will learn about current topics in STEAM, participate in round-table discussions, work together to devise solutions to given problems, and understand the importance of design efficiency. This course will prepare students for the rigors of college thesis and research courses which will require students to work on their own or in groups with minimal teacher interaction.

World Language Department

Requirements: Three consecutive years of the same foreign language (8-12)

Learning a foreign language is one of the cornerstones of a college preparatory, liberal arts education. The goal of the World Language Department at The Knox School is to make foreign language learning relevant, authentic, and engaging for students while teaching them to communicate effectively and genuinely in the target language through total language immersion. In class daily, students speak, listen, read and write in the target language while gaining an understanding and appreciation of the cultural practices, perspectives, and current events connected to the countries where the targeted languages are spoken. Personal motivation combined with the acquisition of tools for lifelong language learning drive student achievement of departmental and personal goals.

Program Objectives

As students progress through the stages of learning within the Knox World Language curriculum, students will demonstrate the ability to:

Program Objective 1: Use the language effectively in three modes of communication:

- **1a.** Interpretive (listening, reading, and viewing)
- **1b.** Interpersonal (listening, speaking, reading, and writing with others)
- **1c:** Presentational (speaking and writing in different types of performance).

Program Objective 2: Achieve language proficiency in all of the following arenas:

- **2b:** Comprehensibility (be able to be understood)
- **2c:** Comprehension (be able to understand others)
- **2d:** Language control (use the language with accuracy)
- **2e:** Vocabulary usage (have vocabulary appropriate for the content and the context)
- **2f:** Communication strategies (be able to communicate effectively in a variety of settings)
- **2g:** Cultural awareness (understand and be able to communicate in various contexts, with people in different geographic, linguistic, ideological, and cultural settings and orientations)

Program Objective 3: Demonstrate an awareness of the basic literary and cultural indicators of the foreign language

- **3a:** Engage the world with empathy and with understanding of the diversity of human experience across target language World Cultures.

Program Objective 4: Demonstrate oral proficiency in the foreign language

- **4a:** Understand grammatical structures in the foreign language and show an awareness of syntactic patterns

Full-Year Courses

Introduction to World Languages
This survey course is designed for 6th and 7th grade students to explore three languages over the course of the academic year: Spanish, Chinese, and French. Their exposure to each language, though only one trimester long, introduces them to basic linguistic skills such as vocabulary building, pronunciation, forming simple sentences and questions, listening comprehension, and recognizing Chinese characters. Students also develop insight into the cultures of the various countries linked to these languages. This course gives students the opportunity to discover which language they would like to continue studying beginning in 8th grade at level I and continuing throughout their education at Knox.

Chinese I
Chinese I is an introductory level course in Mandarin taught by a native speaking teacher. Students begin their exploration of the Chinese language by learning basic conversational skills, pronunciation, Chinese characters, and Chinese culture. They learn through various methods such as songs, games, stories, videos, and culturally relevant, authentic objects. Each student is paired with a native Chinese speaking student in order to practice conversation and share cultural insights throughout the school year.

Chinese II
Chinese II builds on the skills learned in Chinese I. It is designed to reinforce and further develop Chinese language skills in listening, speaking, reading and writing. The goal is for students to speak Chinese comfortably through expressing opinions and feelings in daily conversations. Additionally, students explore Chinese culture through hands-on activities, projects and presentations, which furthers their understanding of modern China. This course will integrate technology in the learning of the Chinese language and follows the national standards for foreign language education. **Prerequisite:** Chinese I.

Chinese III
Chinese III builds on the skills learned in Chinese II. Students moves towards greater fluency in Chinese language skills in listening, speaking, reading and writing. This course will integrate technology in the learning of the Chinese language and follows the national standards for foreign language education. **Prerequisite:** Chinese II.

