St. Luke’s Mission:

*An exceptional education that inspires a deep love of learning,*
*a strong moral compass, the commitment to serve, and the confidence to lead.*

**Community Goals for Learning**

Our mission states that, “A St. Luke’s School education prepares students for a lifelong commitment to learning and social responsibility.” In order to develop lifelong learners and socially responsible citizens, the school’s pedagogy, curriculum, ethos, and environment are designed to foster in its students the following “thinking” dispositions:

**Curiosity**: wondering at our world, asking questions about it, exploring it.

**Open-Mindedness**: being willing to consider and try new ideas, generating alternative options and explanations, and looking beyond the given and expected.

**Seeking Truth and Understanding**: examining things more closely, looking for connections, exploring applications and consequences, pushing ideas to the limits, pulling ideas apart, contrasting one idea with another, and building explanations.

**Reflection**: thinking about one’s thinking, actively monitoring, regulating, evaluating, and directing one’s thinking.

**Integrity**: living a life of honor, characterized by trustworthiness and moral and ethical strength.

Further, we believe that lifelong learning is contingent upon three broad educational goals, including (1) actively acquiring knowledge (defined as *skills combined with information*), (2) active use of knowledge, and, (3) retention of knowledge. Specifically, as a result of their educational career, St. Luke’s School graduates will have developed the ability to:

**Think Critically and Creatively**
- sustain a process of inquiry
- see multiple perspectives
- generate new ideas
- read, view, and listen with comprehension
- take an approach to problem solving that is imaginative, original and strategic

**Communicate Effectively**
- write clearly and cogently in modes appropriate to the topic and audience
- speak confidently and effectively
- use technology effectively and ethically to gather information and formulate new ideas
- express ideas creatively in a variety of artistic media

**Demonstrate Character and Social Responsibility**
- live by the tenets of the St. Luke’s School Honor Code: kindness, responsibility, honesty, and respect
- help others through community service activities
- understand and respect what it means to be a part of a multicultural society and act accordingly

**Grow and Mature on a Personal Level**
- develop self-confidence and the ability to act independently
- work effectively alone and in collaboration with other students and teachers
- be willing to meet appropriate challenges, both intellectual and physical
- put forth maximum effort; realize the intrinsic value of hard work
- take personal responsibility for learning
- cultivate strong organizational skills
The Middle School Program of Studies

St. Luke’s Middle School recognizes the energy, playfulness, and uniqueness of the early adolescent, while believing these qualities are both compatible and essential to serious academic endeavor. The Middle School offers a developmentally tailored experience and a supportive environment that prepares students for the rigors of the Upper School program. Teachers emphasize process as a vehicle for intellectual development. An integrated course of study provides a strong foundation in key content areas while promoting active learning, critical thinking, problem solving, and the development of strong study skills. Teachers employ methods of instruction that respect different styles of learning and honor multiple intelligences.

At the core of the Middle School approach is the desire to provide students with a love and appreciation of the learning process. Emphasis is placed on the skills and attitudes required to become lifelong learners. Students are encouraged to be creative, open-minded, and flexible in their thought processes. Teachers are dedicated to creating a supportive and caring environment where students are expected to reflect on instruction, to think to learn, and above all, to learn to think. Furthermore, moral character and good citizenship are understood to be the cornerstones of adolescent development. Building a sense of happiness, commitment, competence, confidence, and self-esteem are equally important in our educational mission.

In addition to the core academic subjects, students take courses in art, music, drama, and physical education, which further contribute to the development of the whole child. Grade level class trips stimulate thinking, reinforce learning, build unity, and help to enhance community connections, further enriching the Middle School experience.

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designLab
The mission of the designLab is to increase creative problem-solving abilities through engineering, computer science, and design thinking. In the Middle School, this is accomplished through the introduction of the engineering design process and curricula that incorporate empathy, collaboration, project-based learning, and the fundamentals of engineering and computer science.

designLab 5
The goal of this course is for students to become more observant of their environment and see themselves as changemakers who can identify and solve problems. The iterative design engineering process will provide students with a framework for creatively solving a problem and communicating their ideas. Through collaborative projects, students will have the opportunity to develop empathy by becoming more attentive to the needs of others, and they will learn how to design and creative an equitable community. Students will also have the opportunity to develop their skills with some of the fabrication tools in the designLab.

designLab 6
The goal of this course is to engage students in the process of fabrication and prototyping so that they identify as designers and engineers. Technology education spans all core curricula and allows our students to make connections while using physical prototypes and project-based learning. We focus on brainstorming to develop problem-solving skills within each weekly challenge and encourage students to become resilient collaborators. Mini-lessons in engineering and computer science become vehicles for students to build and improve upon their designs. With cutting edge fabrication tools in our designLab, students can increase their breadth of knowledge at the Middle School level. Students are encouraged to transfer their knowledge of core content to solve real-world design challenges.

designLab 8
The goal of this elective is to take a deeper dive into the design engineering process. It offers a unique experience to students to practice and focus on innovation as well as design and engineering. Through the collaborative process, students build resilience and strengthen peer-to-peer connections. Students will practice taking their vision from concept to prototype with each unit of study to increase their problem-solving abilities. Example units include mixed reality tools, 3D printing, laser etching, wearable technology, woodworking materials, power tools, and prototyping with circuitry and physical computing. Through tinkering and tangible projects, students develop autonomy and utilize a larger variety of tools that are available in the designLab. Practice with these tools and processes provides a foundation of knowledge necessary to work in the designLab safely and effectively.

English
Middle School English classes feature frequent creative and expository writing assignments, oral reports, and readings that are “language-rich” and appropriate. In writing, students learn how to compose coherent and developed paragraphs and multi-paragraph essays. Also covered are grammatical concepts, vocabulary development, note taking, test-taking and classroom discussion skills.

English 5
The fifth grade English program focuses on the acquisition and enhancement of foundational writing and reading comprehension skills. Students are encouraged to see themselves as members of a literary community of enthusiastic readers and writers. Reading is heavily emphasized, both in school and at home, and students are immersed in critical thinking and writing activities in the study of appropriately challenging literature. Vocabulary, spelling, and grammar are taught as adjuncts to improving the students’ reading comprehension and writing. Growth in clarity and fluency are major objectives of the fifth grade writing curriculum, and students are guided in choosing to write about things that matter to them, across many different genres. The English curriculum has the flexibility to work with reading materials and writing topics and genres that honor the particular needs and enthusiasms of each class. We encourage our students to meaningfully embrace their roles as participants in their own learning journey, and to recognize their classmates as unique individuals with particular intellectual strengths and contributions to make.
**English 6**
The goal of sixth grade English is to provide students with a toolkit of skills for reading comprehension, composition, vocabulary acquisition, participation in literary discussion, and test preparation. Through the writing process, students develop both creative and analytical compositions and learn to support an argument using appropriate evidence. They also explore the creative possibilities of the language arts and focus on developing their unique writing voice. Emphasis is also placed on the study of grammar, and editing and revising habits. Students examine a variety of literary forms, including short stories, novels, plays, and poetry in order to gain a deeper appreciation of literature. Students also enjoy creative and collaborative activities that challenge them to stretch intellectually, including the performance of a play and creation of an original movie.

**English 7**
Language and writing are the focal points of English 7. Students become sensitized to the role language plays in their lives through various activities including the study of vocabulary in context, rigorous work in composition and a conceptual approach to the study of English grammar that calls for critical thinking. In writing, attention is paid to creating successful complex sentences, transitions, and summaries. It should be noted, too, that the reading for close study includes challenging works of fiction and poetry chosen for their subtlety of expression and richness of theme; also, a high degree of participation is expected of students in presenting their writing and their understanding of ideas in the classroom. As a continuation of the public speaking curriculum that leads to English 8 Declamations, all seventh grade students learn the presentation form in the 100 Influential Characters Who Have Never Lived unit, which is presented to the Middle School community.

**English 8**
English 8 continues the focus on language established in English 7. Students develop and sharpen their analytical and critical thinking skills through language-intensive activities including essay writing, close readings of fiction, the study of vocabulary in context, and a conceptual approach to the study of English grammar. Students compose expository essays based on traditional rhetorical models, including narration, compare and contrast, and persuasion/argument, in addition to personal response writings. Furthermore, students examine a variety of literary forms, including short stories, novels, plays, and poetry in order to gain a deeper appreciation of literature. Also, a high level of participation is encouraged through lively class discussion, oral reports, and in-class readings of text. In the second semester, all eighth grade students are required to present a Declamation (public speech) in front of peers and parents.

**Fine Arts**
The aim of art classes is to provide a hands-on project-based setting for students to become familiar with the principles and elements of art as a discipline. Through visual problem-solving projects, students will discover the joy of individual creation as well as the universal cross-cultural aspect of visual expression. A wide range of two-dimensional and three-dimensional media will be explored, based on observation, memory and imagination.

**Art 5**
Art for fifth grade provides an opportunity for students to begin the practice of autonomy in art making that is a focus in Middle School art. Students are given project ideas every class period that they may choose to work on. At the beginning of the year, students work on a given project, and as the year goes on, they are introduced to more materials, until finally, they are invited to work on a given assignment or work independently on their own idea using the materials offered. A wide variety of materials are available at all times for students to choose from, including but not limited to: clay, papier-mâché, watercolor, tempera paint, charcoal, pastel, colored pencils, a variety of papers, string, yarn, ribbon, fabric, scissors, needles and thread, hot glue guns, tape, and boxes of recyclables. There is a bookshelf filled with how-to draw books, and stories about the lives of artists. A box of magazines is available for collage, and pictures are available for students to practice copywork. The opportunity to choose the skills and materials each student needs in pursuit of an artistic vision creates a palpable excitement and an environment that encourages risk-taking and self-discovery.
Art 6
Sixth grade students continue to focus on autonomy in artmaking, with an increased opportunity for interdisciplinary and group work. The course continues to offer a balance of curricular and choice-based experiences, with exposure to a wide range of artworks and artists. Mediums encountered may include printmaking, painting, papier-maché, ceramic, drawing, and mixed media assemblage, as well as others. Students are encouraged to view their work and process with a reflective lens and to build a resilient mindset, driving future growth and learning. Some examples of past interdisciplinary experiences include: students working together to build ceramic totem poles, designing and painting a mural based on civilization designs, and creating their own currency for these imaginary civilizations.

Art 7
Seventh grade art students continue to pursue their own interests in Art, combined with class assignments designed to challenge their thinking and ways of seeing. There is a focus on the relationship between symbolic, realistic and abstract representation. Assignments range from students being free to choose from a wide variety of materials and approaches to make artworks about given themes (such as contemporary issues) to students using careful looking to draw an object. Seventh grade students spend more time making formal and informal verbal or written reflections on their own and their classmates’ work.

Art 8
This elective course provides the opportunity for deep-level arts learning and engagement at the Middle School level. Each student receives a sketchbook to be used as a space to investigate materials, brainstorm concepts and ideas, collect resources, to play, and to practice and acquire skills. Objectives for the course include: to support students in developing and discovering their artistic competencies as well as creating a body of work that reflects authentic personal style and vision; to critically engage students’ visual culture and guide them in cultivating the ability to interact with and contribute to it consciously and purposefully; and to provide exposure to a wide range of methods and materials that the student can navigate according to their most appropriate level of challenge. Some of these include: color theory painting, photography and materials-based methods for editing, large and small-scale sculpture in relief and in the round, ceramics, and mask-making. Students find both freedom and structure across the course, with time allocated for both curricular and independent work.

History and Social Science
The Middle School Social Science curriculum emphasizes the development of analytical and writing skills in a context of studying a variety of social, historical and political subjects. Students encounter a variety of forms of information – both objective and subjective – and are encouraged to relate that information to the world in which they live. Writing and research skills are developed in preparation for the Upper School curriculum.

Social Studies 5
This course seeks to build a foundation of skills and a framework of knowledge about the world of today, along with an understanding of major themes in American history and culture that play important roles in our contemporary experience. The year begins with an exploration of the concept of community and a series of creating interdisciplinary activities designed to engage students with the people and values of St. Luke’s. Within geography and US History based content areas, students carry out creative project work, both individually and cooperatively, as well as practicing the traditional academic skills of highlighting, note-taking, mapping, researching, and reporting. Students are guided in becoming more discriminating and skillful users of web-based content in research and in building awareness of current events and topics. The fifth grade Kiva Microloans Service Project connects to a major project-based learning experience, culminating in a presentation to families at the annual International Night dinner.

History 6: World Cultures
At the start of History 6, students examine their own culture, and also have the opportunity to view American culture from the outside. A study of mapping and sustainability helps students to better understand the language of geography as well as the extent to which humans are dependent upon our natural resources. Toward the end of the first semester, students will study the roots of early civilization, after which they will create their own ancient civilization. During the second semester, students
study the historical roots of the Middle East and Sub-Saharan Africa as well as contemporary and social issues, and propose workable solutions for the future during their Courageous Citizens Project. The content of each sixth grade course is a vehicle for teaching important academic skills. Students learn how to locate information online and in print, as well as how to synthesize and express what they have learned in writing and in speech. Spatial skills are applied during students’ study of geography and mapping. And finally, examining events from multiple perspectives, analyzing evidence, and problem solving helps to nurture each student’s ability to think critically and purposefully.

History 7: American Social History I
In this course, we structure our curriculum around social issues in American History from the 1700s to the 1900s, specifically addressing the American Revolution and Declaration of Independence through the Civil War and the Suffrage Movement. In the process of investigating these epochs in history students discover the roots of our values, how we established laws and a system of government, the origins of slavery and oppression, the convergence of cultures during westward expansion, the causes and justifications of war, and women’s roles in shaping America. These explorations enable students to identify themes and trends that connect our past with our present. Recurring themes of identity, values, and culture resonate with students’ personal experiences and contemporary issues of social justice. Throughout the year, critical thinking skills are acquired via persuasive writing, design thinking, Project-Based Learning, and research papers/projects. Students will also refine essential skills, such as active listening/response, Cornell note taking, responsible research, and use of primary and secondary sources. Finally, students will use design thinking and service-learning opportunities to address homelessness, food insecurity, and literacy, giving students agency to recognize themselves as actors in a particular historical moment and emphasize the concept of citizenship.

History 8: American Social History II
This course combines the study of the structure and function of the United States Government with investigation of historical epochs and social issues of the 20th and 21st centuries. In essence, it is a survey course and continuation of the study of American history from the 7th grade. Students will develop a foundational understanding of the government of the United States, specifically the workings of the three branches in relation to historic cultural movements that have deeply affected our society into present day. Course units include, but are not limited to: events and world impact of 9/11; issues of immigration and what it means to be an American citizen; our class trip to Washington, D.C., focusing on the function of our capital and the importance of memorials; the Progressive Era; America’s involvement in both World Wars; and the American Civil Rights Movement. Service learning, Project-Based Learning, and design thinking are interwoven in the curriculum to engage students in meaningful learning with real-life applications. At the same time, students will build foundations for Upper School coursework through historical research, case studies, and regular current events assignments. Emphasis will be placed on critical thinking skills, writing, speaking, debate, note-taking, and research skills.

Mathematics
The aim of the Middle School Mathematics curriculum at St. Luke’s is to establish a strong foundation in basic skills and concepts with an emphasis on problem solving and critical thinking. Courses introduce algebra and geometry by using creative activities that challenge and support the students to learn serious, substantive mathematics concepts while fostering confidence and enhancing their ability to be successful in future courses. Students explore relationships among numbers, variables, and real world applications.

Math 5
The curriculum for our fifth grade math program builds fundamental math skills that students will use throughout their lives. The math curriculum focuses on solidifying number facts, consolidating the students’ skills in calculation by developing efficient strategies, and challenging them with high-level concepts and problem-solving skills. The curriculum builds a solid foundation of competence in number sense, place value, estimating, all four operations in problems with whole numbers, fractions, and decimals, while further developing algebraic thinking by utilizing patterns, variables, and equations.
Math 6
The aim of the Math 6 course is for students to master decimal, fraction, and integer operations as well as to utilize those skills in a variety of practical applications, including measurement and geometry. Proportional reasoning is stressed as students explore the concept of scale and percent in real-world applications. Students are introduced to the use of variables and simple equations as a means of problem solving. Emphasis is placed on estimation, critical thinking, practical problem solving, and interdisciplinary connections, with an introduction to basic algebra concepts throughout each lesson.

Pre-Algebra 6 and Pre-Algebra 7
This course is designed to prepare students for the formal study of algebra and geometry. Students master operations with integers, proportions, and percent. Data analysis, solving equations, simplifying expressions, and using exponents (including scientific notation) are explored. The skill of reading critically, both to introduce and reinforce mathematical ideas, is emphasized. The course concludes with an introduction to linear equations and a study of basic geometric concepts.

Math 7
This course will introduce students to concepts in pre-algebra and algebra over two years. Students will learn and review ratios, decimals, percent, and operations with real numbers. Students then will apply those concepts to algebraic expressions and equations—from simple to multi-step—and will also examine word problems. Fractional equations also will be studied, which will allow students to develop fluency with algebra as they study fractions. Students will learn data representations and statistics as they understand graphs, centers of measure, and interpreting information. The year ends with an examination of functions, with special emphasis placed on linear equations and graphing and working with word problems that include linear relationships. The course will have a cumulative component, focusing on topics throughout the year with different methods of review and assessment.

Math 7A
Students in this course will cover all topics in Math 7A at a more rigorous pace, with a greater emphasis on problem solving. They also will delve into more complicated problem-solving techniques and additional topics of functions and systems of equations.

Linear Topics in Algebra
This is a course for eighth graders that will cover the first half of a traditional Algebra 1 class. It is part of a three-year sequence that will include Integrated Algebra and Integrated Geometry in the Upper School. Students in the course gain a solid understanding of the fundamentals of algebra, including solving equations and inequalities, ratio, and proportion and percent. Additionally, students will learn to use the basic algebraic operations of monomials, properties of rational expressions, exponents, and roots. The emphasis will be on solving and using linear equations and inequalities, simple factoring, and graphing of linear functions. A major focus on computations and calculations also will be covered.

