Course Catalog
2025–2026

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Your Academic Journey at Linden Hall

Welcome to Linden Hall! Whether you are a new student or have been with us for years, we are delighted to have you as a member of our vibrant community of learners. You are part of a group of committed students who choose to engage with a world-class educational program that will help you identify your strengths, grow intellectually, challenge your capabilities, and prepare you to be a leader in a dynamic, global society.

This course catalog is designed to provide basic information about classes offered at Linden Hall, and we look forward to working with you on individualizing your educational journey!

Graduation Requirements

To graduate from Linden Hall, students must complete both academic and co-curricular requirements. Both types of requirements are outlined below:

Academic Requirements

Course	Required Credits
English Including at least one full year of English beyond ESL programming	4 Credits
Mathematics Including at least Algebra 1, Geometry, and Algebra 2	4 Credits
History Including U.S. History	3 Credits
Science Including Biology, Chemistry, and Physics	3 Credits
World Language Including study in the chosen language through at least Level 3	2 Credits
Arts	2 Credits
Physical Education Awarded as .50 credits each year	2 Credits
Health & Wellness Awarded as .25 credits each year	1 Credit
Electives Additional academic or art credits in elective or advanced-level classes in any department	3 Credits
Total Credits Required	24 Credits

Co-curricular Requirements

Area	Requirement(s)
Community Service	Outlined in the Student Handbook
Summer Reading	Linden Hall students are required to follow summer reading guidelines, and the requirements will vary by grade level and course selection.
Foundations of Academic Integrity Course	Linden Hall students are required to take the Foundations of Academic Integrity course annually to reinforce ethical academic practices, keep up with evolving standards, and strengthen their research and citation skills.
Assembly Speeches	All students in 10-11th grade, not in ESL, deliver a speech in assembly.
The Senior Speech	Each senior will address the student body during Chapel.

Signature Programs

College in the High School

The College in the High School program enables qualified high school students to enroll in college-level courses at their high school during the regular school day. College in the High School students earn concurrent high school and college credits. Course offerings are selected from the college or university's required courses or core curriculum courses. Courses are taught by a high school teacher who qualifies as an adjunct faculty member and are offered to high school students at a reduced tuition rate. Students are responsible for the cost of the course.

Linden Hall currently has an agreement with the University of Delaware.

Dual Enrollment Program

Dual Enrollment offers the opportunity for students to take college courses and high school courses at the same time. The college credits earned can count towards both high school graduation and a college transcript. All courses taken under this program must be core academic courses. This means that courses can be in any of the following subjects: English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history and geography, psychology, and sociology.

Linden Hall currently has agreements with the schools listed below:

Delaware Valley University
Harrisburg University
PA College of Art & Design

Linden Hall's Transcript Credit Values:

- 4-credit college course: reflected as 1.34 credits on the Linden Hall transcript
- 3-credit college course: reflected as 1.0 credit on the Linden Hall transcript
- 2-credit college course: reflected as 0.66 credits on the Linden Hall transcript
- 1-credit college course: reflected as 0.34 credits on the Linden Hall transcript

Aviation

This program allows our students to learn to fly! Participants take flight lessons that can be the first steps to obtaining a commercial pilot's license, or they can simply enjoy time in the air learning some basic flight maneuvers. The program is offered through a partnership with Aero-Tech Services Incorporated, who successfully positions students for careers in flight and aeronautics. Students must be 15 years old to take the "Ground School" course, 16 years old to do a solo flight, and 17 years old to receive a private pilot's certificate.

Equestrian

The Linden Hall Riding Program offers a year-round competitive training schedule. Whether students want to compete internationally or are looking to become involved with horses for the first time, they will find opportunities in our equestrian program. A comprehensive study for both horse and rider, our program establishes a strong foundation in riding and horsemanship, with a focus on Hunters, Jumpers, Dressage, and Equitation. Linden Hall is also the proud home barn for the Franklin & Marshall College Equestrian Team. There is an additional fee for riding lessons and horse boarding.

English as a Second Language

Linden Hall is one of very few schools in the United States that offers a supportive environment for second language learners. We focus on students' intellectual capabilities and balance their readiness to engage in high-level intellectual pursuits with a supportive program that enhances their acquisition and refinement of the English language. By the time they finish the program, they are ready to take college-preparatory courses without additional support.

Visual and Performing Arts Department

The Visual and Performing Arts are an integral part of human culture and education. Historically, they have served as a means of storytelling, religious enhancement, social documentation, and personal expression. The arts reflect the conventions of the society in which they are created. At Linden Hall, we teach appreciation for historic and contemporary arts through hands-on experiences and art history. We nurture students' creativity and strive to celebrate their individuality.

Music

Language of Music

Introduces the concepts of reading, writing, and performing music through a comprehensive Kodaly curriculum. Students study key elements in music theory including intervals, key signatures, rhythmic notation, sight-singing, and solfege. Performers gain musical confidence as they learn to interpret music cohesively and effectively.