Chinese IV
This advanced course focuses on the history and culture of Chinese-speaking countries, along with a continued study of grammar. Classes are taught in Chinese, and students access electronic news media to enrich both their study of the language and their understanding of current cultural events. Students also read a short novel in the target language. **Prerequisite:** Chinese III.

Spanish I
Spanish I is a beginning level course for students with little or no prior experience in Spanish. The fundamentals of Spanish are introduced through vocabulary and grammar, as well as oral and written communications. At the end of the course, students are able to communicate on a fundamental level both orally and in writing, and understand basic aspects of Spanish-speaking cultures.

Spanish II
Building upon Spanish I, this course introduces more complex and varied grammar, vocabulary, and verb tenses, along with more refined and detailed sentence structures. Students will continue their studies of Spanish-speaking cultures. Students are expected to communicate in Spanish. **Prerequisite:** Spanish I.

Spanish III
This intermediate-level course focuses on refining skills acquired in Spanish I and II. This involves a more advanced study of grammar through the use of short readings in Spanish. Emphasis is also placed on the ability of students to demonstrate communicative competency, both orally and in writing. This course is taught in Spanish. **Prerequisite:** Spanish II.

Spanish IV/V
This advanced course focuses on the history and culture of Spanish-speaking countries, along with a continued study of grammar. Classes are taught in Spanish, and students access electronic news media to enrich both their study of the language and their understanding of current cultural events. Students also read a short novel in the target language. **Prerequisite:** Spanish III.

French I
French I is a beginning level course for students with little or no prior experience in French. The fundamentals of French are introduced through vocabulary and grammar, as well as oral and written communications, rich visuals, and technology. At the end of the course, students are able to communicate on a fundamental level both orally and in writing, and understand basic aspects of French-speaking cultures.

French II
Building upon French I, this course introduces more complex and varied grammar, vocabulary, and verb tenses, along with more refined and detailed sentence structures. Students will continue their studies of French-speaking cultures. Students are expected to communicate in French as this is a full-immersion-level course. **Prerequisite:** French I.

French III
This intermediate-level course focuses on refining skills acquired in French I and II and involves a more advanced study of grammar through the use of short readings in French. Emphasis is also placed on the ability of students to demonstrate communicative competency, both orally and in writing. This course is taught only in French. **Prerequisite:** French II.

French IV/V
This advanced course focuses on the history and culture of French-speaking countries, along with a continued study of grammar. Classes are taught in French, and students access electronic news media to enrich both their study of the language and their understanding of current cultural events. Students also read a short novel in the target language. **Prerequisite:** French III.

Visual and Performing Arts Department

Requirements: 1 VA credit and 1 PA credit during Upper School to graduate

The Visual and Performing Arts are characterized by a rich and active history at The Knox School. We believe that the Arts are an essential element in our lives. To facilitate this understanding, we continue to take advantage of all of the rich resources around us. In doing so, we hope to build a positive sense of "place" for the Arts in the students' daily lives both now and as adults. As a department, we hope to instill an appreciation of the arts by building a stronger sense of self through awareness, relaxation, expression and confidence. As human beings, we are forever enriched by the arts and the artists who dare to create.

Program Objectives

As students progress through the stages of learning within the Knox Visual and Performing Arts curriculum, students will demonstrate the ability to:

Program Objective 1: Explain the technical and aesthetic practices of the visual and/or performing arts
Program Objective 2: Implement an established workflow and artistic process to create original work
Program Objective 3: Analyze artwork and deliver constructive critique to the work of self and others
Program Objective 4: Identify opportunities for professional practice within various artistic fields
Program Objective 5: Build a collaborative community and exchange artistic practices within the classroom

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Full-Year Courses

Visual Arts Courses

Media Arts
This full-year introductory course focuses on the practical operation and creative possibilities of digital photography and video using a Digital SLR. This course explores digital capture, computer editing using Adobe Photoshop, and output techniques utilizing professional Epson printers. Students should have a digital camera with manual capabilities which will shoot stills and video. Open to Upper School students with an interest in photography.