Math 8
This course is the continuation of the two-year sequence which begins in Math 7. Concepts will be seamlessly integrated through the study of basic algebraic concepts by first reviewing the properties and applications of simplifying expressions and solving equations. The class will focus heavily on solving systems of equations, inequalities, and quadratic functions. An in-depth study of computing and factoring polynomials will be applied to simplifying rational expressions and solving functions. Problem solving, understanding the connection to the real world, and abstract thinking will be emphasized. Cumulative review and the use of technology, including graphic calculators, are consistently integrated into this course.

Math 8A
This course will cover all concepts noted in Math 8 at a faster pace. Students in this course also will delve into more complicated problem-solving techniques and additional topics with functions and geometric applications.

Geometry MS
Geometry MS is a traditional course for developing one’s reasoning ability by studying patterns in two and three dimensions. Students are encouraged to form and verify conjectures about relationships through formal proof. This course includes
coordinates, transformations, measurement, area and volume, congruence and similarity, logic, trigonometry, properties of symmetry, and circles.

Prerequisite: recommendation of the student’s current instructor.

Please note: Students in Geometry MS must maintain a B+ test average (before test corrections) and successfully pass a placement test in order to be considered for Algebra II in ninth grade.

Other

Library 6
Students learn to use the St. Luke’s online catalog to find materials for both pleasure reading and research, and then they locate them on the library shelves. Through read-aloud, students discuss various topics, including social-emotional skills, biographies, nonfiction, and fiction. Students are encouraged to pursue their love of reading and discern their literature preferences. In news literacy lessons, students learn to evaluate news for accuracy, bias, and credibility, and they also look critically at social media. Students also learn the difference between a website and a database by using research instruction to execute an effective search and evaluate its results. Students also learn about citations: why they are necessary, and how to construct them by using Noodletools.

Electives 8
Eighth graders will add a twice-weekly elective to their schedules. The 2021-2022 offerings for eighth graders will be published later this spring, and students will rank their elective priorities at that time.

Performing Arts
St. Luke’s students have the opportunity to explore the world of music and theatre through the performing arts. All ensembles explore diverse and varied repertoire and participate in at least two performances each year.

Band 5 or Choir 5
Fifth-grade students attend either choir or band daily throughout the entire year. Students learn to read music notation and follow along in their music. Throughout the year, students participate in active listening and performance of music from many different genres and cultures.

Band 6 or Choir 6
Sixth-grade students attend either choir or band daily throughout the entire year. Sixth-grade performing ensembles build on the basics learned in Fifth Grade Music. Students continue to develop their musicianship skills while expanding their knowledge of choral singing and instrumental music. Sixth Grade Band is offered to beginners as well as those who have previous instrumental experience. Throughout the year, students participate in active listening and performance of music from many different genres and cultures.

Prep Band 7-8 or Choir 7-8
Music is required for all seventh-grade students and is an elective option for eighth-grade students. Students at this level may choose Prep Band 7-8 or Choir 7-8. Basic musicianship, music literacy, music history, and music appreciation are all taught within the context of these performance groups. The Choir 7-8 program focuses on increasingly challenging repertoire, moving toward a blended and flexible choral sound. The Prep Band consists of students who have had at least one year of instruction on a woodwind, brass, or percussion instrument. Beginning instrumentalists may also participate at the director’s discretion.

Theater 8
Join us for a theater-based class with an emphasis on character development. We will explore acting, improvisation, directing, and design through published texts and original work. Roll up your sleeves and be ready to dive into the world of performance and ensemble through collaborative theatre exercises.
**Physical Education**

Middle School students participate in instructional periods every other day all year meeting the National Education Standards for Physical Education and Health. The Middle School Physical Education curriculum encourages cooperation and sportsmanship through the use of team sport activities. The Physical Education Department feels that it is extremely important that students develop their motor skills to further their physical development. Our program also aids in the students’ growth and development on an emotional and social level by including informal and formal competition.

**Science**

The Middle School Science program introduces students to the skills of the scientific method and engages them in activities and lessons that encourage an awareness of the scientific thought process. Students systematically investigate, analyze, and experiment with many of the fundamental concepts that will lead to a greater understanding of the world around them, with the goal of developing an appreciation of science. The program provides a foundation of hands-on explorations that build curiosity and engagement with the world. The goal of the Middle School Science program is to build students’ academic aptitude by instilling a sense of accomplishment brought about by challenge and discovery, thereby empowering them not only to see the world clearly, but also to imagine what could be and how it might be achieved.

*Science 5*

Fifth grade science is centered on experiential learning adventures that provide a balance of hands-on activities, real-world exploration, and engaging content resources. Students develop scientific literacy and are exposed to resources and ideas that challenge them to use processing, critical thinking, and scientific reasoning skills. Through projects and lab-based activities, students are immersed in the main content areas of the curriculum: chemistry, physics, and environmental science. Signature experiences in the fifth grade include: The Great Paper Airplane Experiment, Lego Education’s Simple Machines, Cut The Rope, and The Sound Symphony Celebration.

*Science 6: Earth Systems*

The Sixth grade science program stresses the fundamentals of Earth Science focusing specifically on Land, Air, Water, and Space. Each hands-on investigation is structured to challenge the student to think about the purpose and meaning of the activity, as they hypothesize possible outcomes. Students explore the scientific method in depth, encouraged to ask questions and give suggestions while conducting experiments and evaluating their results. Investigations are done in small collaborative groups where students learn to share ideas, data and experiences. Topics of study include Plate Tectonics, Topography, Meteorology, Astronomy, Geology, Oceanography and the effects of human impact on the environment.

*Science 7: Life Science*

Life Science offers seventh grade students a practical approach to the study of living things by thinking critically about the classification and common characteristics of life. The course emphasizes a hands-on approach, focusing on the scientific inquiry process and thinking like a scientist. This inquiry-based approach challenges students to observe patterns and generalize relationships in acquiring a solid understanding of scientific ideas. Laboratory activities utilizing microscopes and other basic lab equipment are regularly scheduled. The objective of seventh grade science is for students to not only comprehend the scientific concepts, but also to analyze and synthesize information to make sense of the world around them. The course is divided into three sections: diversity of life, cells and heredity, and the human body.

*Science 8: Physics & Engineering*

Eighth grade science is an inquiry-based course that stresses the scientific process, critical thinking, and fundamental concepts of physics through hands-on laboratory investigations and project-based engineering activities. The students learn how to work both independently and collaboratively as they cultivate their scientific thinking skills. The course emphasizes the development of observation, experimentation, and analytical skills applicable to successive laboratory courses in the Upper School. Eighth graders will acquire an understanding of topics including motion, forces, Newton’s Laws, and energy. Each unit culminates with the students engaging in the design thinking process to engineer a project that incorporates the concepts learned in class.
Projects may include the Single Pringle Chip Challenge, the Robo Ring Robotics Challenge, Trebuchet building, the Balsa Bridge Engineering Challenge, Egg Crash cars, and the Roller Coaster Exploration.

### World Language

The World Language curriculum in the Middle School exposes students to three modern languages offered at St. Luke’s (French, Mandarin Chinese, and Spanish) while encouraging fun, active engagement in the classroom. As gaining proficiency in another language is a process that is valuable and enriching in a multicultural world, the Middle School World Language program is vital in helping students take the first steps towards reaching this goal. All students take Spanish in fifth grade and French and Mandarin Chinese in sixth grade. Before starting their seventh grade year, students must choose one of these three languages to study on a daily basis in seventh and eighth grades. Students earning any mark lower than a C- in a course are strongly encouraged to begin with Level I upon entrance into the Upper School or take a summer review course before continuing to the next level in the sequence.

**World Language Sampler Program: Spanish 5, French 6, Mandarin Chinese 6**

This sequence introduces fifth and sixth graders to three different modern languages: Spanish in fifth grade, and French and Mandarin Chinese in sixth grade. Having students experience the beauty of three languages (and the cultures of the many countries where they are spoken) before selecting which one they want to pursue further is empowering and valuable; students have an informed voice in choosing their own world language path. All three courses use the innovative, picture-based method called QTalk. Students assimilate language through images and are able to speak in full sentences almost immediately. They are also introduced to cultural elements, geographical points of interest, and traditions. At the end of the sixth grade year, students choose one of the three languages to study daily in seventh and eighth grades.

**French 7, Mandarin Chinese 7, and Spanish 7**

The purpose of this course is to formally begin the study of French, Mandarin Chinese, or Spanish. Students meet daily for the entire year. The objectives of the course are to help students develop a good accent, to build a basic vocabulary, to understand basic linguistic structures, to read and write simple paragraphs and to learn about and appreciate the culture of the countries where the target language is spoken. Great emphasis is placed on oral work. This course comprises the first half of a full Level I curriculum at the Middle School level.

**French 7A and Spanish 7A**

Those students whose advanced language abilities are recognized in the sixth grade sampler program will be recommended for Level 7A (course availability based on enrollment). This course will move at a more rapid pace and will cover more material than that of Level 7. Upon successful completion of this course and teacher recommendation, students will be ready to begin Level 8A in the 8th grade.

*Prerequisite: recommendation of the student’s current instructor.*

**French 8, Mandarin Chinese 8, and Spanish 8**

This course is the second half of a full Level I curriculum at the Middle School level. When successfully completed, the students will have learned the basics of the language and will have the proper foundation for continued study. The objectives of this year are to increase vocabulary and improve fluency. Students learn more advanced grammar and can read and write more sophisticated material. After this course, students should be prepared to enter the Upper School World Language sequence, most commonly at Level II. Those who have done particularly well may be recommended for the Honors section. Students earning any mark lower than a C in these courses are strongly encouraged to begin with Level I upon entrance into the Upper School or take a summer review course before continuing to the next level in the sequence.

**French 8A and Spanish 8A**

This course is for Middle School students who have successfully completed a full Level 7A curriculum. By the end of the year, students in Level 8A will have completed the equivalent of an advanced, accelerated Level I curriculum and will be ready for French or Spanish II Honors in the Upper School. Students who receive lower than a B in this course for the year or are otherwise not recommended by their teacher will enroll in Level II in the Upper School.
Prerequisite: recommendation of the student’s current instructor.
Upper School Academic Credits and Graduation Requirements

1 All students must be enrolled in and receive at least five academic credits (one credit per year-long course, ½ credit per semester-long course) for promotion to the next grade. In the Upper School, 20 credits are required for graduation and must include the following:

   **English:** World Literature, British Literature, and American Literature or American Studies (or the equivalent of each course) in 9th-11th grades, plus an English elective during both semesters in 12th grade.

   **Health and Wellness:** complete 5 Health units (“mini-courses”)

   **History and Social Science:** Foundations of World History, Modern World History, and United States History or American Studies (or the equivalent of each course).

   **Mathematics:** three years in the Upper School, including Geometry and Algebra II.

   **Science:** Biology, a physical science (either Chemistry or Physics), and a third year of Science.

   **Fine Arts and Performing Arts:** one year-long class or two semester-long classes of Upper School Art, Music, or Theater.

   **World Language:** three years in the Upper School; Mandarin Chinese, French, Latin, or Spanish, through level three.

2 Grade level is determined by awarding one grade promotion for every five credits earned above 8th grade. While at St. Luke’s, students will be promoted only one grade each year, provided they earn at least five credits for that year.

3 A student who does not pass at least five credits during the regular school year must make up the deficit as arranged by the Head of Upper School and/or Director of Studies. Otherwise, that student must repeat the grade. There will be a limit of two make-up courses that a student may take during one summer.

4 A student who drops a year’s course after the add/drop period will receive no credit for it and will have “W” for “Withdraw” or “W/P” for “Withdraw/Pass” on the transcript. (Poor performance, possible failure or failing status are not necessarily adequate reasons for withdrawal from a course.)

5 Summer courses may enrich or prepare students for a future course or may support students who have failed a course. However, a summer course cannot fulfill the requirement for a course unless it is approved by the appropriate Department Chair, Head of Upper School, and the Director of Studies, and also unless the student passes an SLS exam demonstrating proficiency.

6 All students are required to perform 20 hours of community service for each year in the Upper School. This requirement must be completed prior to Commencement. Please see the Director of the Center for Leadership for more information.

7 Ninth graders may not take seven classes during a semester without approval of both the Head of Upper School and Director of Studies.
Dropping and Adding Courses

Students must obtain a “Request for Schedule Change Form” from the Director of Studies and secure the necessary signatures. A course may only be added within a certain period of time (announced at the beginning of the school year); a course may be dropped anytime, provided that the student is left with at least five courses (not including Independent Study courses). Withdrawals from courses generally will not show on the transcript if the course is dropped within six weeks of the first day of school (or, for second semester courses, within six weeks of the first day of the second semester); after that date, the dropped course will appear on the transcript. If a student changes courses within the same department, then the report card grade will be calculated by the percentage of time in each class. The Director of Studies and/or appropriate Division Head may make exceptions to these rules.

Honors, Advanced Placement (AP), and Advanced Courses

St. Luke’s School offers a variety of Honors, Advanced Placement (AP), and Advanced courses in the Upper School. Those courses receive a 0.33 “bump” in weighted GPA calculations. Students enrolled in AP courses are required to take the AP exam in May.

By their very nature, these courses are reserved for students who have excelled in a subject and are capable of dealing with academic rigor at the highest level. Placement into these courses is based on a student’s ability to meet criteria in a number of areas, as noted below, for each of the academic departments. Teachers believe strongly that these criteria should be met if the student is to succeed at an appropriate level in an Honors, AP, or Advanced course. The student’s current instructors are in the best position to determine future success; their recommendation is an essential requirement for placement. Recommendations are tentative and are subject to change.

**Grade:** earn a minimum grade of A- to move from a regular course to an Honors, AP, or Advanced course; a minimum grade of B to remain at the Honors, AP, or Advanced level. Some academic departments might have other requirements to move into or to remain in an honors course. Teachers consider semester grades (not just year-long grades) and March Exam grades (if applicable) when making suggested placements.

**Standardized Tests:** for English and mathematics placement in Honors, AP, and Advanced courses, score highly on the ACT Aspire, PreACT, PSAT, SAT/Subject Tests, or ACT for comparable student category (e.g., Science, Math, Reading). Percentile requirements will be determined when annual data for each standardized test are available.

**Skills:** demonstrate exceptional ability in the skills required for success in the appropriate discipline, whether reading comprehension, analysis, grammar, calculation, or oral ability.

**Motivation:** exhibit a great interest for the subject; demonstrate a strong work ethic; take initiative and be proactive in one’s work; complete homework promptly and completely; participate actively in the classroom.

**Other:** meet all of the prerequisites listed for a particular course.

**Recommendation:** receive the recommendation of the student’s current instructor for placement into Honors, AP, or Advanced courses. In some cases, students also will require the recommendation of the course’s instructor, if the current instructor and the course instructor are different.

Independent Studies

Detailed, written proposals for Upper School independent studies be submitted to the Director of Studies with the name of the faculty member willing to sponsor the course. The final project for an independent study typically includes a paper and a presentation, coordinated by the student, to a panel of at least three faculty members. Independent study projects are restricted to juniors and seniors and can last either one semester or an entire academic year. The project must be driven by an essential question that is challenging and thought provoking, broad in scope, and can be answered only by research, reading, and writing. An Independent Study may be added to a five-course load as a sixth course; an IS may not be one of the five required courses in a typical St. Luke’s schedule. All Independent Study projects are graded as on a proficiency-mastery scale (instead of the traditional A-F grading scale) and are not calculated into a student’s GPA.

Scholars Programs

St. Luke’s offers three academic programs in our Upper School where high-achieving and highly-motivated students might pursue independent research in a particular field of interest. The Classical, Global, and STEM Scholars programs have specific requirements that go beyond our graduation requirements, and they are listed below. All three programs culminate with the
successful completion and presentation of their scholarly research at the Scholars Symposium in April of the student’s senior year. Scholars receive special recognition at both the Upper School Awards Ceremony and Commencement.

Classical Scholars Program
St. Luke’s School offers students the opportunity to graduate with special recognition honoring their commitment to the study of classical languages and cultures. The requirements of this enriched course of study are:
1. The successful completion of Advanced Latin Literature.
2. The successful completion of one year of Advanced Ancient Greek and two semester-long survey classes, History of Ancient Greece and History of Ancient Rome. These courses are offered in alternating years.
3. A final research project or paper as an outgrowth of the studies in Latin, Ancient Greek and/or Classics. Proposals and a basic outline of study for this project must be submitted by the end of the student’s junior year. By mid-second semester of their senior year, students must successfully complete their project and present it at the Scholars Symposium in April.