Choir

Offers opportunities for students to perform with peers in a school concert choir setting. Students learn choral repertoire through a performance-based curriculum and their talents are showcased at on- and off-campus events throughout the year. There is no audition required to enroll, and previous choral experience is not required.

Symphonic Orchestra

Develops students' technical skills in proper playing abilities, as well as in music literacy. Emphasis is placed on the development of musicianship through progressive technical studies, as well as through modern and classic orchestral literature featuring instrumentation that includes all wind, string, and percussion instruments. In symphonic orchestra, students develop their performance abilities on their individual instruments, learn their role in creating a good ensemble sound, improve their aural skills, and expand their knowledge of musical terminology and symbol identification. In this ensemble, students can play any string, wind, or percussion instrument (including piano).

Myrtle V. Eckert Handbell Choir

Offers students the opportunity to perform with peers in a school concert ensemble setting. Students learn bell repertoire through a performance-based curriculum and perform at several on-campus events throughout the year. There is no audition required to enroll, and previous ringing experience is not required. Students gain a better understanding of the fundamentals of musical literacy through an active rehearsal process.

Percussion Ensemble

Develops students' technical skills, music literacy, and musicianship through progressive studies and diverse percussion literature. Participants improve ensemble performance, aural skills, and musical knowledge while playing various percussion instruments or demonstrating a strong commitment to learning. Students must either play a percussion instrument or demonstrate a strong work ethic and desire to learn new instrumental techniques to participate in this ensemble.

String Ensemble

Develops students' technical skills in proper playing abilities, as well as in music literacy. Emphasis is placed on the development of musicianship through progressive technical studies, as well as through modern and classic literature for string instruments. In string ensemble, students grow in their performance abilities on their individual instruments, learn their role in creating a good ensemble sound, improve their aural skills, and expand their knowledge of musical terminology and symbol identification. In this ensemble, students must play violin, viola, cello, or double bass.

Wind Band

Develops students' technical skills in proper playing abilities, as well as in music literacy. Emphasis is placed on the development of musicianship through progressive technical studies, as well as through modern and classic band literature. In band, students grow in their performance abilities on their individual instruments, learn their role in creating a good ensemble sound, improve their aural skills, and expand their knowledge of musical terminology and symbol identification. In this ensemble, students must play one of the following instruments: flute, oboe, clarinet, bassoon, saxophone, horn, trumpet, trombone, euphonium/baritone, tuba, or percussion.

Theater Arts

Theater Performance

Engages students in live theater performances in the fall and spring of the year. Students learn about all aspects of the production process, from the auditions through striking the set at the conclusion of the production.

Visual Arts

Middle School Art I, II, & III

Introduces students to visual and theater arts, focusing on design elements, art history, and creative expression in the first semester. In the second semester, students build confidence through theater performance, improvisation, and play production while developing lifelong communication and collaboration skills.

Ceramics I, II, III, & IV

Focuses on creating both functional and non-functional works of hand-built art with clay. Emphasis is placed on the design elements of line, texture, color, shape/form, value, and space, and the design principles of repetition, balance emphasis, contrast, and unity. Students examine and discuss works of art and create their own works by exercising problem-solving skills and sequential thinking. In the advanced classes, students learn how to make molds and stamps.

Wearable Art I & II

Applies all the elements and principles of design while creating works of art that can be worn, using both traditional and alternative materials. Students look at historical works of art to identify the symbols, subject matter, and techniques, patterns, rhythms, and visual communication used.

2D Studio Art I, II, III, & IV

Focuses on the exploration of color, line, texture, and form as elements for creating a balanced, aesthetically pleasing composition. Students explore and practice new and alternative approaches to making 2D art using both traditional and non-traditional materials and surfaces. Students participate in self-evaluation, examining and discussing their works of art through rubrics and critiques.

AP 2D Art and Design

Designed for highly motivated, talented students who create a portfolio of work to demonstrate inquiry through art and design and development of materials and processes. Students submit portfolios for evaluation based on specific criteria, which include skillful synthesis of materials, processes, ideas, and sustained investigation through practice, experimentation, and revision.

3D Studio Art I, II, III, & IV

Teaches an appreciation for historic and contemporary visual arts using mixed media, textiles, fiber, and artist books focused on symbolism in art. Students design action plans that exercise problem-solving skills, sequential thinking, and time management. Students participate in self-evaluation, examining and discussing their works of art through rubrics and critiques.

3D Studio Art Portfolio

Designed for experienced, highly motivated, dedicated students interested in the practical experience of art. Students complete a portfolio and engage in group and individual critiques.

AP Studio Art – 3D Design

Focuses on the development of a portfolio for presentation to the College Board in May, highlighting aspects of quality, breadth, and concentration. Extensive work for these classes must be completed independently.

Photography I, II, III, & IV

Introduces digital photography in the beginning classes and builds on the knowledge, skills, and ideas in advanced classes. Students will be introduced to shooting techniques, editing, printing, and modes of presentation. Other topics and techniques covered may include color theory, commercial photography, studio photography for portraiture, and still life including various lighting techniques, file management, workflow, digital editing techniques, and printing. Students are encouraged to develop their own personal vision and style.