Photography I
This course serves as a full-year introduction to photography as a fine arts medium with a focus on black & white 35mm film shooting, developing, and printing. This course emphasizes the technical aspects of photography through demonstration, readings, and hands-on experience. Open to Upper School students with an interest in photography.

Media Arts II
This course combines the skills learned in Photo I and Media arts and moves students to the advanced mechanics and aesthetics of digital and 35 mm photography digital imaging skills and output techniques. *Open to the Upper School students who have successfully passed Photography I and/or Media Arts.*

Studio Art I
This course allows students to examine the major concepts of studio art. They begin with drawing then move on to explore painting, printmaking, and various other media of their choice. While learning and improving their technical skills, they will also be learning the concepts of line, spatial relationships, and creative expression. Students will progress from the cornerstone of art (drawing) through to printmaking. *Open to Upper School students with an interest in painting or drawing.*

Studio Art II
Studio Art II allows students to continue to develop the skills gained in Studio Art I and move on to generating pieces that reflect their personal creative style. Possible media include acrylic, watercolor, and tempera painting, as well as printmaking, quilling, batiking, and collaging. *Open to Upper School students with an interest in painting or drawing who have completed Studio Art I.*

Ceramics
Ceramics is a full-year course designed to develop the students' interest and skills in the creation of ceramic arts, including the artistic process from conception to firing. Students will also discover major artists and explore how their work influenced the history of ceramic arts. *Open to Upper School students with an interest in ceramics.*

AP Studio Art – Drawing and 2-D Design
The AP Art and Design course is designed as an advanced investigation into art making that will result in a comprehensive original portfolio of artwork that can be used for college application, and will be submitted to the College Board for review. Within this course, students will develop a portfolio that consists of two sections – **Selected Work** and **Sustained Investigation**, in the subject of Drawing or 2-D Design. This portfolio will exhibit mastery of three skill categories- **Inquiry & Investigation, Making through Practice, Experimentation & Revision, and Communication and Reflection.** In addition to completing an advanced art portfolio, students will investigate prospective careers in the arts, research prospective colleges and universities, and prepare college applications to their desired higher education prospects.

Visual Communication
This course contains an overview of tools and techniques used to convey messages, sell products, and promote awareness, through visual means. Students will apply foundational graphic design principles to digital image-making applications, digital illustration, and layout design, using industry-standard graphic design software. Students will also utilize the 5-Phase design process (discovery, interpretation, ideation, experimentation, and evolution), which puts design thinking into action. Students will apply ideas from a variety of sources, including art/design theory, history, and more, in an effort to provide a deeper understanding of images in contemporary culture.

ART 122 Electronic Illustration
This course enables students to create and modify illustrations and scanned images using the desktop computer as electronic drawing tool. Students will explore image enhancement, compositing and photo-restoration techniques, vector and raster image-making approaches and industry-standard technologies to create commercial art studies and original illustrations. Upon completion of this course have a personalized portfolio of digital illustrations and electronic artwork. *Available for college credit through the Suffolk Community College Beacon Program.*

Digital Filmmaking
This introductory visual arts course is designed to expose students to the creative process of moviemaking. Students will explore ideas of visual storytelling, learning how to compose various film shots and construct storyboards. Students will also become fluent in the technical aspects of film production by using editing programs such as Adobe Premiere and Final Cut Pro. Throughout the course, students will also examine classic and contemporary films and ultimately create their own short form pieces for distribution.

Performing Arts

Choir
This course is designed to develop students' understanding of the art of vocal performance, particularly as a choir. Students in this course explore vocal music from various periods, styles, and cultures, and develop an understanding of the original social and cultural context for each piece of music studied. They work to develop their ability to sight-sing, building on a strong foundation in music theory, through the study of solfege. Students also build confidence in their skills through regular performances at school events and at each trimester recital. Students also attend two local concerts featuring major choral repertoires. Open to Upper School students with an interest in singing and the ability to match pitch.