Global Scholars Program
The Global Scholars Program is a means for students at St. Luke’s to demonstrate their commitment to global education through achievement in a wide variety of disciplines. The honors bestowed reflect students’ accomplishments across disciplines that relate to developing a “global understanding” of the world in which we live. Accomplishment in the liberal arts, social and natural sciences as well as world languages that relate to understanding the interconnectedness of the world in which we live are core elements of the program. Related experiences such as international travel, hosting an international student, service learning, and related extra-curricular activities provide evidence of a student’s commitment to global education and serve as a basis for admission into the final stage of the program.
In order to be admitted into the program, applicants must have maintained a strong academic average in Humanities courses during their Upper School career. They must submit an application during the winter of their junior year (date to be announced after Thanksgiving Break) showing a commitment to global education, including a teacher recommendation. In order to apply, students must also be on target to complete all of the following program requirements by the end of their senior year:
1. Coursework
   World Languages: Students participating in the Global Scholars Program must complete through level 5/AP in French or Spanish or Level 4 in Mandarin. Another option is to complete a total of five years of high-school level language study over multiple languages (e.g., 3 years of Spanish & 2 years of French). Students completing a course sequence in Latin must complete at least one year of a modern language.
   Ethics of Global Citizenship: Students must complete this course in 10th or 11th grade.
   Global Electives: Students must complete at least one additional approved elective that relates to global studies by the end of their senior year. Please contact the Director of Global Education or Director of Studies to learn which electives can fulfill this requirement.
   Advanced Global Scholars Seminar: All Scholars must participate in this year-long course during the senior year.
2. International Learning Experience
   Students must document their international learning experience. This experience may come from having studied abroad, participated in an overseas service program, or volunteered/worked in an international environment such as hosting an exchange student or working with an immigrant community. St. Luke’s sponsored international trips and exchanges automatically fulfill this requirement. International travel that does not include both structured educational content and cultural immersion will not be deemed to have fulfilled this program requirement.
3. Capstone Project and Presentation/Demonstration of Learning
   All program participants must complete and present an advanced in-depth study of a question relating to their interest in global education. Their interest may be in any discipline, though it is recommended and likely that the project will require a multi-disciplinary approach. The project is part of the Advanced Global Scholars Seminar course, and a presentation of the student’s work will be given at the Scholars Symposium in April.
Literary Scholars Program
The Literary Scholars Program is a humanities-based program that focuses most intently on the analysis of literature. Students in the program have a chance to wed scholarship and creativity in an independent project that will showcase interdisciplinary academic research. In order to be admitted into the program, students must submit an application and interview with the Literary Scholars Program Committee during the winter of their junior year. Additional requirements include:
1. One year beyond the required course load in two of the four following disciplines: Fine Arts, History, Performing Arts, and/or World Language.
2. Superlative work in: Honors British Literature (10th grade), and either Honors American Studies or Advanced American Literature (11th grade).
3. At least one Advanced English elective in 12th grade.
4. Successful completion of a Literary Scholars research paper, and presentation of the project at the Scholars Symposium in April.

STEM Scholars Program
The STEM Scholars Program is offered to students whose interests and talents lay in STEM-related disciplines: Science, Technology, Engineering, and Math. In order to be admitted into the program, students must submit an application during the winter of their junior year. In order to apply, students must be on target to complete all of the following program requirements by the end of their senior year:
1. Four years of Mathematics
2. Four years of Science
3. designLab Foundations, a one-semester course
4. Completion of AP or Advanced courses in two out of the following three STEM disciplines: Mathematics, Computer Science, and/or Science
5. Enrollment and successful completion of the Advanced STEM Scholars Seminar course, which includes a year-long research project and presentation of the project at the Scholars Symposium in April.
Given the long-range, multi-year requirements of the STEM Scholars Program, interested students are encouraged to complete the program’s requirements as early in their Upper School careers as possible.

Online and Blended Learning
St. Luke’s embraces online learning as an extraordinary opportunity to expose our students to the many ways one can learn and share knowledge. Our goal is to enhance traditional face-to-face curriculum with a spectrum of online options - from web-facilitated to fully online courses. We have found technology enhanced education engages students and prepares them for interactive, digital learning in college and beyond. Beyond gaining knowledge from class content, students gain technological literacy, time management and collaboration skills, and independent study strategies. St. Luke’s Upper School offers several online and blended learning courses; these classes are labeled within the Curriculum Guide.

Digital Citizenship
The concept of Digital Citizenship is to introduce, teach, practice, and reinforce the norms of responsible behavior with technology. In grades 5-12, our integrated curriculum reinforces the positive aspects of technology and teaches students to make wise choices. The curriculum is based on the nine elements identified by the International Society for Technology in Education (ISTE): access, commerce, communication, literacy, etiquette, law, rights and responsibilities, health and wellness, and security.

Grading Philosophy
The primary purpose of education at St. Luke’s School is student learning. By learning, we mean that our students will have been successful in reaching our Community Goals for Learning, which emphasize the abilities to think critically and creatively, to communicate effectively, to demonstrate character and social responsibility, and to grow and mature on a personal level. Further, the School attempts to foster in its students the following dispositions: curiosity, open-mindedness, seeking truth and
understanding, reflection, and integrity. Teachers have developed rubrics to determine their students’ relative success at meeting these goals.

By setting high academic standards, the School acknowledges its responsibility to assess and evaluate its students’ success at meeting them. Traditional assessment tools include tests, quizzes, papers, projects, and portfolios, among others; the evaluation of students’ success at learning takes the form of grades and, more importantly, written comments that often say more than letter grades express. The purpose of grades, therefore, is to provide an assessment of student learning on a particular assignment, or in a cumulative manner, at a particular point in time.

Grades serve a different purpose in the Middle School, where teachers have the opportunity to deal appropriately with the developmental uniqueness of their adolescent students and to stimulate effective work and study habits. At the core of the Middle School approach is the desire to provide students with a love and appreciation of the learning process. Emphasis is therefore placed on the skills, habits, and attitudes necessary to become lifelong learners. Students are encouraged to be open-minded, creative, and flexible as they discover how to learn. Grades then serve to promote and assess this learning and discovery process, allowing students to gain a sense of confidence and success. Assessments provide evidence of progress in learning and are tailored to challenge students at each grade in developmentally appropriate ways. Because significant emphasis is placed on process rather than product in the Middle School, report card grades may not always correlate with those earned later in the Upper School.

The grading system used at St. Luke’s serves the purposes stated above and allows its students the opportunity to present themselves to colleges in a clear way. More importantly, it measures the extent to which our Community Goals for Learning are being met and, ultimately, plays a critical role in the School’s stated mission to create lifelong learners. Transcripts include semester and final grades as well as some academic awards earned in the Upper School. Report cards go beyond mere grades to include twice-a-year in-depth comments that provide students and parents with a solid understanding of the learning that has taken place and suggestions for improvement.

A system of grading is essential to the operation of the School. However, it can be argued that grades, like standardized tests, often have little effect on success later in life. As pointed out by Pat Bassett, former President of the National Association of Independent Schools (NAIS), “It is the non-scholastic attributes of individuals that often pay the biggest dividends in life: confidence, amiability, sense of humor, perseverance, the ability to get along with other people, team orientation, etc.” He goes on to point out that the best source of motivation is a desire to learn, a need to know, and a drive to excel, not grades. At St. Luke’s, therefore, we emphasize learning as opposed to the achievement of high grades or test scores. Further, we include in our Community Goals for Learning not only those goals dealing with academics that can be readily assessed and measured with grades, but also less tangible ones dealing with issues of character and maturity.

**Standardized Testing**

A system of standardized testing is one method to obtain meaningful feedback on students’ progress and achievement, taking a snapshot of the academic status of the student body at a particular point in time, as well as providing data that can be used for assessment of students’ growth over time and for benchmarking purposes. In addition, the results of standardized tests remain key criteria for some college admissions offices when considering students’ applications.

At St. Luke’s, standardized tests can be used as tools to identify an individual student’s areas of strength and weakness. The results are shared with some teachers, as well as members of our Counseling Services Office, and strategies are developed to improve necessary academic skills. Additionally, teachers may use the results as one aspect to gauge the appropriateness of Honors, AP, or Advanced placement when making recommendations for the next school year. Each year, we are able to track students’ progress in each of the areas covered by the individual tests. Further, the cumulative results for a particular grade or subject may also help us with curriculum planning.

Standardized testing is but one means of determining a student’s growth and progress. In the end, the test scores reflect only the student’s ability or knowledge about what was asked on that particular test. St. Luke’s has always placed far greater weight on the overall academic performance of a student than on a single test or combination of tests.
**Using This Guide**
This Curriculum Guide is provided to current families, and a student's provisional course of study will be posted on the login portion of the St. Luke’s School website. The provisional course of study is based either on the natural sequence of courses or the recommendations of current instructors. The Curriculum Guide provides the School’s Mission and Community Goals for Learning, an overview of the curriculum, and academic policies and procedures, and course descriptions.

Whenever questions about course choices, academic requirements, or academic policies arise, please direct them to the student’s advisor, the Director of Studies, or the appropriate Division Head.
The Upper School Program of Studies

The goal of the faculty in the Upper School is to hold students to rigorous academic standards while supporting them with understanding and compassion. In addition to excellence in academics, the Upper School is committed to excellence of character and regards honor as a major component of its development. The School’s Honor Code serves as a guide for all student endeavors. The Upper School carries out the mission to give students an exceptional education that inspires a deep love of learning by teaching critical thinking skills, highlighting global imperatives, imparting aesthetic sensibilities, and offering an integrated approach to science and technology.

<table>
<thead>
<tr>
<th>Department</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
</tr>
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<tbody>
<tr>
<td><strong>designLab</strong></td>
<td>Electives</td>
<td>Electives</td>
<td>Electives or Advanced Electives</td>
<td>Electives or Advanced Electives</td>
</tr>
<tr>
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<td>British Literature</td>
<td>American Literature, American Studies, or Advanced American Literature</td>
<td>Electives or Advanced Electives</td>
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<td>Foundations of World History</td>
<td>Modern World History</td>
<td>United States History, American Studies, or Advanced United States History</td>
<td>Electives or Advanced Electives</td>
</tr>
<tr>
<td><strong>Leadership Studies</strong></td>
<td>Electives</td>
<td>Electives</td>
<td>Electives</td>
<td>Electives, Advanced Scholars Seminars/Research</td>
</tr>
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<td>Algebra II, Algebra II with Trigonometry, FST, Pre-Calculus, Calculus, Statistics, AP/Advanced courses</td>
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<td>Chemistry, Physics, Electives, or Advanced courses</td>
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<tr>
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<td>French, Latin, Mandarin Chinese, Spanish, or Ancient Greek</td>
<td>French, Latin, Mandarin Chinese, Spanish, or Ancient Greek</td>
<td>French, Latin, Mandarin Chinese, Spanish, or Ancient Greek</td>
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designLab

The mission of the designLab is to increase creative problem-solving abilities through engineering, computer science, and design thinking. In the Upper School, the designLab offers an array of courses—from designLab Foundations through Advanced Programming Languages—that showcase the interconnected nature between software and hardware. Each course provides a strong foundation of skills while allowing the flexibility to meet students where they are based on previous experiences and current interests. An emphasis is placed on applying learned concepts to real-world design challenges that encourage students to ‘do good’ for others.

**designLab Foundations**  
*1st or 2nd Semester*

This course presents an introduction to the fundamentals of engineering and computer science so that students may better understand the role of creative problem-solving in future designLab courses. Through the course of the semester, students will develop an understanding of the engineering design process and a familiarity with the software and hardware related to fabrication, rapid prototyping, and programming. Students will learn how to model objects in 2D and 3D, create prototypes via additive and subtractive fabrication, model circuits via simulation, use inputs and outputs to create basic physical computing systems, design interactive and static web content, and write programs in Python.

**Computer Programming**  
*1st or 2nd Semester*

This course presents an introduction to computer programming and algorithm development using Python. It is designed to give students a solid foundation in common programming practices and conventions, as well as basic programming techniques. Topics include primitive data types, control structures, lists, dictionaries, functions, file I/O, basic graphics, and others—all with a strong focus on problem solving, program design, and documentation. It is presented both as a prerequisite for Advanced Computer Science I, and as a general introduction to programming that can be applied to other disciplines.  
*Prerequisite: designLab Foundations or recommendation of the course’s instructor*

**Robotics**  
*2nd Semester*

This course continues the exploration of fabrication and physical computing as they relate to the field of robotics. Through the course of the semester, students will design, fabricate, build, and program their own robot in order to successfully navigate a series of real-world challenges. Students will need to draw on their previous designLab experiences on topics such as modeling and microcontrollers and will be introduced to more advanced topics in the software and hardware related to robotics. Additionally, students will conclude the course by exploring connections between fabrication, physical computing, and adaptive technologies in order to make the world a more accessible place. The goal is for students to appreciate the complexities and develop a deeper understanding of embedded systems.  
*Prerequisite: designLab Foundations or recommendation of the course’s instructor*

**Mechanical Design**

This course challenges students to incorporate their previous knowledge of modeling and fabrication in order to creatively solve real world challenges. Using technologies such as computer aided drafting (CAD) software and fabrication hardware such as 3D printers, CO2 lasers, and CNC routers, students will work both individually and collaboratively to prototype solutions to design challenges through the lens of design thinking. Students will be required to draw on knowledge gained through previous math and science courses, and in some cases students may be expected to complete independent research to supplement background knowledge.  
*Prerequisite: recommendation of the course’s instructor*

**Advanced Computer Science I**

This course is a comprehensive study in C++ programming, equivalent to a first-semester college-level computer science course. It emphasizes problem-solving with an object-oriented approach, as well as algorithm and data structure development and analysis. The course involves several large projects which encourage good program design and documentation. Topics in the course include: variables, control structures, arrays, functions, enums, recursion, classes w/inheritance, searches & sorts, exception handling, and basic file. The course does not prepare students for the AP Computer Science A exam, due to the different languages used in these courses.
Prerequisite: recommendation of the course’s instructor.

Advanced Computer Science II
This course is a continuation of C++ programming that was started in Advanced Computer Science I. The class introduces pointers and examines various data structures including single and double linked lists, stacks, queues, and trees. These structures are examined on both theoretical and technical levels—students write their own, and they explore the C++ STL—before being put into practice in several large projects that are design to help students not only understand the use cases for the various data structures, but also to further develop their problem solving and project planning skills. Students are expected not only to produce working code, but also to create code that is efficient, reusable, and scalable.

Prerequisite: Advanced Computer Science I and/or recommendation of the course’s instructor.

Advanced Computer Architecture
1st Semester
Students in this course will build the hardware portion (via simulator) of a simple computer using the NAND to Tetris model (nand2tetris.org). Beginning with the simple NAND gate, students will build upon continuing layers of hardware abstraction until they have a working CPU and memory.

Prerequisites: Advanced Computer Science II and/or recommendation of the course’s instructor.

Advanced Programming Languages
2nd Semester
This course picks up with the NAND to Tetris project (nand2tetris.org) where Advanced Computer Architecture leaves off. Students will build a software hierarchy for their computer, including an assembler, VM translator, compiler, and operating system to run on the computer that was built in Advanced Computer Architecture. Students also will explore various modern computer languages and their differences.

Prerequisites: Advanced Computer Architecture and/or recommendation of the course’s instructor.

Advanced Computer Architecture
1st Semester
Students in this course will build the hardware portion (via simulator) of a simple computer using the NAND to Tetris model (nand2tetris.org). Beginning with the simple NAND gate, students will build upon continuing layers of hardware abstraction until they have a working CPU and memory. Students wishing to continue on with the software hierarchy portion of the project should enroll in Advanced Programming Languages.

Prerequisites: Advanced Data Structures and recommendation of the course’s instructor.

Advanced Programming Languages
2nd Semester
This course picks up with the NAND to Tetris project (nand2tetris.org) where Advanced Computer Architecture leaves off. Students will build a software hierarchy for their computer including an assembler, VM translator, compiler, and operating system to run on the computer built-in Advanced Computer Architecture. Students will also explore various modern computer languages and their differences.

Prerequisites: Advanced Computer Architecture and recommendation of the course’s instructor.

English
First and foremost, the English Department places a strong emphasis on clear and persuasive writing. Our courses take students through a progression of rhetorical styles and methods designed to make their writing as effective, compelling, and original as possible. To that end, we assign numerous in-class prompts along with extended out-of-class essays, and we present grammar and phrasing exercises on a regular basis. In addition, we are committed to the importance of critical reading, with an emphasis on both the “classics” and selected modern and multicultural titles. Exposure to challenging literary texts, we believe, enhances students’ literacy, empathy, and ability to make informed moral decisions.

In the Upper School, primary importance is placed on the formal analytical essay, and the literature is studied for its cultural and artistic importance. The 9th grade World Literature course provides an introduction to the four literary forms (novel, short
story, drama, and poetry) and the literary terms and concepts that will be needed for the coming years. In 10th grade students study British authors, and in 11th grade the focus is on American literature. Finally, given their exposure over the previous three years, seniors can select from the various elective offerings in the 12th grade — whether genre, author, theme, or period studies. In some cases, juniors may also register for these electives as second English courses. Furthermore, Advanced American Literature is available to qualifying students in the 11th grade, and also the interdisciplinary courses Honors American Studies and American Studies. Several Advanced electives are available to qualifying seniors as well. In most cases, English courses are discussion-based and so encourage students to share their views and interpretations and to listen attentively to others. They also develop the formal skills to work in collaboration with their peers in group projects, and, in addition, they are frequently required to give short oral presentations.

World Literature

World Literature provides a foundation for the study of literature in the Upper School. The readings for this course are selected for their rich language, cultural influence, and universal themes. Through study of a wide variety of texts spanning the globe, students will consider how these works inform their understandings of identity and self. With close reading and lively discussions centered on the texts, students develop intellectual confidence, study skills, and an appreciation of literature, all of which is preamble to writing. The process of composition is given great attention in the freshman English course, as students work towards mastering organization, diction, and voice to build fluency in academic conversation, composition, and presentation. Students will study challenging vocabulary words and receive instruction in grammar, proper sentence structure, and idea flow.

Honors World Literature

This course is an introductory study of literature and its various forms (short story, mythology, novel, drama, and poetry) for the freshman with a love of inquiry as well as strong fundamental skills in reading and writing. Like World Literature, this course encourages students to consider how works from around the globe inform their understandings of identity and self; however, reading and writing assignments are more demanding, both in terms of scope and complexity. Emphasis is placed on learning how to analyze literature critically and write with voice, focus, and fluency. Students in this course will engage in frequent composition, both in class and at home, vocabulary and grammar study, Harkness discussions, presentations, and projects.

Prerequisite: recommendation of the student’s current instructor.

British Literature

Students in this course will examine a wide array of texts from the British Isles that address an important question: how are our individual identities and choices shaped by the societies in which we live? In search for an answer to this question, students study several works of English literature, ranging from long-standing classics to contemporary novels. Students will continue to refine their composition skills, focusing primarily on thesis generation and development, the effective use of close reading of quotations, and revision and editing. In addition, students will develop their public speaking skills through oral presentations and graded discussions.