Photography Portfolio

Designed for experienced, highly motivated, and dedicated students interested in the practical experience of photography. Building on creative skills and techniques learned in previous photography courses, this course focuses on individual expression, professional presentation, and exhibition. Emphasis is placed on creating work with more complex visual statements. A wide range of materials and processes will be further explored, and students will have the opportunity to master a chosen subject or medium. They will focus on portfolio development as they continue to develop their skills in producing high-quality works of art.

Digital Arts

Digital Arts introduce students to the use of the computer as an art-making medium to visually communicate their ideas and become better prepared to compete in our ever-changing age of technology. These courses cover a variety of topics, including art theory concepts such as the elements of art, principles of design, typography, composition, and color theory. Students learn the powerful software tools used to create digital art, such as the industry standard programs of Adobe Photoshop, Illustrator, After Effects, Premiere, and more. Other software, such as Unity and Processing, may be explored for the creation of animation. Student fees are required for software, printing, and presentation materials.

Digital Arts I, II, III, & IV

Introduces various topics in such areas as digital photography (editing and adjusting photographs), graphic design, illustration, animation, and visual effects within raster and vector-based applications in the beginning classes. Upper-level classes may include original photo manipulations, original digital illustrations and paintings, product and/or packaging development, web design, corporate design, communications, advertising, digitally enhanced art experiences, logos, graphics creation, and mechanics of art for print. In addition, students will create individually designed projects. Advanced techniques may include webpage design, multimedia presentations, advanced animation, interactive video games, 3D character design, and video techniques. Course projects are determined by student interest.

AP Studio Art – 2D Design Photography

AP Photography is a portfolio course designed for experienced, highly motivated, and dedicated students interested in the practical experience of art. It is the equivalent of a one-semester college course in art, in which students prepare a portfolio for presentation to the College Board in May. The portfolio highlights aspects of quality, breadth, and concentration. Extensive work for these classes must be completed independently, and students are expected to take advantage of opportunities to visit museums, galleries, and art exhibits as they study masters of photography as a means of personal artistic enrichment.

English Department

The English department introduces students to the world through literature. We read and respond to literature from across time and cultures, believing that reading and writing teach empathy and critical thinking. Our students read literature from a variety of genres and work to understand how genre, history, form, and content all inform one another. Additionally, students strive to become more successful communicators through regular speaking and writing opportunities. Vocabulary and grammar are studied to improve the clarity and precision of communication. Finally, upper school students give yearly speeches to the school community.

Foundations of Academic Integrity

Teaches students how to succeed academically while adhering to ethical and legal standards, covering topics such as plagiarism, academic misconduct (including improper AI use), MLA citation, and proper paraphrasing techniques. This project-based course, integrated into advisory, encourages collaboration among students as they explore each topic and build a sense of community.

Humanities English: Global Studies & Cultures

Running in tandem with Humanities History, students read stories from different cultures and time periods; they practice strategies to effectively reflect upon, discuss, and write about themes within literature and the world around them. Writing assignments vary from analytical paragraphs to creative short stories and responses to literature.

Humanities English: Civics in Action

Prepares students for the rigors of upper-school English, exploring reading, writing, vocabulary, and grammar. Reading and writing assignments examine how writing is used as a tool for narration, description, explanation, and persuasion. Literary texts challenge and engage students, serving as vehicles for broadening reading ability and as models for writing. Public speaking skills are emphasized through discussions and presentations.

Language, Skills, and Planning

Teaches a range of soft skills to help middle school students become better scholars, communicators, and problem-solvers. Students set specific and measurable goals for personal and academic improvement, as well as explore strategies and systems to maximize effective organization, study skills, and workflow.

World Literature

Explores global texts from ancient times to the 21st century, building on middle school skills and preparing students for upper school. Emphasizing historical context, analytical writing, and spoken communication, the course includes essays, speeches, and regular practice in vocabulary and grammar.

American Voices

Explores critical questions such as, Who is an American? Which voices and experiences are quintessentially American? To what extent are certain American voices silenced? This course focuses on women writers of color, tracing narratives of immigration, gender, and identity formation.

Video Games as Literature

Engages students in critically exploring video games as a medium, examining how gaming has transformed storytelling, character development, and narrative building. Through research, writing, and project-based assignments, students apply literary theory, philosophical concepts, and sociopolitical analysis to dissect games while enhancing communication skills through discussion and creative projects.

Science Fiction & Fantasy Literature

Explores why storytelling captivates the imagination, and why societies have long revered storytellers. Through analyzing iconic fictional worlds and engaging in reflective writing, students will uncover allegorical, philosophical, and scientific ideas while considering their own role as heroines in shaping the future.

Image and Word

Examines the relationship between the arts and literature through the study of film and graphic novels. This course introduces students to the basics of film analysis, including theoretical, historical, and critical approaches to films. Analysis of graphic novels focuses on the study of visual literacy and visual rhetoric. Skills in research and writing are honed through analytical, creative, and reflective assignments.