Chamber Choir
This smaller singing ensemble is hand-selected by the Choir Director and consists of an elite group of vocalists who wish to pursue studies in vocal music and/or performance.

Chamber Ensemble
This is a full-year performance group open to students who play string, wind or percussion instruments. Students will explore and perform challenging and varied repertoire for small ensembles.

Theatre I
Theatre is a full-year course designed to develop students' understanding of the various arts involved in the creation and production of theatre. Theatre students explore various crafts associated with the arts of acting, playwriting, designing, and directing. Students develop their understanding of the business of theatre and the variety of jobs available to those who have a passion for theatre and theatrical production. Students present their work at each trimester recital and attend two professional theatre productions. Open to Upper School students with an interest in theatre; preference given to students in grades 11 and 12.

Theatre II
This full-year course is designed for those students who have successfully completed Theatre I and who may wish to pursue

studies in theatre and performance at the University level.

Stagecraft
Stagecraft is a full-year course that introduces students to the theatrical arts associated with the technical elements of production, including scenic, costume, and lighting design; set construction and painting; lighting hanging, focusing, and gelling; and costume construction and alteration. Students learn to create scenographic models, ground plans, and front elevations, provide technical support for Knox Theatre productions and serve as technicians when appropriate for school events. Students also attend two professional theatre productions. Open to Upper School students with an interest in backstage work, including working with power tools, computers, and lighting equipment.

Music History
In this full-year course, students will examine various aspects of music that define style, genre, and period and develop the vocabulary to discuss them.

Advanced Placement (AP) Music Theory
This is a full-year course designed to prepare students for the Advanced Placement exam in Music Theory. Students will challenge themselves to develop a keen awareness of musical techniques present in significant works of the major musical periods and genres. Open to Upper School students in grades 11 and 12 who sing and/or play an instrument; placement at the discretion of the Chair of the Visual and Performing Arts Department.

PRIVATE MUSIC INSTRUCTION
Private lessons in voice and any musical instrument requested can be arranged at an additional fee. Students receive a private lesson during the class day once a week throughout the school year. No academic credit is earned for private music lessons.

English as a New Language (ENL) Department

Requirements: Students must receive a TOEFL score of 92 or higher with no subcategory less than 23 to be exempt from ENL.

The purpose of the ENL curriculum is to support overall academic achievement in preparation for college admission. The needs of international students seeking to develop competency in written and spoken English are met through daily instruction that integrates the core skills of reading, writing, listening, speaking and critical thinking into a holistic learning experience. To strengthen English language proficiency, the School promotes speaking English as often as possible. Students realize that communicating in English is not only courteous, but also enhances their ability to assimilate into American culture. The Knox ENL Program provides a comprehensive study of both spoken and written English to international students in need of such instruction. The ENL program enables these students to converse with ease in English and prepares students for the TOEFL, SAT and other standardized testing in preparation for admission to selective American colleges and universities.

Program Objectives

As students progress through the stages of learning within the Knox English as a New Language curriculum, students will demonstrate the ability to:

Program Objective 1: Speak, listen, read and write in English for the communicative purposes of gathering and giving information, responding to literature, enjoying social interaction, expressing themselves and sharing their knowledge.
Program Objective 2: Listen, speak, read and write in English for critical analysis and evaluation
Program Objective 3: Demonstrate the skills necessary for giving oral presentations for social interactions and content related academic language
Program Objective 4: Demonstrate competence in managing the writing process and producing effective written products including academic writing

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Full Year ENL Courses

Entering ENL
*Prerequisite***:** NONE
Emerging ENL
Prerequisite: Entering ENL
Transitioning ENL I
Prerequisite: Entering ENL
Transitioning ENL II
Prerequisite: Transitioning ENL I
Expanding ENL I
Expanding ENL II
Prerequisite: Expanding ENL I
Prerequisite: Transitioning ENL II

ENL English
(630) ENL Science
(632) ENL History

Commanding (No ENL Required)
Prerequisite: TOEFL score of 92 or higher

NOTE: ENL courses at or below the Emerging level do not carry Upper School credit.