Honors British Literature

This rigorous course explores classic and contemporary texts in British literature. The central intellectual task of the students will be to expand their natural critical thinking talents, and to write clearly and sequentially about complex ideas. All genres—poetry, plays, fiction, and film—will be integrated into the curriculum, and students will become aware of the way art reflects and illuminates the human condition. Students in this course should have exceptional reading skills and a strong appreciation of the written word.

Prerequisite: recommendation of the student’s current instructor.

American Literature

This course traces the foundations of American literature with an emphasis on the historical, political, and cultural influences of the time periods. Students will examine literature in terms of the American experience and investigate such pervasive themes as the American Dream, equality, and the conflict of the individual versus society. Writing is the chief means of demonstrating
understanding of the readings and the themes. Assignments will be frequent and will call upon critical and creative thinking skills to formulate arguments. Major papers will address key themes and issues. Oral presentations in which students explain and interpret writings, images, and songs will also be part of the course. Finally, discussion will be one of the primary means of “unpacking” texts and issues. A high degree of student interaction and engagement with the material is expected.

American Studies: “America Is…” (English and History combined course)
The people of the United States, indeed people around the world, would finish this sentence in many different ways. Even for Americans, it is difficult to define what means to be an American. Yet, this course will attempt to do so. In a rich multidisciplinary context, we will examine together the major historical realities that brought the United States into being and have defined its development into the major political, economic, and cultural power that it is today. We will explore history, literature, fine arts, as well as music and popular culture in our quest to better understand who we are as a nation. The course will establish a firm understanding of the history of the United States and embroider that understanding with a close analysis of the many ways America expresses its culture and its power in the world, both past and present. Students will further develop their analytical thinking and persuasive writing skills while building a deep understanding of what “America is.” This course is cross-listed within the English and History Departments.

Note: this course awards two academic credits and fulfills graduation requirements for both English and History. The class will meet during two academic periods.

Honors American Studies: "America Is…” (English and History combined course)
This course will build upon the premises of (regular) American Studies curriculum while asking students to undertake additional work in historical research, literary analysis, and creative writing. Honors students will develop a strong sense of their place in the American story by challenging the variety of narratives examined in the course and by participating in rigorous discussion of a variety of forms of cultural expression. Students will become teachers and leaders as they learn to express their personal understandings of what it means to be an American.

Note: this course awards two academic credits and fulfills graduation requirements for both English and History. The class will meet during two academic periods.
Prerequisite: recommendation of the student’s current instructor.

Advanced American Literature
This course is an adventure in sophisticated reading, discourse and writing about books, culture, history, film, and the arts—from the Colonial experience to our contemporary zeitgeist. Students will deeply engage with American authors in fiction and non-fiction, as well as learn about the literary movements that give shape to our society. This interdisciplinary course requires that students have a genuine attraction to the written word and to the prism of ideas generated by the classic and contemporary material on tap. Further, students should be able to penetrate text, embrace complexity, and write clearly.

Prerequisite: recommendation of the student’s current instructor.

Yearbook
Yearbook is a course in photojournalism and publishing, open to all Upper School students. The goal of the course is to publish the annual chronicle of life at St. Luke’s, The Caduceus, and to learn elements of print and photographic style, management, teamwork, and organization. The staff uses professional level design software, and both the publisher's designer and guest designers work with the class as part of the design process. The class discusses and settles on a design, including the book’s theme and styles. Following these decisions, the staff schedules assignments and then creates content to build their pages around set deadlines. During the spring, the staff reviews the process of having completed the book, critiquing the process for the following year. Participants in Yearbook should expect to put in time outside of school and manage their assignments according to deadlines.

Note: Yearbook does not count as a permitted course for English graduation requirements; it is only considered an additional elective for students. Also, experience or demonstrated interest in photography or publications is preferred.
Seniors can choose from a variety of semester electives. The electives listed are examples of recent courses and do not necessarily reflect those that will be offered in 2021-2022. Those electives will be shared with students later in the spring.

Classical Mythology
While the mythological tales of Greece and Rome were created millennia ago, the ideals and morals shared within them can still be relevant to our lives today. Ancient Greek and Roman literature are generally defined by their use of mythology and religion. In this course, students will analyze some of the most important myths and mythological figures of ancient Greece and Rome to determine how these stories can help us better understand the people and societies who believed them. Additionally, students will study how Greek and Roman art enhanced or, in some cases, contradicted the best-known versions of mythological stories.

Feminist Literature / Advanced Feminist Literature
This interactive course will explore the rich stash of novels, plays, poetry, film, and non-fiction for and about women from a psychological and socio-political lens. Is biology destiny? Where do myth and reality diverge? What does society have to fear from strong women? What is meant by ‘closing the gender gap’—and is it beneficial to women? Close reading and seminar-style discussion will dominate the class, and papers will mix the academic and the personal. A NYC museum excursion to view female artists, or a theatrical production, will be on the docket, and women’s voices from classic to contemporary—Amazon ancestors to cover girls—will be examined.

Advanced Shakespeare
The Bard did not intend his plays—passionate, bawdy and bloody—to be recited under florescent lighting while seated on metal chairs. Therefore, this course explores the theatrical nature of the tragedies—how to move, speak, leap, fight and swoon. In brief, the class will examine the essential humanity of Shakespeare’s most compelling figures, and how both the spirit and the technique of the master resonate in contemporary life and art. Hamlet, Othello and Richard III will be analyzed, dissected and staged; moreover, critical analysis by leading Shakespeare scholars will be introduced in preparation for college-level essays. A provocative selection of film adaptations, and at least one live theatre production, will also be in the wings. The rest is definitely not ‘silence.’

Prerequisite: recommendation of the course’s instructor and/or Upper School English Department Chair.

Literature of War
Why do we go to war? What is the effect of war on those who lead it, those who serve in it, those caught up in it as civilians, and those who stay at home waiting for news of it? Is there such thing as a “moral war”? Students in this course will examine these questions from a literary perspective. We will study the ways writers of nonfiction and fiction have attempted to answer these questions in a global context. The Roman philosopher and poet Horace wrote that “it is sweet and noble to die for one’s country,” a line so memorable and important that two thousand years later, it is engraved above Arlington National Cemetery. World War I poet Wilfred Owen famously called Horace’s line “The old Lie.” This course examines both perspectives. Students should expect a discussion-based seminar with both traditional analytical essays and creative projects.

Sports Journalism: The Written Word
This course will take a deep dive into the history of sports journalism, with an emphasis on learning, developing, and cultivating the basic practices of reporting. This will be a writing-intensive course in which students will explore sports media in the form of the written word. With the rise in digital media and the change in the distribution of news in the sports world, this course will stay focused on writing and print media. Students will learn to develop pitches, find and expand on popular sports storylines, and debate and write about various controversial topics within the world of sports. Students will read and discuss the works of some of the world’s most prominent sports journalists, while working to establish and develop their journalistic voice. Note: Sports Journalism does not count as a permitted course for English graduation requirements; it is only considered an additional elective for students.

Voices of the 60s
There was more to the 1960s than peace, love, and rock and roll. It was a time of major social upheaval that forever changed the fabric of American society. By reading selected fiction, biography and essays from the era, students in this class will gain a better understanding of how the present-day world came to be. Authors will include Kurt Vonnegut, Hunter Thompson, Malcolm X and Tim O’Brien. Several seminal films and songs from the era will supplement this literature. Writing assignments will be journalistic in nature, consisting of news articles, interviews, editorials, and reviews. A multi-media research project will be assigned as a course-culminating activity.

*African American Literature* 2nd Semester

What is African American literature? Drawing from Kenneth Warren’s *What Was African American Literature*, we will try to define the genre by relating it to other categories of literature based on race, ethnicity, gender and geography. We will also explore the historical context and literary content of the works to determine if they are judged based on aesthetics or their social and/or political representations. Readings in this course will include short stories, essays, articles, poems and one novel.

*Advanced European Literature: Civilization & Barbarism* 2nd Semester

In 1929, Sigmund Freud came to the astonishing conclusion that, “What we call our civilization is largely responsible for our misery.” What inspired such iconoclasm from the founding father of psychoanalysis, and did it share anything in common with the overwhelming anxiety that compelled Edvard Munch to endeavor to paint “the infinite scream of nature” nearly forty years prior? This interdisciplinary seminar will probe this and related questions by exploring significant developments in European culture and society in the period running from the Belle Époque to the close of the 1920’s. Against a backdrop of ascendant nationalism and the mounting crisis of liberalism, we will examine a wide array of writers, artists, and thinkers whose work critiqued established social norms regarding gender, class, and race. We will consider efforts in fiction, philosophy, and psychology to test and even transcend the limits of reason, along with those of modernist artists and musicians to challenge long-running assumptions concerning meaning and authenticity. Across group discussions, as well as individual research and writing, students will engage with text and context simultaneously, blending English and History in order to lay bare the profound role played by the arts and humanities in giving shape to this transformative age.

*Prerequisite: recommendation of student’s current instructor and/or the course’s instructors.*

*America in Film / Advanced America in Film* 2nd Semester

Film. The Cinema. Movies. Whatever society calls it, the artistic phenomenon of ‘the big screen’ is an essential reflection of America in ways that are personal, social and political. This course will cover the historical arc of American film from The Jazz Singer in 1927—the first “talking picture”—to the antic vision of Quentin Tarantino’s recent “Once Upon a Time…in America” in order to reveal how movies mirror culture, and, reflexively, how culture mirrors movies. Genres such as horror, the western, film noir, the sci-fi thriller, and rom-coms will be viewed, explored and analyzed. There will be entertainment but also scholarship as the class engages visually, verbally and in writing with a wide and dynamic range of films.

*Reading and Writing Satire* 2nd Semester

Satirists use humor to make a point or offer a critique. There is much in our world to critique, and we live in a moment when satire is dominant in popular culture. From *Saturday Night Live* to *Key & Peele*, from *The Office* to *The Onion*, so much of what makes us laugh today is structured as satire. But where did this literary form come from, and how has it evolved over time? Students in this course will learn the history of satire dating back to ancient Rome, and they will read and analyze examples from 17th century France (Moliere) and 18th century Ireland (Swift). We will also consider contemporary literature from authors such as George Saunders and filmmakers such as Stanley Kubrick, as well as the burgeoning television and online landscape. The course is discussion based, and students should expect to write regular short reflection papers as well as several full-length analytical essays. Ultimately, students in this course will grapple with the questions: what makes an effective satire? Having learned about the form through study, students will be challenged to create their own works of satire in different media, reflect on their artistic choices, provide feedback to peers, and share their creations with the community.

*Shakespeare, Austen, and the Marriage Plot* 2nd Semester

The romantic comedy is a tale as old as time; from the meet-cute and flirtatious fighting to the inevitable profession of love and proposal on bended knee, we all know the path to happily ever after. But where did this structure originate? And is it still
relevant today? In this course, we will read works by Shakespeare and Austen, two masters of the genre, and trace the origins of the marriage plot. We will also study a selection of contemporary movies and consider how the romantic comedy form has evolved through visual media before moving to an examination of novels and films that subvert our expectations for the form. Students will be expected to engage in close analysis of these works through daily participation in class discussions as well as create well-crafted papers.

Sports Journalism: The Rise in Digital Media
2nd Semester
This course will take a deep dive into the history of sports journalism, with an emphasis on learning, developing, and cultivating the basic practices of reporting, with a specific focus on digital media. With the present influx of digital media, students will study how sports journalism has evolved and in what ways people get their news. Through the use of social media, short-form storytelling, podcasts, and more, students will learn ways to use their journalistic skills beyond the written word. Students will learn new and creative ways to tell their sports stories and the sports stories that we follow every day.

Note: Sports Journalism does not count as a permitted course for English graduation requirements; it is only considered an additional elective for students.

Fine Arts

The Fine Arts program provides opportunities for students to gain insight and knowledge about art as a functioning academic subject. Art is a language and each artist has a unique artistic voice. In-class assignments serve as starting points from which students begin to actualize individual creative capacities. The Fine Arts program provides a hands-on, holistic approach that encourages students to realize that art is a thoughtful discipline. Consequently, students are involved with elements and principles of design; experimentation with materials and techniques; as well as analysis, interpretation and evaluation of visual images from diverse historical and cultural contexts. The Fine Arts Department hopes that creating artworks and appreciating artworks of others becomes a vital part and a touchstone in each student’s life.

Ceramics
1st or 2nd Semester
This semester-long course is designed to introduce students to the basics of ceramics and 3-D design. In this course students will be instructed in various hand-building and wheel-throwing techniques. Students will also learn trimming and glazing techniques and will use the electric kiln and possibly the raku kiln. The class will culminate with individual projects that will allow the students to realize their own vision as ceramic artists and will employ the lessons learned in the course.

Ceramics: Intermediate
1st or 2nd Semester
This course goes beyond the material covered in Ceramics. Students will continue to develop hand building and wheel throwing skills in creating vessels and small sculptures. There will be an emphasis on experimenting with glazes and surface decoration techniques. Students will keep a sketchbook and will create individually inspired work as well as in-class assignments.
Prerequisite: Ceramics

Ceramics: Expert
1st or 2nd Semester
This course is for the Ceramics student who has achieved mastery with hand-building and/or the potter’s wheel. Students in this course will develop a significant body of work around an idea of their own determination. Each student will work towards a set of goals that they develop for themselves and are agreed upon with the teacher. Class critiques will be held on a weekly basis. Each student’s work will be accompanied by an artist’s statement explaining the origin of the idea and the progression of its development over time.
Prerequisite: Ceramics: Intermediate

Digital Design
1st or 2nd Semester
This semester-long course introduces students to Adobe Photoshop, where they will learn how to utilize the software in order to render original works of art. Students will learn the basics of two-dimensional design, including the importance of color, typeface, branding and copyright information. This course will allow students to explore the software while also learning about
their personal aesthetic preferences and practical applications for their work in their daily lives. Students also will learn how to best present their finished work through presentation of their work and critiques.

**Digital Design: Intermediate**

*1st or 2nd Semester*

This semester-long course will allow students to further their knowledge and application of Adobe Photoshop software, as well as refine their two-dimensional design skills and artistic interests. Students will have the opportunity to begin to explore other Adobe software programs, such as Illustrator and In Design. Students will also explore a variety of output methods of their work in order to see the variety of ways in which their works can exist. Students will apply their previous knowledge and skills in order to create richer, more content-based and personally fulfilling artwork than in the previous course.

**Prerequisites:** Digital Design and recommendation of the course’s instructor.

**Digital Design: Expert**

*1st or 2nd Semester*

This semester-long course will allow students to work with their preferred software programs in order to further their technical and artistic knowledge and skills in two-dimensional digital design. Students will have the opportunity to refine their technical and artistic abilities through experimentation with various approaches and production methods in order to work on advanced and independently-designed projects that explore their personal interests.

**Prerequisites:** Digital Design: Intermediate and recommendation of the course’s instructor.

**Drawing**

*1st Semester*

Drawing is the foundation of all the arts. This course will introduce the student to many drawing techniques and will encourage creative expression. Technical skills will be taught and aesthetic sensibilities will be developed. Students will be challenged with in-depth problems involving line, value, perspective and composition. Students will work in graphite, pen and ink, washes, charcoal and pastel. Color theory will be introduced and studied in depth in preparation for the second semester in painting.

**Drawing: Intermediate**

*1st Semester*

In this course students will improve drawing skills and expressive capabilities through a wide variety of projects. The focus of this course is for each student to find his/her own subject matter, viewpoint and stylistic approach, thereby creating a body of work suitable for any portfolio.

**Prerequisite:** Drawing

**Drawing: Expert**

*1st Semester*

This course goes beyond Drawing and Drawing: Intermediate by giving students the opportunity to work in depth on projects of their own selection, with the approval of the instructor. Each quarter will begin with a written statement of the chosen topic of study. A portfolio of finished, thematic work will be produced.

**Prerequisite:** Drawing: Intermediate

**Painting**

*2nd Semester*

Students will be taught how to compose and execute paintings using acrylic, tempera and watercolor. The course offers intensive work in painting from observation (still lives, the figure, landscapes and interior scenes) as well as from the imagination. Some projects will be designed to develop competence in rendering volume, perspective and color, while other projects will allow the student to develop original ideas of her/his own choices.

**Painting: Intermediate**

*2nd Semester*

This course begins with a study of the interaction of color as well as a study of approaches to structuring the composition. Students will work on a series of paintings around concepts such as sequence and narrative. The focus of this course is for each student to find his/her own subject matter, viewpoint, and stylistic approach and to create a personal body of work.

**Prerequisite:** Painting
Painting: Expert  
2nd Semester
This course goes beyond the Painting and Painting: Intermediate curricula by giving students the opportunity to work in-depth on projects of their own selection, with the approval of the instructor. Each half of the semester will begin with a written statement of the chosen topic of study. A portfolio of finished thematic work will be produced.
Prerequisite: Painting: Intermediate

Photography  
1st or 2nd Semester
In this introductory, semester-long course, students will learn the foundation of photographic imaging through the use of a manual film camera, black and white film, and black and white printing in a traditional photographic darkroom. Students will learn how to use the components of their cameras in order to understand the technical nature of the art form through controlling the quality and quantity of light through their cameras. Students will learn how to craft well-printed enlargements of their images, as well as how to curate and display their works. Students have the ability to work with pinhole, 35mm and medium format film cameras. A 35mm manual camera is required for this course. We have a limited number of 35mm film cameras available, so borrowing a film camera from a friend or family member is encouraged.

Photography: Intermediate  
1st or 2nd Semester
In this semester-long course, students may either continue their investigation of black and white film-based photography, or begin to learn about the use of color, digital cameras and Adobe Photoshop software for post-production photographic editing. Students will explore various creative approaches, material and methods in order to define their personal creative voice and preferred methods of production. Alternative photographic processes, as well as traditional equipment and materials, are combined to give students a well-rounded experience as photographers. Students have the ability to work with pinhole, 35mm, medium and large format film cameras, as well as a digital camera and scanners if they opt to work digitally during the semester.
Prerequisites: Photography and recommendation of the course’s instructor.