Philosophy Through Literature

Engages students in the interpretation of literature through a philosophical lens. Students learn the basics of philosophy and are guided through the four main branches: metaphysics, epistemology, ethics, and politics. Through a critical analysis of literature, they study the ways authors reinforce or subvert these branches in their writing.

Horror Literature

Takes a deep dive into a genre that has, for centuries, been one of the most reliable sources of biting social commentary and a way for humans to grapple with the darkness of the world around them. This course surveys the entirety of modern horror, beginning with Gothic literature and working its way to contemporary allegories that seek to engage the audience in a larger conversation about both our past and its present implications.

AP English Literature and Composition

Refines students' analysis and writing strategies to lead to a deeper understanding of challenging works while fostering an understanding of how literary elements help create meaning. Emphasis is placed on critical thinking, interpretation, and analysis of literary texts, including close readings of poetry, novels, and drama. AP English Literature is offered in alternating years with AP English Language.

Writing Seminar

Supports students in their writing skills on assignments specific to this course, as well as assignments from other classes. It provides targeted instruction using the exploration of mentor texts, daily writing exercises, and editing workshops. Students make progress thanks to a supportive environment in which they receive individualized instruction, work collaboratively with classmates, and develop executive functioning skills.

English as a Second Language Program (ESL)

This program assists English language learners in acquiring a sufficient command of the language and academic English vocabulary to be successful in our rigorous, college-preparatory classes. Following an initial placement test, the ESL placement committee uses a combination of grades, placement test scores, and teacher recommendations to determine ESL course placement and promotion. The ESL program also features extensive preparation for the TOEFL exam. Students do not select their own placement.

Students are required to complete a full year of college-preparatory English & History work beyond ESL coursework prior to graduation. Students who are promoted from ESL into college-preparatory English courses with a TOEFL score below 80 must spend at least one semester in Writing Seminar.

ESL Language

Focuses on the mastery of basic structures and grammar forms in the classic tradition. Students also begin learning the terms and concepts that their domestic counterparts have been learning in their own studies of grammar. Although all four language domains are addressed, ESL Language places especially heavy emphasis on writing and public speaking. *This course is taken by students with TOEFL scores below 70 in lieu of studying an additional world language.*

ESL Literature

Supports students in the four language skills of reading, writing, speaking, and listening. The primary purpose of the class is to transition second-language students to the study of English as literature rather than language. Students learn to use literary devices both in their discussions of literature and in their own writing, and they move beyond the comprehension of text into close reading and analysis through full-class discussion. *ESL Literature is taken by upper school students with TOEFL scores below 70 in lieu of a standard English course. Middle school students will be placed in a traditional English course and given support as needed.*

ESL History

Provides students with an introductory survey of the major events, people, documents, and ideas of United States history. The course explores pre-Columbian to 20th-century American history; it also places a special focus on the global language and research skills needed to succeed in most American classrooms. *This course DOES NOT fulfill the US History requirement for graduation. ESL History is taken by upper school students with TOEFL scores below 70 as a foundation course in US History. Middle school students will be placed in a traditional history course and given support as needed.*

ESL Content Support

Supports students in ESL with the language assistance they will need to excel in college prep-level courses. Emphasis is placed on decoding academic text, the study of word roots and families, and effective research practices for the American classroom. Students will also study directly for the TOEFL exam. *ESL Support is taken by students with TOEFL scores below 70 or by other students requesting support in their coursework as they become proficient in English.*

ESL Science

Introduces English language learners to fundamental concepts in biology while developing their academic language skills. Through engaging activities, students will explore the interrelationships of

living things, levels of biological organization, cellular structure and function, molecular biology, biochemistry, genetics, evolution, and ecology. Students will also develop skills in laboratory work and projects, as well as a thorough understanding of scientific inquiry. Emphasis is placed on building scientific vocabulary and communication skills to support success in both science and English learning. *ESL Science is taken by students with TOEFL scores below 70 or by other students requesting support in their coursework as they become proficient in English. Middle school students will be placed in a traditional science course and given support as needed.*

History Department

The History Department encourages each student to develop her critical thinking skills while expanding her knowledge of the world around her. Courses within the department examine Western, world, US, local, modern, and ancient history, as well as related fields in the humanities and social sciences. We use primary and secondary sources, class discussion, independent and guided research, analytical writing, and standardized test preparation as appropriate. Courses in the department develop students' ability to interpret data, think and write clearly, make comparisons, draw conclusions, present and defend material, conduct research, and read actively.

Humanities History: Global Stories & Cultures

Examines geography and culture from the ancient world until today. This course asks students to consider the impact of geography on culture and examines how cultures compete, collaborate, connect, and change over centuries and continents. Students begin with an introduction to the study of geography; they then expand their study through the modern day.

Humanities History: Civics in Action

Examines how the United States government works on the national, state, and local levels and the rights, responsibilities, and benefits of citizenship. The course places constitutional principles in a historical context through a closer study of key moments in American political history.