BOOST Department

Requirements: Students who desire academic support or those with 504 plans or IEP's may be eligible for academic support services. Files will be reviewed on a case-by-case basis prior to the student's acceptance to The Knox School. Visit our website (www.knoxschool.org) for a list of fees for this additional service known as BOOST.

The BOOST Department offers programs and support services designed to provide capable, college-bound students with the foundation and skills necessary to develop their abilities and to reach their personal goals for academic achievement and college admission. There are three BOOST courses: BOOST Language, BOOST Math and BOOST Executive Functioning and Organization. Students are enrolled upon recommendation of current documentation and/or parental request. BOOST classes are taught either individually or in a small (no more than 3 students) group setting by qualified learning specialists. Classes meet during one period of the student's schedule. BOOST teachers often foster communication and share pedagogical methodologies within the school community and serve as a liaison between the school and the home.

BOOST Language
This is a language-based developmental program designed to provide specific individualized instruction in decoding, encoding, writing fluency and expression, reading fluency and comprehension, and basic grammar concepts. Self-advocacy issues, test-taking strategies and study skills (listening, note-taking and mnemonics, etc.) are also addressed in the BOOST classroom.

BOOST Math
In BOOST Math, concepts that are being learned in class and/or foundational concepts are reviewed and reinforced. Emphasis on understanding the language of higher mathematical concepts is stressed. Students will be introduced to and develop mathematical concepts that are necessary for successful completion of the required mathematics program at The Knox School.

BOOST Executive Functioning and Organization
BOOST Executive Functions and Organization focuses on executive functioning skills such as organization, planning, cognitive flexibility, task initiation and sustainability, memory, etc. This aspect of the BOOST Program is designed to help students succeed in all areas of their core academic classes.

The Knox School
Academic Integrity Policy

The Knox School *Student Handbook* states: "The Knox School's Core Values – Respect, Responsibility, Integrity, Courage, Kindness and Scholarship – provide students with an internal, ethical compass to guide them through their journeys at Knox and beyond" (4). In particular, Integrity, Responsibility and Scholarship are at the core of The School's academic policy. Knox students are expected to consult research materials for their studies; however, instances of academic dishonesty and/or plagiarism are unacceptable:

- Borrowing ideas or language from a source, including an online translator without giving that source credit is plagiarism.
- Downloading, copying, and/or cutting and pasting material (either in whole or in part) without crediting the source and/or the information through formal citation methods is plagiarism.
- Submitting work created in whole or in part by another person when it is understood that the work being submitted is supposed to be your original scholarship is dishonest and violates policies of academic integrity.
- Buying essays or research papers or hiring someone to do the assignment for you is dishonest and violates policies of academic honesty.
- Negotiating, asking or agreeing to have someone complete an assignment for you is dishonest and violates policies of academic honesty.

Students are expected to produce work that displays proper use of the MLA citation protocol. This includes, but is not limited to, the use of in-text citations, quotation marks, and references to ensure proper acknowledgement is given to any external source(s) used in the creation of academic material.

The following steps will be taken when students have violated The School's Academic Integrity Policy:

1. FIRST OFFENSE: In addition to meeting with the class instructor, the student's advisor, and the Assistant Head of School, the parent(s) or guardian(s) will be notified and the student will receive a grade of "0" for that assignment. A Violation Report will be added to the student's academic file.
2. SECOND OFFENSE: The student will fail the course for which the second violation occurred.
3. THIRD OFFENSE: Expulsion

I, _____, understand that plagiarism and academic dishonesty violate The Knox School's core values and will not be tolerated.

Signed: _____ Date: _____