Photography: Expert  
1st or 2nd Semester
In this semester-long course, students may continue working with the traditional black and white film-based process, color photographs through digital means, or a combination of both methods. This course goes beyond previous Photography courses by offering students the opportunity to work on either assigned projects or self-designed projects, with the approval of the instructor. Students will have the opportunity to refine their technical and artistic abilities through experimentation with various approaches and production methods in order to work on advanced and/or independently designed projects that explore their personal interests.
Prerequisites: Photography: Intermediate and recommendation of the course’s instructor.

Visual Art: Portfolio Development
This class allows students to develop a significant body of work around an idea of their own determination. Form, content and style in the concentrations will be as unique as each individual. Sustained investigation of a particular artistic concern will be evident in each student’s portfolio. Creative work of modern and contemporary artists will be explored. Students will create as much artwork outside of class time as they accomplish in class time. Class critiques will be held on a weekly basis. The course culminates in solo shows at the end of the year. Each student’s work will be accompanied by an artist’s statement explaining the origin of the idea and the progression of its development over time. This course can run for either one semester or two semesters.
Prerequisites: Drawing: Intermediate and Painting: Intermediate

Advanced Art Practices: Senior Thesis
Students in this course develop a strong body of work based upon a theme or line of inquiry. Students will draw upon work already created, learn the best ways to supplement that work, and learn how to objectively curate their work into a strong series of images. Students also will learn how to write about their work, how to create written and visual statements for press releases, and how to properly install and display their work in a gallery environment.
Prerequisites: recommendation of the course’s instructor.
Advanced Art History: Art & Architecture of the Renaissance

1st Semester

In this course you will take part in an investigation of the cultural impact of the Italian Renaissance, with a particular focus on the art and architecture of the period. Students will discover why the Florentines sought to shed their medieval past and look to the ancient Greeks and Romans for inspiration to carve out their cultural identity. Starting with the Early Renaissance in Florence and the artist Giotto di Bondone (1267-1337), this course will trace the unparalleled flourish of creativity and innovation through the 15th century and how the ideals of Humanism inspired the art and architecture of the period.

Prerequisite: recommendation of the course’s instructor.
Note: this course is offered every other year and will be offered again during the 2022-2023 school year.

Advanced Art History: Impressionism & Beyond

2nd Semester

In this course you will be formally introduced to the visionary painters in and around Paris in the late 19th century referred to as The Impressionists. Some argue that the artworks created by the Impressionists helped to usher in a fresh period of artistic innovation often referred to as the Avant Gard led by Édouard Manet, Claude Monet, Camille Pissaro, and Mary Cassatt, among several others. It is no coincidence that this period coincides with the development of photography, oil paint in tubes, and the introduction of Japanese woodblock prints to Europe. Students will also study the Post Impressionists, such as Cézanne, van Gogh, Toulouse-Lautrec, and Seurat, who built upon the innovations of the Impressionists and helped to blaze trails towards Modernism.

Prerequisite: recommendation of the course’s instructor.
Note: this course is offered every other year and will be offered again during the 2022-2023 school year.

Health & Wellness

The purpose of this required wellness program is to promote principles of wellness with emphasis on the whole child’s social, mental, emotional, intellectual, and physical health. Health education will provide the practical knowledge and skills for students to make responsible, effective decisions regarding everyday life choices and give them the opportunity to learn, explore, ask questions, and challenge ideas. Furthermore, students will have a forum to bring up and discuss issues in a non-threatening atmosphere that will encourage both personal and group reflection, with respect and tolerance for others. Our Upper School Health and Wellness curriculum is divided into six units, or “mini-courses,” which are required for graduation from St. Luke’s. These mini-courses vary in length, and they must be taken in 9th-11th grades. Some mini-courses will be offered over the summer, and all mini-courses will be offered several times during the school year.

Health Mini-Course: CPR/AED & First Aid

This mini-course will certify students through the American Red Cross in CPR/AED and First Aid. The primary purpose of the program is to help participants recognize and respond appropriately to cardiac, breathing, and first aid emergencies. The program teaches participants the knowledge and skills needed to give immediate care to an injured or ill person and to decide whether advanced medical care is needed. Students will receive a certification that will be valid for two years.

Note: this Health mini-course is required, starting with the Class of 2025

Health Mini-Course: Drugs & Alcohol

This mini-course provides students with critical information about the use and misuse of alcohol and drugs, including over-the-counter, prescription, and illegal drugs. Students will be afforded the opportunity to explore six specific drug categories: alcohol; club drugs; hallucinogens; marijuana/vaping; stimulants and opioids; prescription and over-the-counter drugs. While many prescription medications can be abused or misused, these three classes are most commonly abused: opioids, CNS depressants, and stimulants. Students will learn the effects and street names for each drug category, and they also will discuss statistics and trends. There will be an emphasis on the process and consequences of decision-making and the influences of peer pressure. Topics will be presented through class discussions, videos, PowerPoint presentations, and activities (Fatal Vision goggles, teen alcohol PSA, and golf cart driving simulation).
Health Mini-Course: Health & Stress
This mini-course will focus on emotional, psychological, and social well-being. Emotional intelligence is important at every stage of life, determining how we handle stress, relate to others, make decisions, develop points of identity, and perform in school. Through lecture, class discussion, and reflection, students will learn about the neuroscience of emotion; long-term effects of stress; healthy strategies for managing stress; and coping and defense mechanisms.

Health Mini-Course: Healthy Relationships
This mini-course will give students the opportunity to study the causes and potential risk factors of teen violence and how it affects teenagers in their everyday lives. Students also will take a look at teen dating and relationships, in the context of what behaviors constitute healthy and unhealthy relationships. Lastly, students will learn ways dating violence can be prevented.

Health Mini-Course: Healthy Tech Use
This mini-course focuses on how to be a well-informed digital citizen. Students will learn about the dangers associated with social media, identity theft, and excessive smartphone use. They also will learn how to cultivate a positive digital footprint, think more intentionally about how to spend and structure their time in the face of digital distractions, and more thoroughly understand the ramifications of personal information stored on the cloud or accessed through app permissions. Each student will keep a journal for the duration of the course in order to more mindfully reflect on their current habits and strategize ways to make healthy, informed decisions around future technology use.

Health Mini-Course: Human Sexuality
This mini-course focuses on human sexuality, taking a fact-based approach to sharing information that is important for student wellness. Through lecture, class discussions, PowerPoint presentations, and classroom activities, the students will have the opportunity to participate in a healthy conversation around a multitude of areas, including sexually transmitted diseases, HIV/AIDS education, and gender and sexuality. The emphasis of this mini-course is student awareness.

Sports Medicine
The purpose of the sports medicine program is to provide a general overview of the sports medicine field through a five-part series. First, students will be introduced to the different professions that make up the allied health field including orthopedics, neurology, pediatrics, physical therapy, athletic training, occupational therapy, nursing and chiropractic medicine. The second part will cover bone and muscle anatomy. The third section will cover exercise physiology related to the human body during activity. In the fourth section, students will learn how to recognize and evaluate common sports medicine injuries, such as concussion management, ankle sprains and muscle strains. And finally, the class will discuss rehabilitation techniques and protocols to the common injuries discussed in section four, which will include a project developing a personal rehabilitation program for a sports medicine injury. This is an elective and does not count toward any core academic graduation requirements, though ¼ credit will be granted and regular assessments will occur.
Note: this course will not be offered during the 2021-2022 school year.

History and Social Science
The broad objective of the History and Social Science Department is to prepare our students to be humane, rational, participatory citizens in a national and global context. The scope and sequence of the course offerings are designed to provide students with an essential base of knowledge and a cumulative development of skills necessary to their growth as individuals, as members of their communities, and as students preparing for college study. We encourage students to gain a perspective for life in other eras and in other regions of the world. The Department also trains students in the skills of critical reading, research, writing, discussion, and debate.

Students in grades 9 through 11 take a sequence of courses in World History and United States History. Additional year-long and semester electives are offered to juniors and seniors. The Department recommends that Upper School students pursue at least one year-long elective or one pair of semester electives in order to complement the required courses. These electives are
normally taken as a senior, although occasionally juniors enroll in semester electives. There is some variation from year to year in the electives offered.

An Honors section is available for each of the required, year-long courses for grades 9 through 11. Advanced courses are offered to juniors and seniors who have shown exceptional levels of achievement. Entrance into Honors and Advanced courses is determined by recommendation of the department faculty.

**Foundations of World History**

Ninth grade students will learn what it means to think like a historian and to work like a historian. Close reading, analysis and interpretation of events, persuasive writing and research skills (especially the ability to analyze the veracity of sources) will be emphasized throughout the course. By studying the foundations of civilization and patterns of development in the ancient world, students will be asked to think deeply about historical connections between the ancient and modern worlds. Students will study cultures and civilizations from the ancient Near East and Far East to Mesoamerica and Sub-Saharan Africa in order to develop appreciation and understanding of the meaning of World History.

**Honors Foundations of World History**

The Honors course will help students develop the skills of historians, with a heavy emphasis on analytical thinking and writing skills. Students must be able to read and analyze more complex texts, including many primary sources, as well as to take responsibility for managing the workflow of long-term assignments. Daily classes, homework assignments, thesis-driven essays and test questions will require students to take a more critical approach to the material, exercising their ability to analyze, synthesize and evaluate course content. Students will be expected to generate original ideas and to demonstrate independent thought.

*Prerequisite:* recommendation of the student’s current instructor or (for new students) strong performance on a diagnostic placement test.

**Modern World History**

Students will consider what it means to be “modern” and how new modes of thought in early modern Europe has affected the development of World History since the 15th century. They will practice the skills of the historian as they read and analyze a variety of texts and cultural artifacts. Students will practice political, economic, and cultural modes of interpreting history as they encounter questions as varied as the significance of the scientific method, the development of modern nation states, and the meaning of revolution. Students will develop a keener understanding of our contemporary world as they examine the impact of global conflict and interdependence in the 20th and 21st centuries.

**Honors Modern World History**

The Honors level course is similar in content to the standard course. In-class discussions and written work will require a high level of independent critical thought. Students will read and analyze more complex texts, both primary and secondary, and will grapple with highly abstract concepts. Students must be responsible for managing the workflow for long-term projects. Most class sessions will be discussions and workshops.

*Prerequisite:* recommendation of the student’s current instructor or (for new students) strong performance on a diagnostic placement test.

**American Studies: “America Is…” (English and History combined course)**

The people of the United States, indeed people around the world, would finish this sentence in many different ways. Even for Americans, it is difficult to define what is means to be an American. Yet, this course will attempt to do so. In a rich multidisciplinary context, we will examine together the major historical realities that brought the United States into being and have defined its development into the major political, economic, and cultural power that it is today. We will explore history, literature, fine arts, as well as music and popular culture in our quest to better understand who we are as a nation. The course will establish a firm understanding of the history of the United States and embroider that understanding with a close analysis of the many ways America expresses its culture and its power in the world, both past and present. Students will further develop their analytical thinking and persuasive writing skills while building a deep understanding of what “America is.” This course is cross-listed within the English and History Departments.
Note: this course awards two academic credits and fulfills graduation requirements for both English and History. The class will meet during two academic periods.

**United States History**
United States History is an introductory survey of the creation and evolution of the American Republic from the colonial period through the present day. The political history of the United States anchors the course, but social, economic, diplomatic and cultural developments are covered as well. In addition to reading narrative texts, students will spend time grappling with a variety of primary sources. Students will write analytical essays as well as complete research papers. By acquiring a basic knowledge of United States history, and by developing their critical thinking, reading and writing skills, students will be better equipped to be informed and involved citizens of the United States.

**Honors American Studies: “America Is…” (English and History combined course)**
This course will build upon the premises of (regular) American Studies curriculum while asking students to undertake additional work in historical research, literary analysis, and creative writing. Honors students will develop a strong sense of their place in the American story by challenging the variety of narratives examined in the course and by participating in rigorous discussion of a variety of forms of cultural expression. Students will become teachers and leaders as they learn to express their personal understandings of what it means to be an American.

Note: this course awards two academic credits and fulfills graduation requirements for both English and History. The class will meet during two academic periods.
Prerequisite: recommendation of the student’s current instructor.

**Advanced United States History**
This course closely examines the political, economic, social, intellectual, and diplomatic trends in American history from the colonial era to the present. Students will analyze primary and secondary sources, understand and critique a variety of narratives, compare the development of social relations across time and distance, and learn to discuss all such topics with confidence and rigor. Students will have opportunities to conduct primary and secondary source research into topics of personal interest while constantly contextualizing all that they learn in order to better understand what it means to live in the United States today. This course is designed to challenge students who are ready for college-level work.
Prerequisite: recommendation of the student’s current instructor.

**Seniors, and in some cases Juniors, can choose from a variety of semester electives. Students will prioritize their elective requests later in the spring.**

**Economics**  
1st Semester
“There’s no such thing as a free lunch,” goes the most famous saying in Economics. But if you can’t get something for nothing, then how do individuals and societies make choices about who gets scarce resources? This course is designed to help students answer that question by gaining a working knowledge and deeper understanding of a short list of key economic concepts, including: opportunity cost, voluntary exchange, supply & demand, marginal analysis, and real vs. nominal values. We then use those concepts to look at the areas that interest us the most individually – because all areas can be examined through the lens of economics. The course emphasizes discussion, collaboration, written expression, and encourages students to explore interesting and relevant issues faced by citizens of modern society.

**History of Ancient Greece**  
1st Semester
This course covers millennia of ancient Greek history, from the Minoan civilization to the campaigns of Alexander the Great. There particular emphasis on the (fifth century BCE) Golden Age of Athens, though earlier ages will be covered to add background, and later ages will be presented to consider the development of concepts or effects of events in the Classical Age. Students will gain an appreciation for the pivotal role played by Athens in the development of western culture in various aspects of civilization, and will trace the rise and decline of the polis from the Persian Wars through the Peloponnesian War. The course will wrap up with a study of Alexander the Great and his successors during the Hellenistic period.

Note: this course is offered every other year and will be offered again during the 2022-2023 school year.
Life Worth Living  
1st Semester
Based on a popular undergraduate course at Yale University, Live Worth Living spurs critical thinking on the question of what constitutes a flourishing life. Drawing upon several religious and philosophical traditions, students and teachers together approach the core question—what is a life worth living?—by examining different models of the good life, by practicing individual habits of reflection and action in discerning and pursuing the good life, and by practicing collective habits of discussion within a respectful, honest, and diverse community of learners. The course is rooted in the belief that diverse communities can reason together about the good life and the practices that support it. Through sustained personal reflection coupled with group conversation, students will grapple with consequential thinkers while engaging in a deep learning experience that prepares them for the concluding exercise in which they articulate their own vision of a life worth living. This course is cross-listed within the History and Leadership Studies Departments.

Vietnam  
1st Semester
America’s involvement in the Vietnam War (what the Vietnamese know as “The American War”) is one of the most controversial and troubling periods of the history of the United States in the 20th century. This course will examine the war in Vietnam from 1945-1975, exploring the political and economic motivations for American involvement in Vietnam as well as the broad impacts the war had on life in Vietnam, the United States, and the rest of the world. Students will gain a strong understanding of why people fought, how people fought, and how all this fighting continues to effect combatants more than 40 years after the conflict officially ended. Students will examine primary source documents, read and discuss scholarly sources, and practice the skills of both written and oral argument in this class.

The Civil Rights Movement  
2nd Semester
The struggle of African Americans to gain their full political and civil rights in this country has been unfolding since the first ship carrying enslaved Africans arrived in Jamestown in 1619. The story of the movement built by black Americans in the mid-20th century to respond to the continuing existence of discriminatory laws and social practices is the quintessential American story. It is a story of ideals, and bravery, and conflict, and change. This course will focus on the events that unfolded between the mid-1950s and the late 1960s to illustrate the revolutionary and powerful nature of what we broadly call the Civil Rights Movement. Examining a variety of eyewitness accounts and personal narratives, students will better understand the human dimensions of both subjugation and liberation for Black Americans in the 20th century. The course will be animated throughout by a need to question whether the achievements of the Civil Rights Movement have led to a flourishing of equality in American society over the past 50 years or whether the work of those recent revolutionaries remains unfinished.

Civil War  
2nd Semester
The most destructive war in American History consumed the nation for four intense years in the middle of the 19th century. From 1861-1865, more than 600,000 Americans died as a result of this conflict. Americans killed Americans to the point that nearly 2% of the national population was lost. The outcomes of this conflict were many and remain with us today, echoing in the political structures and debates that characterize the United States. This course will closely examine the political, social, and economic roots of the American Civil War, learn the stories of the men who fought in the great conflict, and evaluate the degree to which the United States as a nation has been defined by its Civil War. Students will examine primary source documents, read and discuss scholarly sources, and practice the skills of both written and oral argument in this class.

History of Ancient Rome  
2nd Semester
This course focuses primarily on the history, literature, art, architecture, and philosophy of Rome from the 2nd century B.C.E. through the 2nd century C.E. The course will pay particular attention to the end of the Roman Republic and beginning and height of the Empire, though earlier ages will be covered to add background to the time period from the Gracchi to the Good/Adopted Emperors. Students will gain an appreciation of Rome’s transition to an empire that dominated the world for the coming four centuries and the legacy left by the Romans for civilizations that followed.

Note: this course is offered every other year and will be offered again during the 2022-2023 school year.
Psychology & Leadership

Have you ever wondered why we behave as we do? Have you ever thought about the personality differences among people or the nerve activity that is involved with emotions? Would you like to know more about the history of the field of psychology or different stages in developmental psychology? As we explore foundational concepts in psychology such as learning, memory, development, neurology, motivation, sense, perception, and personality, we also will consider how the insights from psychology can make everyone stronger leaders. This course is cross-listed within the History and Leadership Studies Departments.