World History

Examines the past from ancient times to the 21st century, complementing the World Literature course. Students develop historical thinking skills by analyzing primary and secondary sources using Stanford's Model, building on middle school knowledge for upper school success.

United States History

Offers a survey of US history from the Columbian Exchange to the present day. We examine the political, economic, social, religious, intellectual, and cultural factors that shaped history. We follow a number of themes throughout the year: the emergence of the culture and institutions; the struggle for national unity and identity amidst cultural diversity and conflict; the powerful reform impulse in society; the conflicts between freedom and order, individualism and conformism, progressivism and nostalgia for the past, and state and federal power. *This course fulfills the US History graduation requirement.*

AP United States History

Provides a survey of US history from the Columbian Exchange to the present day. Students study the formation and development of the American nation as it evolves from a colonial British outpost to a global hegemon. Major themes include America and national identity, politics and power, technology and exchange, and geography and environment. Students will consider the political, economic, social, religious, intellectual, and cultural factors that shaped history. *This course fulfills the US History graduation requirement.*

AP World History: Modern

Concentrates on developing students' abilities to think conceptually about world history from approximately 1300 CE to the present, as well as apply historical thinking skills as they learn about the five major geographical regions of the globe: Africa, the Americas, Asia, Europe, and Oceania, with a

special focus on historical developments and processes that cross multiple regions. Themes include focusing on the environment, cultures, state-building, economic systems, and social structures.

Psychology

Introduces students to the scientific study of behavior and mental experience. Topics range from brain physiology to social behavior. We study many influences on behavior and thought, both internal (e.g., genetics, neurophysiology, traits) and external (e.g., parenting, learning, culture) to help us better understand human behavior.

AP Psychology

Explores the basis of psychological theory as the study of human and animal behavior, as well as mental processes and how psychologists design and conduct research. Students will examine psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They will also learn about the methods psychologists use to explore the processes involved in normal and abnormal perceptions, thoughts, feelings, and actions.

AP European History

Focuses on the period from 1450 CE to the present. Students will explore developments in political power and how they affected relationships both among states and between states and individuals. They will also learn about the social, political, and cultural conditions resulting from economic developments in Europe.

Entre X Lab

Entre X Lab is a dual enrollment entrepreneurship course, offered in partnership with the University of Delaware's Horn Entrepreneurship Center, that allows students to earn three transferable undergraduate credits. The curriculum focuses on 21st-century business skills through project-based learning, including business plan development, pitch competitions, and creating minimum viable products (MVPs).

Personal Finance

Equips high school students with essential financial literacy skills, covering budgeting, saving, credit, investing, taxes, and smart consumer decisions. Through hands-on activities and real-life case studies, students gain practical knowledge to make informed financial choices and achieve long-term financial independence.

History of Ideas

Explores the philosophical movements that have shaped Western thought, challenging our understanding of identity, morality, society, and reality from ancient times to today. Guided by Kant's maxim, "dare to know," students will gain a strong foundation in history and philosophy, examining how these ideas have inspired, unsettled, and transformed civilizations.

Pop Culture and History

Examines the development of American popular culture — particularly music and film — from the end of World War II to the end of the 20th century. Emphasis will be placed on an analysis of the primary

sources themselves as students grapple with the question, “Was there a distinctive American aesthetic between 1945 and 2000, and if so, how did it shape who we are today?”

Mathematics Department

The Mathematics Department is dedicated to developing the reasoning and problem-solving skills of each student and instilling confidence in her mathematic ability. We incorporate the use of technology to enhance learning and mastery of concepts, as well as provide a collaborative working environment that emphasizes the further development of analytical, problem-solving, and communication skills. Mathematical concepts and Excel skills are taught and reinforced through collaborative critical thinking activities and projects.

Mathematics Exploration

Focuses on computational proficiency, critical-thinking skills, and developing an organized approach to problem-solving. Students study integers, rational numbers, coordinate systems, percentages, and proportions. They investigate the practical applications of two-dimensional geometry and are introduced to solid geometry.

Pre-Algebra

Addresses the transition from arithmetic to the basic elements of theoretical mathematics. This course emphasizes critical-thinking skills and focuses on writing and solving multistep equations and inequalities, all operations with rational numbers, proportions, percentages, square roots, the Pythagorean Theorem, graphing linear equations, and solid geometry.

Algebra I

Provides students with a deeper understanding of linear functions and inequalities, systems of equations and inequalities, and their graphs. Students are introduced to factoring, polynomials, radical equations, all operations with rational expressions, and quadratic equations. Throughout the year, students work collaboratively to apply the skills they learn in solving word problems. In addition, they participate in both individual and group projects in which they explore and solve real-life problems.

Geometry

Introduces students to the concepts of Euclidean Geometry. Students in this course study the properties of geometric figures and develop abstract and logical thinking skills through deductive and inductive reasoning techniques. Emphasis is placed on justifying conjectures by writing proofs. Topics studied include properties of triangles, including right triangle trigonometry, quadrilaterals, congruence, and similarity.

Algebra II

Focuses on mastering quadratic equations and solving them through graphing. Other functions studied include rational, exponential, and logarithmic families of equations. Emphasis is placed on the processes used to find solutions rather than on the solutions themselves. Students learn different problem-solving strategies and explain the methods used to find solutions both in oral and written form.

Algebra III & Trigonometry

Builds a solid algebra foundation to prepare students for higher-level math. Students will review major algebra topics such as graphing and analysis of basic functions, including exponential and logarithmic functions. We will also spend time preparing for the SAT. Conic sections and other analytical geometry topics will then be introduced. We will devote the second semester to trigonometry.

Pre-Calculus

Explores basic functions (linear, quadratic, power, polynomial, rational, trigonometric, absolute value, and greatest integer) and their algebraic properties with an emphasis on their graphical, algebraic, and numerical representations. An in-depth study of trigonometric functions includes right-angle geometry, inverse trigonometric functions, trigonometric identities and proofs, trigonometric proofs, trigonometric equations, the Law of Sines, the Law of Cosines, and other trigonometric applications.

AP Calculus AB

Covers all the topics normally covered in a traditional college-level Calculus I course. After a review of the concepts of functions and their graphs, the topics of limit and continuity are introduced. The derivative concept is developed, and its applications are studied. The integral is developed as an anti-derivative and, through the introduction of Riemann Sums, the definite integral is studied as a consequence of the Fundamental Theorem of Calculus. The course concludes with techniques of integrations and application of the integral to volumes of solids.

AP Calculus BC

Provides a deeper understanding of the concepts and methods of single-variable calculus. There is continued emphasis on calculus applications and techniques, with the use of multiple representations including graphic, numeric, analytic, algebraic, verbal, and written responses. Technology is an integral part of the course and includes the use of graphing calculators. Topics include limits, derivatives, integration, and graphing of these. Students are expected to solve problems in a variety of ways: graphically, numerically, analytically, and verbally.

Statistics

Provides students with a basic understanding of statistical concepts and methods. Students will collect, organize, and analyze data, then draw conclusions and make inferences based on the data. Topics include descriptive statistics, probability and probability distributions, sampling, estimation, hypothesis testing, correlation, and regression. Students will use a variety of statistical tools and will be required to complete data analysis projects and presentations.

AP Statistics

Encourages student awareness of the importance of mathematics in the modern world. This course is an introduction to the study of probability, interpretation of data, and fundamental statistical problem-solving. Students will explore and analyze data by observing patterns or the absence of patterns, interpret information from graphical and tabular displays, apply appropriate statistical models to infer information from data, and learn to use technology in solving statistical problems.

Multivariable Calculus

Explores differential and integral calculus of functions of several variables. Topics include partial derivatives and the total derivative of real-valued and vector-valued functions, the chain rule, directional

derivatives, extrema of real-valued functions, constrained extrema, Lagrange multipliers, double and triple integrals, and the change of variables formula in multiple integrals. Emphasis is placed on the processes used to find solutions rather than on the solutions themselves.

Introduction to Python Programming

Introduces students to the Python Programming Language, covering fundamentals, advanced features, and real-world applications like web scraping, data analysis, automation, and the basics of machine learning. Through hands-on projects and coding exercises stored on GitHub, students will develop computational thinking, create their own programs, and build a portfolio to prepare for advanced studies.

Fundamentals of ChatGPT and Generative AI

Introduces students to the evolving world of artificial intelligence (AI). This course focuses on using current AI tools such as ChatGPT and generative AI. Students will also explore AI tools such as Microsoft Copilot, Google Gemini, DALL-E, and Midjourney for content creation, problem-solving, and task automation. Through hands-on projects, students will gain experience with AI applications in writing, coding, art, and business, while building a strong foundation for future studies in AI and machine learning.

Introduction to AI and Machine Learning

Introduces AI and machine learning, covering fundamental concepts such as neural networks, deep learning, and natural language processing, with hands-on Python projects. It provides a solid foundation for further studies in AI, preparing students for more advanced courses while clarifying key concepts without requiring coding or complex math.

Science Department

We encourage students to develop their understanding of both the natural world around them and technological advances. We also emphasize the development of the analytical and logical thinking skills necessary to succeed in the sciences. Methods include introducing the major ideas of science via laboratory techniques currently used in scientific investigation, as well as discussions of recent advances made in science, the world of opportunities available in modern science, and the impact that science has on our society and environment.

Life Science

Explores fundamental biology concepts, focusing on living organisms and their interactions with the environment. Through hands-on investigations and inquiry-based learning, students study topics such as cells, genetics, evolution, ecosystems, and human biology while developing critical thinking and scientific inquiry skills.

Physical Science

Introduces students to key principles of physics and chemistry through hands-on experiments and inquiry-based learning. The course emphasizes critical thinking and problem-solving while covering topics such as atomic structure, chemical reactions, motion, forces, and energy transformations.