Seniors may enroll in a yearlong Advanced course (Advanced European History) or a first and/or second semester Advanced elective. Advanced courses will always be considered the “first choice” for seniors within the lottery course selection process.

Advanced Government: Constitutional Law 1st Semester

This course provides highly motivated seniors the opportunity to explore the Constitution and its implications in great depth while prepare for college-level work in political and/or legal studies. Students will examine the framework of the U.S. Constitution and the powers, rights, and liberties that it defines. Additionally, students will explore a range of contemporary issues subject to constitutional interpretation, including: freedom of speech and religion, civil rights/equal protection, the structure and scope of national power, the rights of criminal defendants, the right to privacy, and the right to bear arms. While becoming deeply immersed in the historical documents themselves, students will also read a range of scholarly perspectives. They will evaluate and apply various modes of constitutional analysis and will explore the relationship between law and American society.
Prerequisite: United States History and recommendation of the student’s current instructor.

Advanced Political Theory: Questions of Justice 1st Semester

We take it as fundamental that the very origins of human society were instigated by the need to create codes of justice and methods for bringing them to fruition, yet more than 9000 years after humans first began to settle in villages, and more than 5000 years after the emergence of the first complex civilizations, we continue to debate the nature of justice and struggle to find the best way to administer it. This course will examine the nature of contemporary political disagreements about the meaning and proper administration of justice. What is fair? What is just? How do we, as a society, decide how to punish those who might have transgressed our norms? The course will look closely at recent events that challenge long-accepted truths about the way our justice systems work and raise questions about the foundations upon which our entire political system is built. Students will then examine a selection of philosophical texts (ranging from the present back to over 2000 years ago), all of which have contributed in powerful ways to influence our current political debates. Readings will include selections from thinkers of greatly varying experiences and perspectives. A major goal of the course is to put our current disputes over the nature of justice into conversation with ideas that helped establish ancient civilizations.
Prerequisite: United States History and recommendation of the student’s current instructor.

Advanced Government: Legal Studies 2nd Semester

This course provides highly motivated seniors the opportunity to explore the American legal system in considerable detail while preparing for college-level work in political and/or legal studies. Students will examine the American legal system, its nature, operations, and theoretical underpinnings. Students also will analyze key areas of civil and criminal law, law enforcement methods, and efforts toward corrective justice. Through case studies, readings in legal theory and procedure, and simulations, students will explore topics ranging from robbery and homicide to immigration and family law. Throughout the course, students will evaluate the moral and policy justifications for laws and processes at the heart of American life.
Prerequisite: United States History and recommendation of the student’s current instructor.

Advanced International Politics: State and Non-State Actors in a Changing World 2nd Semester

The 20th century saw the emergence of powerful new nation states through a variety of both violent and non-violent revolutionary means. By the end of the century, global politics was marked by increasing agitation and political violence by different kinds of revolutionary forces, often deemed terroristic, and often brutal repression of such groups by established governments. The beginning of the 21st century has only accelerated these trends. From South America, to the Middle East, to
East Asia, the exercise of political power continues to evolve. This course will use a series of case studies from the recent past and different regions of the world to develop a strong understanding of emerging problems in global politics. Students will examine primary sources (including declassified CIA documents) as well as both journalistic and scholarly treatments of such problems. They will engage in rigorous discussion, analysis and writing throughout the course.

**Prerequisite:** United States History and recommendation of the student’s current instructor.

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**Advanced European History**

Advanced European History provides highly motivated high school seniors the opportunity to explore this subject in greater depth while preparing for college-level work in the discipline. To that end, this course draws heavily upon primary sources of a diverse nature, ranging from political tracts and theoretical essays to fiction and memoirs. We will also explore a wide array of art and visual culture, along with audiovisual sources (music, cinema, speeches, newsreels), from the period. We will pay meticulous attention to the changing geography and demography of modern Europe by analyzing maps and statistical renderings. Moreover, we will examine secondary sources that have helped define these fields of historical inquiry.

**Prerequisite:** United States History and recommendation of the student’s current instructor.

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**Leadership Studies**

The Department of Leadership Studies offers academic courses designed to help students better understand leadership, so that they can apply their learning to become compassionate, intentional and effective leaders in the world. The courses are housed in the Center for Leadership (CFL), which was created to help all students develop their exceptional leadership abilities and the confidence to use them in service to their communities. Additionally, our interdisciplinary Advanced Scholars programs (Classical, Global, Literary, and STEM) have their senior-year research and seminar courses within our Leadership Studies department. In a world where rapid change regularly redefines the future, the CFL enables students to hone their own distinct leadership skills by engaging in collaborative study that broadens ethical understanding, increases empathy, shapes multicultural perspectives, and serves the greater good.

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**Democracy & Media**

*1st Semester*

What is the role of the media in a democracy? How is the changing media landscape altering the way citizens consume news and the way journalists report it? How do economic incentives and journalistic values influence the way the media cover politics? To what extent do the media shape public opinion? Are cable television, the internet, and social media corroding or improving American democracy? Students will think critically about what democracy demands of citizens, the role the media plays in fostering a democratic society, and the role of the consumer (or are we producers?) of media. This module-based, semester-long course will involve varied voices from experts within and outside of St. Luke’s. Course content will focus on historical and current events. Students will be expected to follow world news events from a range of perspectives, complete research projects, participate in civil discourse, and propose real-world solutions to problems identified in the course.

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**Ethics of Global Citizenship**

*1st or 2nd Semester*

This semester-long class explores the question: "What does it mean to be an ethically engaged citizen of the 21st century?" Students will explore and learn about the concepts of leadership, citizenship, ethics, empathy, globalization, and culture. They will examine the connections among them and the ethical choices inherent in solving those issues. This course requires curiosity, a willingness to engage in thoughtful discussions and initiative.

Note: this class is open to 10th, 11th, and 12th graders. Global Scholars must have completed this course before 12th grade.

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**Life Worth Living**

*1st Semester*

Based on a popular undergraduate course at Yale University, Live Worth Living spurs critical thinking on the question of what constitutes a flourishing life. Drawing upon several religious and philosophical traditions, students and teachers together approach the core question——what is a life worth living?——by examining different models of the good life, by practicing individual habits of reflection and action in discerning and pursuing the good life, and by practicing collective habits of discussion within a respectful, honest, and diverse community of learners. The course is rooted in the belief that diverse communities can reason
together about the good life and the practices that support it. Through sustained personal reflection coupled with group conversation, students will grapple with consequential thinkers while engaging in a deep learning experience that prepares them for the concluding exercise in which they articulate their own vision of a life worth living. This course is cross-listed within the History and Leadership Studies Departments.

Note: this class is open to 11th and 12th graders.

Speech & Debate  
1st Semester
Speech & Debate is a one-semester introductory course that covers a variety of styles of public speaking and formal debate. Students in this course will improve their ability to make and respond to arguments, identify faulty logic, think on their feet, and tailor their public speaking to the audience and occasion. No prior debating experience is needed. Each unit will culminate in performance assignments that require students to demonstrate their abilities within the classroom setting. Students are encouraged to participate in competitions outside of the school day, but it is not a required component of the course.

Finance & Entrepreneurship  
2nd Semester
This one-semester course is designed to introduce students to the world of finance and business, focusing on stock market investing, entrepreneurship, and leadership. The class will cover corporate finance, stock market investing, pricing/costing, and entrepreneurship, as well as communication, selling, and business leadership. The initial project of the class focuses on building a stock portfolio and competing in a simulation of The Stock Market Game. The final project of the course will ask students to apply the tools that they have acquired in order to analyze and launch their own business. Students interested in a business career or in starting their own business will find this course valuable.

Note: this class is open to 11th and 12th graders.

Psychology & Leadership  
2nd Semester
Have you ever wondered why we behave as we do? Have you ever thought about the personality differences among people or the nerve activity that is involved with emotions? Would you like to know more about the history of the field of psychology or different stages in developmental psychology? As we explore foundational concepts in psychology such as learning, memory, development, neurology, motivation, sense, perception, and personality, we also will consider how the insights from psychology can make everyone stronger leaders. This course is cross-listed within the History and Leadership Studies Departments.

Note: this class is open to 11th and 12th graders.

Service Seminar  
2nd Semester
This semester-long elective will lead students through a process of examining the root causes of local concerns while deepening their service experiences and advocacy skills. Students will learn how to evaluate efforts to help different causes while engaging in hands-on work to help address those issues that are most compelling to members of the class. The course will invite each student to dive deeply into an issue of their choosing and come up with both advocacy and action that will promote change.

Note: this class is open to 11th and 12th graders.

Advanced Classical Scholars Research
This course serves as a college-level research experience for our Classical Scholars. Students accepted into the program will conduct formal research on a Classical topic of their choosing, use both primary and secondary sources, present their research in monthly feedback sessions, and write a substantive research paper in mid-May. Additionally, Classical Scholars will present their research at the Scholars Symposium in April.

Prerequisite: acceptance into the Classical Scholars program.

Advanced Global Scholars Seminar
This course serves as a college-level seminar course for our Global Scholars. Students will study and discuss various topics related to Global Studies throughout the school year, and they will conduct individual research on a global topic of their choosing. Students will present their research regularly in class and will write a substantive research paper due in mid-May. Global Scholars also will present their research at the Scholars Symposium in April.
Prerequisite: acceptance into the Global Scholars program.

Advanced Literary Scholars Research
This course serves as a college-level research experience for our Literary Scholars. Students accepted into the program will complete a detailed explication of primary literary sources, literary criticism research, an interdisciplinary approach to the study of literature. Monthly presentations on research will be given, and a substantive research paper will be due in May. Additionally, Literary Scholars will present their research at the Scholars Symposium in April.
Prerequisite: acceptance into the Literary Scholars program.

Advanced STEM Scholars Seminar
This course serves as a vehicle for effective engagement in the scientific research process. Skills and topics will include, but are not limited to: conducting formal literature searches; literature review summary writing exercises; presentation of literature research on a topic of interest; attending research presentations of other STEM Scholars; discussion-based and written summative evaluations of peer work; and a capstone project of faculty-mentored novel research on a STEM project of interest. A formal presentation is required at the Scholars Symposium in April, and the written summary in the style appropriate to peer-reviewed journals is due by the end of the course in May.
Prerequisite: acceptance into the STEM Scholars program.

Mathematics
The Upper School Mathematics curriculum is focused on building in our students the skill of communicating (reading, writing and speaking) in the language of mathematics, while being able to explain their thinking beyond simply supplying answers. Through studying applications of real-life situations, the consecutive courses promote awareness in our students that mathematics is a life skill, as much a part of their lives outside of the classroom as in the classroom. We develop in our students a flexibility to select appropriate methods to accomplish their goals and to utilize the proper tools for the task at hand. Access to technology is important. Computers and calculators are integral parts of the mathematics curriculum. Throughout their studies, students are expected to use estimation, mental math and pencil and paper to verify the work of the calculators. Our students’ mathematical knowledge and ability to use that knowledge in a variety of problem-solving settings increase by involving critical thinking skills that include deduction, inference, and conjectures. When possible, mathematical ideas are presented to foster an appreciation for the historical context in which they were formed, so as to encourage students to appreciate the place and beauty of mathematics in our civilization and culture in a personal and empowering way. All Upper School courses provide informal preparation for standardized tests by teaching the essential concepts that are covered on the math sections of these exams.

Please Note: students who wish to move from a regular to an Honors, AP, or Advanced Math course must maintain an A- test average (before test corrections) in their current course, and students who wish to remain at the Honors, AP, or Advanced Math level must maintain a B+ test average (before test corrections). This is in addition to their current instructor’s recommendation.

Integrated Algebra
This course strengthens and expands students’ algebraic skills and understanding while integrating Geometry throughout the course of study. The logical reasoning abilities developed during an algebra course promote deeper critical thinking and problem-solving prowess that will serve learners throughout their lives. It will also build students’ confidence and facility with mathematical problem solving using linear equations, systems of equations, quadratic equations, graphing data and functions, and understanding the meanings of those graphs. Other skills include factoring, multiplication of binomials, basic operations with polynomials, coordinate geometry, and use of formulas with symbols. All of the concepts will include integrated topics in geometry. Upon completion of this course, students will have a solid understanding of basic algebraic techniques along with exposure to geometry concepts in area, perimeter, volume, two and three dimensional figures, the Pythagorean Theorem, and similarity in triangles, to name a few.
Prerequisite: Algebra 8 or Linear Topics in Algebra (MS)
Integrated Geometry: Algebra-Based Geometry
This course develops one’s reasoning ability through studying patterns in shapes in two and three dimensions. Integrated Geometry goes beyond that in applying learned geometric skills to real life situations. Students will continue their study of algebra through the lens of geometry. An integrated approach offers an opportunity to focus on developing conceptual understanding and to help students see how the disciplines of math are intertwined. Course content will include: coordinates, transformations, measurement, area and volume formulas, congruence and similarity, logic, trigonometry, properties of symmetry, circles, linear functions, systems of equations, and solving quadratic equations using multiple methods.
Prerequisite: Algebra 8 (MS) or Integrated Algebra (US)

Geometry: Proof-Based Geometry
Traditionally a course in developing one’s reasoning ability through studying patterns in shapes in two and three dimensions, this course goes beyond that in applying learned geometric skills to real life situations. Students successfully completing Geometry gain an understanding of key properties of figures in the plane and in three dimensions. Students also have practice developing deductive reasoning skills and writing proofs, both formally and informally. Students are encouraged to form and verify conjectures about relationships that they see. Course content will include: coordinates, transformations, measurement, area and volume formulas, congruence and similarity, logic, trigonometry, properties of symmetry, and circles. A review of algebra will be integrated throughout the course.
Prerequisite: Algebra 8 (MS)

Algebra II
The emphasis of this course is on preparing the student for success in future mathematics courses. Concepts and understandings developed in the Algebra I course are reviewed and extended. The material is presented and studied for application to real-world problems that motivate the ideas and provide opportunities for practicing the skills. Course content includes: formulas, equations, graphs, relations, functions, matrices, systems of equations, quadratics, exponential and logarithmic functions.
Prerequisite: Integrated Geometry or Geometry

Algebra II with Trigonometry
The emphasis of this course is on preparing the student for success in Pre-Calculus. Concepts and understandings developed in earlier Algebra courses are reviewed and extended. The material is presented and studied for application to real-world problems that motivate the ideas and provide opportunities for practicing the skills. Course content includes: formulas, equations, graphs, relations, functions, matrices, systems of equations, quadratics, exponential, radical, logarithmic, polynomial, and rational functions with emphasis on connecting their graphs and their equations. The laws of sines and cosines and the graphs of the trigonometric functions will also be studied.
Prerequisite: Integrated Geometry or Geometry

Honors Geometry and Honors Algebra II with Trigonometry
These courses will be similar in scope and sequence to their non-Honors counterparts. The main difference will be qualitative, not quantitative, which means that students will not simply do more of the same kinds of problems; rather, coursework will emphasize a more rigorous development of mathematics, and additional topics will be studied in more depth. Class and homework assignments will include independent and group projects that are designed to offer a richer selection of more challenging work. Students will be expected to assume more responsibility for their own learning; periodic reviews of performance will determine continuing Honors placement.
Prerequisite: exceptional performance in previous coursework in the sequence and recommendation of the student’s current instructor.

Functions, Statistics, & Trigonometry (FST)
This course examines the behavior and uses of functions, analysis of descriptive statistics, in addition to basic and intermediate trigonometry. Students continue their study of rational, logarithmic, exponential, and polynomial functions while using modeling techniques to enhance the understanding of data sets. Emphasis will be placed on building connections to real-world scenarios and utilizing statistics to enhance the justification of a conclusion. Trigonometric concepts include the Law of Sines and Cosines and transformations of trigonometric functions. This course, together with Algebra II, provides the student with the necessary foundation for continuing on to Pre-Calculus, if desired.
Prerequisite: Algebra II
Probability & Statistics
This class covers many of the same topics as the Advanced Statistics course, but the pace is more methodical and the scope of the coverage is reduced. The course is broken into three parts: descriptive statistics, probability, and inference. Many in-class activities allow the students to get a feel for how the probability and inference work in real life.
Prerequisite: Functions, Statistics, & Trigonometry (FST) or Algebra II with Trigonometry
Note: This course is for seniors only.

Pre-Calculus
This is an elective course for students who want to further their mathematics backgrounds and possibly continue with Calculus the following year. A full treatment of trigonometry as well as complete understanding of the concept of a function and study of algebraic and trigonometric functions are goals of the course. Emphasis is placed on course content as well as review and development of necessary algebraic and arithmetic skills and applications for real-world problems.
Prerequisite: Functions, Statistics, & Trigonometry (FST) or Algebra II with Trigonometry, and recommendation of the student’s current instructor

Honors Pre-Calculus
This course aims to prepare serious, interested students for Calculus during their junior or senior years at St. Luke's. More material is studied than in the Pre-Calculus course and in more detail. Topics studied include: a thorough treatment of trigonometry, matrices, probability, conics, functions (polynomial, rational, exponential, logarithmic), and an introduction to limits.
Prerequisites: Honors Algebra II with Trigonometry and recommendation of the student’s current instructor.

Calculus
This course is a study of differential and integral calculus at an introductory level. Students will learn how limits, derivatives, and integrals can be used as tools to solve applied problems in a variety of real world situations, in areas such as life sciences, economics, and finance. They will use the graphing calculator extensively to explore, discover, and problem-solve. This course will serve as a foundation for future study of calculus at the college level, and for other areas of study such as sciences, the business world, and psychology, for which a general understanding of calculus concepts will be necessary.
Prerequisite: Pre-Calculus or Honors Pre-Calculus and recommendation of student’s current instructor.