Biology

Focuses on how organisms develop, function, and reproduce. Students learn concepts and techniques of modern biology, including cellular structure and function, molecular biology, biochemistry, genetics, evolution, classification and characteristics of living organisms (plants and animals), and ecology.

AP Biology

Cultivates students' understanding of biology through inquiry-based investigations as they explore evolution, cellular processes, energy, communication, genetics, information transfer, ecology, and interactions. Laboratory exercises are emphasized.

Anatomy and Physiology

Takes an in-depth look at the multitude of processes that enable humans to survive in almost every climate on earth. A focus on homeostasis will lead students through various body systems, starting with anatomical form and shifting into physiological function. Introduces muscles and bones, as well as the nervous, circulatory, renal, respiratory, digestive, and hormonal systems. This course will be taught at the introductory collegiate level and is designed for students interested in premedical tracking for undergraduate study.

Chemistry

Examines the study of matter, any observable change that matter experiences, and the energy differences that accompany changes in matter. Students explore matter at its fundamental levels, focusing on three perspectives: the atomic, the observable, and the symbolic. Skills in critical thinking and problem-solving are essential as students manipulate information and synthesize concepts in laboratory exercises and classroom exploration. Additionally, students complete complex math-based and conceptual problems selected to expand their understanding.

AP Chemistry

Provides students with a foundation to support future advanced coursework in chemistry, as work equivalent to a full year's introduction to college-level chemistry is completed. Students cultivate their understanding of chemistry and science practices as they explore topics such as atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium.

Physics

Introduces students to the underlying rules governing the world around us. Students explore the concepts of motion, force, momentum, energy and work, properties of matter, electricity and magnetism, and waves through independent and group work. Laboratory experiments are intended to engage students' problem-solving and critical thinking skills. Students develop skills in scientific research and writing.

AP Physics

Explores principles of Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits in this college-level course equivalent to one semester's study of introductory physics. In the inquiry-based laboratory, students establish lines of evidence and use them to develop and refine testable explanations and predictions of natural phenomena.

Immunology

Explores the body's defense mechanisms, focusing on innate and adaptive immunity, immune cells, and the role of vaccines. It prepares students for future scientific studies by introducing advanced concepts and fostering a deeper understanding of immune system functions.

Genetics

Focuses on how DNA controls our development, function, and behavior. Students apply concepts from biology and chemistry to build a strong understanding of how genes control our function, from DNA and RNA to the complex mechanisms behind Mendelian inheritance. Students will explore how DNA controls our development, function, and behavior, as well as discuss the impact that genetics has on genetic diseases, the human genome project, and current controversies in the field.

Aviation

Permits students to participate in a partnership with Aero-Tech Services Incorporated (ATS). Students work independently using an FAA-certified online program to learn the basic principles of flight needed to be ready to pass the FAA private pilot written exam. Most students take this course simultaneously with flight school. Students must be at least 15 years old to take the "Ground School" course, 16 years old to do a solo flight, and 17 years old to receive a private pilot's certificate. There is an additional fee for this course.

World Languages Department

In the World Language Department, we believe that the acquisition of a second language is an integral part of every student's education. Knowledge of another language provides insight into other cultures and other people, helping one to create a better understanding of the world.

Survey of Languages

Introduces students to the basics of the Latin, French, and Spanish languages. Students will spend the first semester learning basic Latin grammar and vocabulary, with a particular emphasis on recognizing root words. Students will spend half of the second semester learning basic French grammar, vocabulary, pronunciation, and Francophone culture. They will then spend the second half of the semester learning basic Spanish grammar, vocabulary, pronunciation, and Spanish and Hispanic culture.

French

French I

Provides an introduction and foundation to the study of the French language, literature, and culture. Students intensely study vocabulary and grammar structures to build the base for continuing study of the language. Through the use of appropriate-level authentic texts and resources, students learn commonly used French words and idiomatic expressions.

French II

Builds upon work completed in French I in the use of authentic texts and resources to build vocabulary, grammar, and understanding of Francophone cultures. Students develop and improve French reading, writing, speaking, and listening skills, while also broadening their understanding of French grammatical structures.

French III

Continues the study of grammar and vocabulary. Students learn more complex grammar structures, including a thorough study of the subjunctive verb mood. Students continue to develop their French reading, writing, speaking, and listening skills. There is a strong emphasis on writing and speaking, as students are expected to speak in French every day. In addition, students read and discuss a variety of short stories in French.

French IV

Continues to help students hone their reading, writing, listening, and speaking skills with daily conversations in French, weekly writing assignments, and regular reading and listening assignments both inside and outside of class. Students read stories and literature excerpts spanning the centuries of French history, read and discuss current events from France and the Francophone world, look at and analyze French works of art, and listen to and discuss French music.

AP French Language & Culture

Helps students master a strong command of the language through speaking, writing, listening, and reading. Current events and literary works of the French-speaking world are accessed through newspapers, magazine articles, and short stories. Reading and writing are completed with primary source documents, original-language French literature, and poetry spanning the centuries.

Spanish

Spanish I

Introduces grammar principles, cultural themes, and simple structure of the language through reading, writing, listening, and speaking. This course is a foundation for further study of the language and includes the present tense of regular and irregular verbs, vocabulary needed for introductory-level communication in Spanish, and grammar needed to construct complete sentences.

Spanish II

Advances a more complex structure of the language and expands upon the grammatical and cultural themes presented in Spanish I, including the study of the preterit, imperfect, future, and conditional tenses, adverbs, diminutives, comparatives, and superlatives. Students increase their skills in reading, writing, listening, and speaking, as they speak in Spanish every day.

Spanish III

Focuses on a review of grammar principles while emphasizing conversation and written expression. This course increases the student's language skills in reading, writing, listening, and speaking. Students speak in Spanish every day, write weekly in Spanish, and give a short presentation quarterly in Spanish. Students read, discuss, and analyze short stories and literary texts.

Spanish IV

Provides an intensive review of grammar, from subject pronouns to the more complex pluperfect subjunctive mood. It is designed to further increase the student's language skills in reading, writing, listening, and speaking. Students implement grammar and vocabulary by writing compositions and personal journals, giving informal speeches, and reading materials. This course includes an introduction to major art and literary works, as well as to different cultural aspects of Spanish-speaking countries.

AP Spanish Language & Culture

Helps students master a strong command of the language through speaking, writing, listening, and reading. Current events and literary works of the Spanish-speaking world are accessed through newspapers, magazine articles, and short stories.

Health & Wellness Department

Physical Education Overview

This program is dedicated to promoting lifetime fitness and physical activity, as well as enhancing personal fitness, health, and wellness for all students. To that end, the focus of this curriculum is to help students become informed, independent decision-makers capable of planning for enjoyable lifetime fitness, physical activity, and the achievement of personal fitness and sport activity goals. The objectives of the curriculum are to assist students to:

- Become physically active and physically fit
- Acquire knowledge of the benefits of physical activity, health and wellness, as well as the principles of fitness
- Become an individual capable of designing her own personal fitness program

Physical Education [Grades 6 and 7]

Sixth- and seventh-grade students will participate in a physical education class three times per week. Students will take part in both individualized instruction and cooperative learning opportunities in sports, exercise, and health issues. By following all the proper procedures, instructions, and behavior expectations, students will be able to participate effectively as positive team players, critical and independent thinkers, problem-solvers, and active lifelong learners.

After School Physical Education (ASPE) [Grades 8–12]

All students will be enrolled in a one-semester PE class. Passing this semester-long class will earn the student their required .5 PE credits for the school year. To pass PE class, students must complete a minimum of two hours each week of physical activity. Students must complete the full two hours for a 100% to pass and earn their credit. Any grade below 100% is considered a failure and will require the student to repeat the class and double up on physical education in the following school year. Hours may be fulfilled through:

<u>Equestrian Program</u>

- Two hours of riding lessons each week

<u>Individual Program/Self-Study</u>

- Completed through community/independent sports
- Students are required to submit an Independent Sport Form to Mrs. Martelle
- Community sports must total a minimum of 36 hours.

<u>Fitness Center</u>

- Signing into and working out in the fitness room

<u>Walking or Running</u>

- Logging a walk or run on their phone at a minimum pace of 2.5 mph (4 kph)
- Emailing Mrs. Martelle a screenshot showing both total time and total distance. Students must use an app that live-tracks their workout. Manual uploading is not permitted.

Participating in a Fitness-Based Weekend Activity

- Options include roller skating, ice skating, bowling, hiking, etc. Students should ask the event chaperone to email confirmation to Mrs. Martelle if they plan to use the activity for PE hours.

Linden Hall or Warwick Sport Participation

- Options include volleyball, tennis, cross country, golf, basketball, wrestling, swimming, track and field, lacrosse, middle school soccer, or club tennis.
- Students must attend all practices and competitions (unless excused by the athletic trainer or school nurse due to injury or illness) to receive credit. Unexcused absences result in a PE failure.

Health & Wellness Overview

Focuses on the "whole student" and provides them with the tools they need to succeed beyond Linden Hall. Issues related to life skills, social-emotional health, and well-being are explored through specific topics of internet safety, self-defense, depression prevention, bullying, empathy, kindness, nutrition, relationship building, financial literacy, and leadership. The content for each level is determined by the prevailing challenges of each group.

At the middle school level, topics may include body systems, personal hygiene, introduction to puberty, mental/emotional health, relationship building, sleep hygiene, time management, and values-based decision-making.

At the upper school level, topics may include research, media literacy, digital footprint and data, personal finance-checking, investing, personal credit, global citizenship, family history, leadership, personal growth, interpersonal relationships, boundaries, communication, consent, stress management, mindfulness, self-compassion, gratitude practice, civil discourse, academic integrity, basics of self-defense, financial literacy, phishing, scams, identify theft, fraud, taxes, and college-preparatory skills.