AP Calculus AB
This course aims to provide the serious, interested student with the equivalent of a first-semester undergraduate calculus course. Definitions and theorems will be stated carefully and their understanding and use stressed. There will be some emphasis on formal proof techniques as well. The content of the course will be drawn from the College Board’s AP syllabus for Calculus AB, and generally will consist of the theory and applications of elementary functions, limits, the derivative, definite and indefinite integrals, and techniques of integration.
Prerequisites: Honors Pre-Calculus and recommendation of the student’s current instructor.

AP Calculus BC
This course reviews and extends the course content of the AB course to encompass all of the topics in the College Board’s syllabus for the BC course, which generally encompasses the content of a typical second semester undergraduate calculus course. These include further examples and applications of models involving differential equations, integration techniques, sequences and series, the calculus of parametric, vector and polar functions.
Prerequisites: Honors Pre-Calculus, or completion of pre-BC work involving topics from the AB syllabus during the previous academic year or over the summer, and recommendation of the student’s current instructor.

Advanced Statistics
This is a college-level course that introduces students to descriptive statistics, probability, and inferential statistics. Activities to promote collecting, analyzing, and drawing conclusions from data will be used. Students will gain experience using software
(Excel and Tableau) and programming languages (Python and R). With these tools, students will acquire the skills to visualize and analyze large data sets. Topics include: probability theory, random variables, sampling distributions, the normal curve, central limit theorem, hypothesis testing, correlation, regression, and model building.

**Prerequisites:** Honors Pre-Calculus and recommendation of the student’s current instructor.

**Note:** students who take this course can be prepared for the AP Statistics exam with additional independent preparation.

**Advanced Multivariable Calculus**

This course extends topics covered in calculus of real-valued functions of one real variable as developed in AP Calculus BC. Specific areas of study include functions of two or more variables, vectors and matrices, partial derivatives, double and triple integrals, vector fields, line integrals, flux integrals, divergence, curl, and Stoke’s Theorem.

**Prerequisites:** AP Calculus BC and recommendation of the student’s current instructor.

**Note:** this course may not be offered every year, based on enrollment.

**Music**

The Upper School Music program provides opportunities for students to gain insight and knowledge about Music as an academic subject, method of communication, and measure of social climate. Music itself is a language, and each performer has his or her own unique artistic voice. In addition to learning music and performing skills, students who participate in the Music program will develop self-esteem, a sense of belonging to an ensemble, and connectivity with their environment and the world around them. Successful Music students will take pleasure in the process of rehearsal leading up to performance and feel pride in a job well done. They will often have high expectations for themselves and be actively engaged in the learning process. Above all, as students of Music, they will develop their creativity, sensitivity, and affinity for music and the arts.

**Chorus**

This course is a mixed choir whose membership is open to any freshmen and sophomores who have a desire to sing in a performing ensemble. Potential members must first demonstrate an understanding and introductory knowledge of music theory and sight-reading. The curriculum will emphasize singing literature from a variety of historical periods and cultures. Students will develop their skills as singers in the area of tone quality, diction, articulation, expression, and breath control. Students will also practice sight-reading skills. Music theory will be taught as part of the curriculum. This choir participates in all concerts throughout the year and may also participate in competitive festivals at the Director’s discretion. There will be a fee for concert attire.

**Chorale**

This course is a mixed choir whose membership is open to juniors and seniors who have a desire to sing in a performing ensemble. Potential members must first demonstrate an understanding and working knowledge of music theory and sight-reading. The curriculum will emphasize singing literature from a variety of historical periods and cultures. Students will develop their skills as singers in the area of tone quality, diction, articulation, expression, and breath control. Students will also practice sight-reading skills. Music theory will be taught as part of the curriculum. This choir participates in all concerts throughout the year and may also participate in competitive festivals at the Director’s discretion. There will be a fee for concert attire.

**Concert Band**

The Concert Band provides a quality, performance-based musical experience for students who have the requisite proficiency. Admittance into Concert Band is at the discretion of the Director. The curriculum will emphasize literature from a variety of historical periods and cultures. Students will develop their skills in the areas of tone quality, articulation, expression, and comprehensive musicianship. Students intending to register for Concert Band must apply to the music instructor. There will be a fee for concert attire. Members of the Concert Band may audition to participate in the Jazz Band. The Jazz Band consists of students wishing to explore and perform various idioms of jazz. Jazz Band is an extension of Concert Band. Special emphasis is placed on learning jazz techniques including articulation, interpretation, sight-reading, and improvisation.
Digital Music Production
This course will give students an overview of various technical and musical applications used within the context of electronic music. Such areas as MIDI, synthesizers, sequencing software, digital audio, notation software, and other programs will be covered. Students will also be given instruction in basic theory, piano, and composition in order to better express their ideas through the use of these technologies. Students will be given creative activities such as songwriting, film scoring, and jingle writing to demonstrate their knowledge of software and musical concepts covered in class.
Prerequisites: sufficient musical background and recommendation of the course’s instructor.

Advanced Music Theory & Appreciation
This course is designed to provide a clear background for the study of college level music theory. It combines the study of advanced music theory with an overview of Western music history. It will focus on the fundamentals, species counterpoint, harmony and voice leading, tonal counterpoint, phrasing, and structure to help students understand the mechanics of how music works. In addition, it explores the history and development of Western music and non-Western music from ancient times to the present, placing composers and their famous works in their historical context. Students will learn the framework necessary to read, comprehend, and analyze music, and they will listen to well-known and influential works within the Western and non-Western music traditions. Students enrolled in this course may take the AP Music Theory exam, though additional work outside of class would be necessary.
Prerequisite: recommendation of the course’s instructor.
Note: this course may not be offered every year, based on enrollment.

Science
Each science course at St. Luke’s runs along two parallel paths: one which leads students to the scientific facts and understandings of our world, and the other which leads students to use scientific logic to analyze and describe new phenomena and to solve new problems. Scientific facts and understandings, whether they are the laws of motion described by Newton, the structure of atoms as explained by Rutherford and Bohr, or the enormous interrelated web of life explained by Darwin, are integral to developing basic scientific literacy. To gain this scientific literacy, students at St. Luke’s explore the concepts that describe the workings of the world. However, to go beyond basic literacy, to become college-ready, St. Luke’s science students must also learn how these ideas became known, how they were tested, and how they were later changed or refined. As they pursue this college-ready level of understanding, students will regularly use the experimental method, with its hypotheses, observations, and analyses to answer questions. Demonstrations and virtual laboratories may also be used to enhance the understanding of scientific principles.

Enrollment in all Honors or Advanced courses is dependent upon the current teacher’s recommendation and the minimum grade requirements. Students who do not meet the criteria may file an appeal through the Science Department. Please see the Upper School Science Department Chair for more details.

Biology
This course is designed to expose students to the major topical science concepts and issues of the modern world that they will encounter as adults. Inquiry-, discovery-, and project-based learning, coupled with the application of obtained knowledge, will define a new pedagogy to teaching science that eliminates the need for rote memorization. In short, students will focus their efforts on scientific practices in order to develop a mastery of the course material. Through the lens of five major units (Scientific Inquiry, Nutrition, Cellular Biology, Sickle Cell Anemia, and Ecosystem Dynamics), students will explore the confluence of chemical and cellular life, inheritance and evolution, and the dynamic and energetic interactions that make life possible. By the end of the course, students will have gained a new appreciation for the life in the world in which they live, and they will be able to apply the proper tools to make positive changes in the world.

Honors Biology
Honors Biology covers the same pedagogical practices as Biology; however, the material covered will have greater depth and breadth with a greater emphasis on the quantitative and technical processes of biology and higher-order thinking skills. The
major units covered in this course include Scientific Inquiry, Chemistry of Life, Cellular Biology, Energetics, Inheritance, DNA, and Evolution. Students will learn information helpful to prepare for the SAT Subject Test, but direction preparation for the SAT Subject Test is not part of the curriculum. Additional preparation outside of class is suggested for those students wishing to take the examination in May.

Prerequisite: recommendation of the student's current instructor or (for new students) strong performance on a diagnostic placement test.

Geoscience
This course is designed to interpret and understand the physical world. Students will investigate and study the interactions between the Earth's four major spheres, including the geosphere, atmosphere, hydrosphere, and biosphere in order to explain the Earth's formation, processes, history, landscapes, and how and why the Earth changes over time. The course will also explore how current human actions interact and affect Earth's spheres leading to local and global changes. Topics may include, but are not limited to: the scientific method; mapping the Earth's surface; minerals and rocks; plate tectonics, earthquakes, and volcanoes; geologic time; and meteorology. Students will participate in laboratory exercises, small group activities, web-based investigations, class discussions, projects, and research.

Prerequisite: Biology
Note: this course may not be offered every year, based on enrollment.

Marine Science
This course gives students an opportunity to explore the diverse array of marine ecosystems, processes, and organisms. With shorelines nearby, students can literally and figuratively get their feet wet as they collect live specimens, design field and lab experiments, and discover the variety of local marine life. Some features of this course include seasonal collections with the Maritime Aquarium, tracking marine mammals and reptiles using real-time web-based data, Project: Octopus, Sea the Future, and chemical, ecological, and biological monitoring of the class marine aquarium. Students will have the opportunity to apply their understanding of the Scientific Method, strengthen their data-analysis and processing skills, learn aquaculture and field research techniques, and demonstrate scientific oral and written presentation skills. Marine Science is designed for students who are curious about what lurks beneath the surface, are intrigued by the processes (and organisms) that shape the shores, and are in awe of the oceans and seas.

Prerequisite: Biology
Note: this course may not be offered every year, based on enrollment.

Anatomy & Physiology
This course is designed for students to explore the anatomy and physiology of the human body in an applied manner. Anatomy is the study of the location, appearance, and relationships of body parts while physiology explains the chemical and functional processes throughout the body. Topics of study will begin with cellular structure and continue through the different systems of the body, including the developmental aspects and dysfunctionality of each system. Using discussions, lab activities, projects, designLab collaboration, and dissection, students increase their knowledge of the body's anatomy and how the different systems work together. Anatomy and Physiology is recommended for those interested in pursuing a career in the health sciences.

Prerequisite: minimum grade of B+ in Biology and recommendation of the student's current instructor.
Note: this course may not be offered every year, based on enrollment.

Chemistry
This course introduces students to the basic structure of the atom and the nature of matter. Emphasis is placed on the general properties of matter, measurements and calculations, the periodic law, nomenclature, chemical reactions, formulas, equations, and stoichiometry. Additional topics include chemical bonding, quantum mechanics, gas laws, thermochemistry, equilibrium, and acids and bases. Laboratory exercises will stress the development of experimental skills and reinforce the chemical concepts taught in class. Clear written communication and data collection and analysis are integral components of the lab section of this course.

Prerequisite: Biology

Honors Chemistry
The goal of this course is to provide a broad survey of the major topics in general chemistry, but at an accelerated pace for the student who seeks a more rigorous treatment of the subject. Specifically, the course examines the structure of matter (i.e.,
atomic structure and chemical bonding) and the interactions of matter (i.e., chemical reactions and the condition of chemical equilibrium). Topics include: classification of matter, atomic and electronic structure, the mole concept and stoichiometry, chemical reactions, thermochemistry, states of matter and their properties, chemical equilibrium, acids and bases, electrochemistry, reaction spontaneity, and kinetics. Concepts and theory are stressed in lecture, application of content is done through demonstration and laboratory experiments. The course is mathematically rigorous and prospective students should be comfortable with using applied algebraic methods.

Prerequisite: Biology and completion of or concurrent enrollment in Honors Algebra II with Trigonometry, and recommendation of the student’s current instructor.

Genetics

Genetics is perhaps one of the fastest growing fields in science today. Its applications include, but are not limited to: prenatal testing, advances in gene therapy for certain diseases; and even exploring ancestry. This semester-long course will focus on molecular genetics, starting with the structure of DNA. Throughout the course, students will learn about chromosomes, protein synthesis, and how genes control the expression of traits in organisms. In addition, the topics of heredity, genetic variation, and mutations will allow students to see how traits are influenced by both genes and environmental factors.

Prerequisite: Chemistry or Physics and recommendation of the student’s current instructor.

Note: this course may not be offered every year, based on enrollment.

Environmental Science

This course aims to introduce students to the study of the natural world, its modification by human activity, and the importance of securing a sustainable future. The course content includes the following topics: the complexity and functioning of natural ecosystems, with an emphasis on the St. Luke’s campus; biodiversity; public policy and environmental ethics; the impact of human population growth on resource consumption; global warming and climate change; agricultural practices; industrial pollution; and environmental justice. Students will participate in laboratory exercises, small group activities, web-based investigations, class discussions, projects, and research. By developing a wide range of scientific practices, students will become better able to engage in decision making and public discourse, and they can debate about matters of environmental significance.

Prerequisite: Chemistry or Physics and recommendation of the course’s instructor

Note: this course may not be offered every year, based on enrollment.

Physics

In this course, students will study the fundamental laws that govern the world around them. During the first semester, students will focus on Newtonian mechanics and learn about the fundamentals: forces, momentum, energy, and gravitation. During the second semester, students will explore material properties, thermodynamics, and radioactivity. While the course uses mathematical expressions frequently as a guide to understanding, it places a heavy emphasis on conceptual understanding and problem solving. During regular lab experiments, students work in teams to test relationships between physical quantities, gather and analyze data, and write group and individual lab reports. The goal of this course is to sharpen students' critical thinking and experimental skills while exposing them to the wide variety of topics that physics holds.

Prerequisite: completion of or concurrent registration in either Functions & Trigonometry or Pre-Calculus.

Honors Classical Physics

This course will advance skills of conceptual thinking, analytical thinking, problem-solving and technical collaboration via exploration of mechanical phenomena observed in daily life (e.g., the flight of a softball, or a car’s acceleration on the way to school). A fundamental understanding of these mechanics, through largely visible to the energy, momentum, classical thermodynamics, and basic statistical mechanics. The course is mathematically rigorous, using algebra, trigonometry, and pre-calculus to analyze and apply the governing physics laws. Weekly homework assignments and detailed laboratory investigations require independent work, teamwork, data analysis, and technical communications skills. This course may be taken before, after, or without its sister course, Honors Modern Physics.

Prerequisites: completion of Chemistry or Honors Chemistry, completion of or concurrent enrollment in Honors Pre-Calculus, and recommendation of the student’s current instructor.
**Honors Modern Physics**

This course will advance skills of conceptual thinking, analytical thinking, problem-solving and technical collaboration via exploration of mechanical phenomena discovered since the Technological Revolution. Key topics (and their applications to be studied) include: electricity (neuroscience, computers), electromagnetism (Tesla cards, power generation), light/optics (astronomy, optometry, telescopes, medical imaging), nuclear physics (radiation, nuclear power, explosions), and relativity (time “travel” as in *Interstellar*). The course is challenging from a conceptual perspective, as most phenomena are invisible to the naked eye, and it is mathematically rigorous, using algebra, trigonometry, and pre-calculus to analyze and apply the governing physical laws. Weekly homework assignments and detailed laboratory investigations require independent work, team work, data analysis, and technical communication skills. This course may be taken before, after, or without its sister course, Honors Classical Physics.

**Prerequisites:** completion of Chemistry or Honors Chemistry, completion of or concurrent enrollment in Honors Pre-Calculus, and recommendation of the student’s current instructor.

**Advanced Organic Chemistry**

This course examines the structure and reactivity of organic molecules—those containing carbon as their base atom. The course begins with a focus on describing the bonding, conformations, and stereochemistry of small organic molecules developing the proper nomenclature as needed. Next, the mechanisms of the basic reactions of substitution, elimination, addition, and rearrangement are formulated from kinetic and thermodynamic data. Reactions of hydrocarbons, alkyl halides, and alcohols, as well as aromatic, carbonyl-containing, and amine functional groups are explored. Finally, we end the school year with either a look at the chemistry of simple biological molecules, namely the structure of proteins, carbohydrates, and lipids as well as an in-depth look at carbohydrate metabolism in plant and animal species, or a study in methods of synthetic organic chemistry.

**Prerequisites:** Chemistry and recommendation of the student’s current instructor.

**Advanced Physical Chemistry: Thermodynamics**  
1st Semester

This course follows the historical development of thermodynamic principles examining the relationship between heat and temperature and energy and work. We begin with the behavior of gases; a study of the ideal gas is used to generate the laws of thermodynamics and the associated thermodynamic potentials. Thermodynamic principles are then extended to describe chemical systems at equilibrium.

**Prerequisites:** Chemistry, Physics, and Calculus, and recommendation of the student’s current instructor.

*Note: this course is generally offered every other year, based on student interest, and will be offered again during the 2022-2023 school year.*

**Advanced Physical Chemistry: Waves & Quanta**  
2nd Semester

The quantum mechanical revolution of the early 20th century turned the established truths of physics upside down. This course begins at the Bohr model of the atom rationalizing quantization via the uncertainty principle and wave-particle duality. The postulates of quantum mechanics are developed using several simple systems as models, including the particle in a box and the hydrogen atom, with the latter serving as a vector to understand basic chemical bonding. Our final study of statistical mechanics shows that quantum mechanical outcomes converge to the bulk thermodynamic laws in the macroscopic limit.

**Prerequisites:** Chemistry, Physics, and Calculus, and recommendation of the student’s current instructor.

*Note: this course is generally offered every other year, based on student interest, and will be offered again during the 2022-2023 school year.*

**Advanced Biology**

This is a college-level course designed to challenge and engage motivated students who want to study biology at the next level. This course will delve into central biological concepts through intensive lab experience; Harkness-style scholarly discourse and debate; seminar-style critique and evaluation of timely peer-reviewed research; lab practicals and reports; and in-depth class discussions. A student wishing to enroll in Advanced Biology should have: solid knowledge of the facts, principles, and processes of biology; experiential understanding of scientific inquiry with the ability to propose and conduct novel research experiments; and a desire to view science as a human endeavor with significant social consequences.

**Prerequisites:** Biology and Chemistry, one of which should be at the Honors level; and recommendation of the student’s current instructor.

*Note: this course will adequately prepare students for the science section of the ACT, as well as the AP Biology exam (with some additional preparation required). Taking either the ACT Science section or the AP Biology exam is not required.*
Advanced Chemistry
This is a college-level survey course covering major topics in the first two semester of general chemistry. The course is taught at an accelerated pace with a focus on developing quantitative reasoning skills and problem-solving technique; performing qualitative and quantitative analysis through verification and inquiry-based laboratory work; and an introduction to examining peer-reviewed research. The curriculum consists of two distinct areas: chemical structure and chemical behavior from an “atoms first” perspective. Topics include: models of atomic and quantum electronic structure; chemical bonding, molecules, and intermolecular forces; chemical reactions; the mole concept and stoichiometry; solutions and their properties; characterization of chemical systems at equilibrium; thermodynamics and spontaneous processes; the rates of chemical reactions; and special topics depending on student interest and time. Students in taking this course should have a strong foundation in chemistry and should be comfortable with quantitative rigor.
Prerequisites: Honors Chemistry and recommendation of the student’s current instructor
Note: this course will adequately prepare students for AP Chemistry exam (with some additional preparation required). Taking the AP Chemistry exam is not required.

Advanced Physics: Mechanics & Thermodynamics
This is a college-level, calculus-based exploration of the world of physics. The course involves an in-depth and mathematically rigorous study of motion. We will cover 1-D and 2-D kinematics, Newton’s Law of Motion, energy and linear momentum, rotational motion, gravitation and orbital motion, thermal energy and transfers, and the laws of thermodynamics. The goal of Advanced Physics is a full conceptual understanding of physical principles, applications of these principles in new situations, and testing these principles through experimental design. Through problem solving, observations, measurements, and computer simulations, students will be guided through thoughtful discussions on new material, building their own understanding through hands-on exploration and critical thinking. Throughout the course, students will develop a deep appreciation for experimental and theoretical investigations. They will apply techniques of differential and integral calculus as needed, as well as develop proficiency in data handling techniques, including preparation of graphs by hand and using a computer, analysis of graphs, and assessment of laboratory precision and accuracy.
Prerequisites: Physics, completion of or concurrent enrollment in AP Calculus AB, and recommendation of the student’s current instructor.
Note: this course will adequately prepare students for AP Physics C: Mechanics exam (with some additional preparation required). Taking the AP Physics C: Mechanics exam is not required.

Theater Arts
The Theater Arts program at St. Luke’s School offers an eclectic mix of opportunities for both the committed student of Theater and the student whose interest has just been piqued. Introductory acting classes offer students the opportunity to explore improvisation while being exposed to techniques that heighten the actor’s spatial awareness, kinesthetic response, and impulsivity. More advanced classes provide means for students to explore the skills they have learned in introductory classes and to execute those acting and design techniques in productions in our Black Box Theater. Design for Theatre classes provide tools and techniques for students to explore set, lighting, sound, and costume design. Independent studies allow students to five more deeply into a specialization.
The St. Luke’s Theater Arts program aims to facilitate students to “step into themselves,” to awaken their artistic passions, and to provide the means to help students take in the world around them by “listening with the ear of their heart.” At the core of the theatre program is a very vibrant, professional, exciting theatrical season. The Department of Theater Arts produces material that aims to challenge, provoke, and inspire. Our productions have been honored by the Connecticut Halo Awards, The Broadway Method Academy’s Sondheim Awards, and have been invited to perform at the Edinburgh Fringe Festival.

Acting I 1st Semester
This beginning examination of acting includes theatrical improvisation, physical & vocal exercises, and scene work, which are designed to phone physical actions and honesty on stage. Class work is designed to stimulate the imagination, build self-confidence and trust, and reach the emotional reservoir of the actor.
Acting II

2nd Semester

This course will introduce students to text analysis, scoring, and the rehearsal process. Focus will be aimed at in-class presentation of scenes drawn from naturalistic dramatic literature. Students will develop a system of working that helps analyze a piece of dramatic text and to cull “actable” information from that text. Techniques explored include: Sanislavski’s “Method,” Sanford Meisner Technique, Laban’s Quality of Movement, and David Mamet’s Practical Aesthetics. Students will develop and workshop a culminating performance that will be presented for an audience.

Prerequisite: Acting I or recommendation of the course’s instructor

Theater Design: Scenery & Costumes

1st Semester

This is a project-based course that serves as an introduction to theater for designers. Students will work towards completing a scale set model and costume renderings. Students read, conceptualize, research, and defend their work with presentations, and work to build a portfolio. Previous experience in the Tech Theater afterschool activity is helpful for this course, but it is not required.

Theater Design: Lighting & Sound

2nd Semester

This is a project-based course that serves as an introduction to theater for designers. Students learn the basics of lighting design and produce a radio drama. Together we read, conceptualize, research, and present work to others outside of the class, while also building a portfolio. Previous experience in the Tech Theater afterschool activity is helpful for this course, but it is not required.

Advanced Acting: St. Luke’s Theater Company

The St. Luke’s Theater Company (SLTC) is by audition only. It is for serious students of acting and theater and has the creative power of the ensemble as its focus. The content varies each semester because it is geared to each specific group. The group will have occasional rehearsal outside of class time. While technique will be discussed and explored, the class is design to produce a culminating production in the Black Box Theater each semester.

Prerequisites: Acting I-II and/or participation in at least two Upper School afterschool theatre productions, an audition, and recommendation of the course’s instructor.

World Language

The rationale behind St. Luke’s World Language program is two-fold. First is the belief that learning a second language is enjoyable. It expands a student’s ability to understand, to communicate, and to appreciate other world cultures. Second, and of increasing importance, is that knowledge of another language is necessary today in business and diplomacy and for understanding our global economy and other cultures. French, Mandarin Chinese, and Spanish are taught to provide our students with important skills to function successfully in both their personal and professional lives. The ability to communicate with people of other cultures and to share one’s own are the principal goals of offering these major world languages, spoken in over ninety countries and regions. Modern language courses immerse students in a virtually 100% target-language-use environment. Modern language coursework particularly emphasizes oral production in order to prepare students for real-world interactions with native speakers. Latin and Ancient Greek are offered to stress the importance, beauty, and specifics of learning language while providing insight into the customs, values, traditions, and lifestyles of ancient cultures. A special feature of the SLS Latin program is a focus on communication, as students at all levels engage in extensive conversational Latin as well as original composition.

Motivated Upper School students are encouraged to take two different world languages simultaneously. In most cases, the addition of a second world language takes the place of a free period in the student’s schedule. Considering the benefits of studying multiple languages and the many connections to be made between languages, choosing to study more than one world language can dramatically enhance a student’s overall academic experience.

Students earning a C- average or lower in a course are strongly encouraged to repeat a year or take a summer review course before continuing to the next level in the sequence.
Upper School students who are self-motivated, manage time well, and have shown prior success in standard World Language classes may choose to participate in the World Language Learning Online (WLLO) program. With WLLO, students cover an entire year’s worth of introductory world language study at their own pace...anywhere...starting anytime.

WLLO is a combination of self-paced online lessons and up to 20 one-on-one sessions with a St. Luke’s World Language teacher. Students have the opportunity to learn French I, Latin I, Mandarin Chinese I, or Spanish I with WLLO. Though this experience does not count towards graduation requirements, once students finish a WLLO course (which can be completed in as little time as a couple of months, or up to an entire calendar year), they can “skip” into a standard Level II course at SLS if they wish to pursue further formal study. Student progress is assessed as pass/fail, with a passing grade starting at 80%, and WLLO will appear on the formal transcript.

Prerequisite: recommendations of the Upper School World Language Department Chair and Director of Studies.

Note: there is a fee for the WLLO experience. For more information, please contact Jon Shee, Upper School World Language Department Chair.

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French I and Spanish I

These courses begin the three-year sequence required for graduation. In this initial phase, emphasis is on communication. This includes growing a basic vocabulary, understanding sentence structure, and taking risks to express oneself in the target language as much as possible. All four language skills (speaking, aural comprehension, reading, and writing) are developed throughout the year. At the end of the first year, students will be able to ask and answer questions describing themselves, their families, friends, school, and activities while using the past, present, and future tenses. They will be able to have full, meaningful conversations in the target language and will have learned hundreds of words and dozens of grammatical points and structures.

French II and Spanish II, Honors French II and Honors Spanish II

At this level of study, students continue to enlarge their vocabulary and improve syntax to make broader communication possible. Writing practice increases to include short paragraph-length compositions and reading consists of lengthier selections from authentic printed matter and excerpts from literature. At the end of the second year, students will be able to ask and answer specific questions with greater detail and participate in conversations about the past, present, and near future. Note: the curricula of the Honors Level II courses are similar to those of Level II, but the Honors Level II courses move at an accelerated pace, have different assessments and/or grading standards, and have the prerequisite of a recommendation of the student’s current instructor.

French III and Spanish III, Honors French III and Honors Spanish III

At this level, students will learn to use the subjunctive mood, while expanding their ability to express themselves in the present, past, and future tenses. This, combined with vocabulary that addresses issues in the world beyond the self, will help students become more adept at expressing and interpreting opinions, emotions, and details and carrying on more varied and consequential exchanges and discussions. Students will build these skills in writing, speaking, listening, and reading. Note: the curricula of the Honors Level III courses are similar to those of Level III, but the Honors Level III courses move at an accelerated pace, have different assessments and/or grading standards, and have the prerequisite of a recommendation of the student’s current instructor.

French IV and Honors French IV

These courses offer a multifaceted curriculum with a more sophisticated level of speaking, reading, and writing in French. Though some grammar lessons are featured throughout the year, the majority of the key units are based around traditional and modern literature and media pieces that students read, study, and discuss. Each year, various selections from theatre, novels, cinema, musicals, poetry, and current events will be covered. Students will prepare and revise essays, presentations, and other
projects based on the readings and discussions in class. The Honors section will move more quickly, will have different assessments and/or grading standards, and will challenge students with more complex tasks.

Prerequisite: recommendation of the student’s current instructor.

Spanish IV and Honors Spanish IV
These courses offer a multifaceted curriculum with an advanced, sophisticated level of speaking, reading, and writing in Spanish. Each course is made up of thematic units that aim to engage intermediate-level learners with a diverse range of authentic materials from Latin America and Spain. These courses emphasize the three modes of communication: interpersonal, interpretive, and presentational. They cover key grammar structures to help learners strengthen their language skills and develop cultural competency in order to become proficient in the target language. The Honors section will move more quickly, will have different assessments and/or grading standards, and will challenge students with more complex tasks.

Prerequisite: recommendation of the student’s current instructor.

French V and Honors French V: Culture, Arts, Language, & Media
These courses are for students who are deeply interested in the French language, culture, current events, film, music, and other elements of modern francophone life. These courses feature varied units that focus on important elements of francophone culture and language. Grammar is no longer a principal focus of the curriculum, as students have already been exposed to the majority of grammatical components before reaching this level. Some units covered in this class are based around key moments of history and culture of the francophone world. Current (and perpetually relevant) issues such as immigration, education, politics, religion, oppression, freedom, exploration, self-expression, and revolution also are focus points. Many films are presented and studied to help expand on the diverse themes within the curriculum. Music (via the study of songs and musical theatre) is an integral part of the curriculum. Students will study articles and video clips from online news sources to learn about current events in the francophone world.

Prerequisites: demonstration of advanced oral proficiency in French and recommendation of the student’s current instructor. Honors French V has different grading standards and is only open to students who have already completed AP French Language.

Spanish V and Honors Spanish V: Identity and Culture in the Spanish-Speaking World
These courses are for students who are deeply interested in Spanish language and culture. Students immerse themselves in real, contemporary language while learning to think and communicate across diverse topics. Course content emphasizes the development of conversational skills, presentational written and oral expression, and the ability to interpret authentic texts and media of various genres and cultural contexts. Thematic units prepare students to be engaged global citizens in the Spanish-speaking world.

Prerequisites: demonstration of advanced oral proficiency in Spanish and recommendation of the student’s current instructor. Honors Spanish V has different grading standards and is only open to students who have already completed AP Spanish Language.

AP French Language and Culture and AP Spanish Language and Culture
Each of these courses gives a thorough, comprehensive review of all grammatical structures and prepares students for the College Board AP Exam in French or Spanish Language and Culture and its four components: listening, writing, speaking, and reading. In the process, students will read many forms of literature, write extensively, and record their voices to simulate the evaluation methods used by the College Board. These activities are related to six themes, including global challenges, science and technology, aesthetics and beauty, identities, families and communities, and contemporary life.

Prerequisite: recommendation of the student’s current instructor.

Latin I
This class introduces Classical Latin grammar, including verbs in all conjugations and tenses, nouns and adjectives of three declensions, and various other grammatical constructions. Emphasis is placed on developing sight reading skills and recognition of communicative structures in both Latin and English. In order to bring the language alive, the course is supplemented with study and discussion of various elements of Roman civilization, and spoken Latin is also a significant component of the class.
Latin II
This course is designed for students who have successfully completed (Middle School) Latin 8 or (Upper School) Latin I at St. Luke’s. Students will solidify and build on their foundation of Latin grammar so that they may read more difficult Latin passages. Classical Latin grammar will be covered in further depth and complexity, and continued emphasis will be on Roman culture and history. Students will also develop communication skills by speaking and writing in Latin frequently.

Latin III
The course will begin with a review of basic grammar and vocabulary, after which students will advance to the study of more complex grammatical constructions before transitioning to reading exclusively unadapted classical texts. Increasingly difficult Latin passages will reinforce the study of grammar, and continued emphasis will be placed on Roman culture and history through readings, class discussions, research, and projects.

Latin Literature and Honors Latin Literature
Students will briefly review Latin grammar and thereafter will begin to read a variety of lengthier, unadapted selections of literature from authors such as Pliny, Catullus, Horace, Caesar, Ovid, and Vergil. While reading these works, the students’ foundations of Latin grammar will be reinforced and, if need be, reviewed more thoroughly. Students also will explore the historical and cultural context of the readings, as well as the literary forms and intricate uses of the Latin language found within the passages. Latin Literature will function mostly as a traditional translation course, while students in the Honors section will have an increased focus on Latin composition and literary analysis, and students will be expected to communicate primarily in Latin. The texts covered in these courses change each year, so both can be taken multiple times as needed.
Prerequisite: recommendation of the student’s current instructor.

Advanced Latin Literature
This course will focus on building independent reading and research skills as well as increasing productive fluency in spoken and written Latin, aligning with many newly-developed immersive college programs. Latin will be the primary language of instruction and discussion at this level. After a brief review of Latin grammar as a whole, students will read a variety of lengthier, unadapted selections of literature from authors such as Pliny, Catullus, Horace, Caesar, Ovid, and Vergil. Students also will explore the historical and cultural context of the readings, as well as the literary forms and intricate uses of the Latin language found within the passages. Students in this class will also complete a semester-long independent project that will culminate in a multi-class teaching experience.
Prerequisite: recommendation of the student’s current instructor. This course is required for the Classical Scholars program.

Advanced Ancient Greek
This course is designed to introduce students to the grammar, culture, and literature of Ancient Greece. The scope of the curriculum will cover the language patterns of classical Greek as used in Athens during the 5th century B.C.E., though some comparisons to Homeric and Koine Greek will be addressed as well. Students are expected to have attained familiarity with the linguistic patterns of classical Latin before taking this course, to allow the pace of instruction to be accelerated.
Prerequisite: recommendation of the course’s instructor.
Note: this course is offered every other year, and it is required for the Classical Scholars program.

Mandarin Chinese I (Blended Learning course)
Mandarin Chinese I begins the three-year sequence required for graduation. In this initial phase, the emphasis is on communication. This includes growing a basic vocabulary, understanding sentence structure, and taking risks to express oneself in the target language as much as possible. All three modes (interpersonal, interpretive, and presentational mode) are developed throughout the year. At the end of the first year, students will be able to ask and answer questions describing themselves, their families, friends, school, and activities, etc. Students will be able to read mini-stories written in Chinese characters. By discussing images, videos, maps, and stories, students will be able to identify Chinese cultural products and practices to help them understand the cultural perspectives.
Students learn Chinese through simplified characters, which are used in mainland China. In the first year, the students will learn how to read about 200 characters. Students will practice writing Chinese characters every day after the first few weeks of instruction.

Mandarin Chinese II
At this level of study, students continue to grow their vocabulary, express preferences and opinions, describe in more detail, make comparisons and contrasts, ask and answer questions with greater detail, and participate in conversations in the past, present, and near future. While oral communication continues to be the primary objective, reading and writing practices will progress as well. Cultural learning will involve more comparisons and contrasts between Chinese culture and the students’ own cultures. By the end of this course, Mandarin Chinese II students will be able to communicate about everyday topics (e.g., school, daily routine, shopping, weather, transportation) in increasingly complex, complete sentences.

Mandarin Chinese III
At this level of study, Mandarin Chinese III students will learn to carry on more varied and consequential exchanges and discussions. They will work on essential skills that promote proficiency growth: narrating, elaborating and supporting, and sustaining a conversation. Students will build these skills in writing, speaking, listening, and reading. By the end of this course, Mandarin III students will have developed the ability to communicate about more extensive topics related to everyday life (i.e., attending school, asking directions, dining at restaurants, attending parties, seeing a doctor, discussing healthy lifestyles, socializing with friends, discussing living quarters, etc.) in even more elaborate complete sentences.

Mandarin Chinese IV and Honors Mandarin Chinese IV
These courses are for students who have maintained a deep interest in the Chinese language and culture. The courses are made of thematic units that aim to engage students with authentic texts and media of various genres and examine cultural practices and perspectives in modern society in China. Though some grammar lessons are featured throughout the year, the focus is to express more complex and original ideas in Mandarin through class discussions. Students will prepare and revise numerous compositions based on the readings and discussions in class. The Honors section will have different assessments and/or grading standards, and will challenge students with more complex tasks.

Prerequisite: recommendation of the course’s instructor.