Manlius Pebble Hill School

Upper School Course Descriptions 2020 – 2021

Computer and Information Sciences

The Computer and Information Science department provides students the opportunity to explore technology from all perspectives. Whether learning about software design or the development of computer-generated imagery, it is important for students to think about themselves as both media makers and theorists. Each course is designed to help students learn how to maneuver different technological landscapes and understand the power they have at their fingertips. CIS courses are rotated annually based on current trends. Every class includes at least one unit where students will explore some form of programming.

Courses for Graduation Credit

First Semester

3D Modeling
The ability to design and render 3-dimensional images was once a niche skill for animators and video game designers. As the public's interest in computer generated films and 3D printers is on the rise, more media developers are learning how to design and render 3D imagery. This 3D modeling course is designed to give students an introduction to the multiple ways to utilize 3D mesh designs. Using programs such as OpenSCAD, TinkerCAD, Sculptris, and Blender, students will develop 3D models for prototype development, 3D printing, video game modification, and character-based animation.

Cinematic Storytelling
Cinematic Storytelling introduces students to the process of audio, video, and image development and distribution. Students learn the ins and outs of motion picture production, then use their skills to script, shoot, edit, export, and publish videos for social media and film festivals. By the end of the semester, students will have the background to create their own documentaries, narrative videos, and audio presentations, as well as to write in the traditional script format. Over the course of the semester, students will utilize video and audio editing software including Audacity, Adobe Audition, Adobe Premiere Pro and iMovie.

Introduction to Programming
Anyone with a passion for the creative process, who is interested in logic and problem-solving, can learn to develop games, applications, and software. Introduction to Programming is intended to ease students into the programming mindset by developing games in simpler languages like Scratch (developed by MIT) and OpenSCAD, then progress to the more difficult object-oriented language of Java. By the end of the course, students will have a foundational understanding of how programming works and will be able to create simple games and programs using different languages and design programs.

Second Semester

Broadcasting
The Internet Age has had a dramatic effect on all modern industries. From reading to retail, there has been a seismic shift in the way in which traditional industries operate. In the broadcasting world, television re-runs are being replaced with video-on-demand, news conferences can be held anywhere via streaming services, and modern radio broadcasting comes in the form of podcasting. Broadcasting is a course designed to teach students about the power their computers and phones offer as mass communication devices. Students will work together to create podcasts, schedule and produce live streams, and design and market their own YouTube channels. Students will learn to use software including Adobe Premiere, Adobe Audition, and XSplit Broadcaster.

Computer Graphics
Visual imagery can function on a variety of different levels. In order for it to stand out to a viewer, or experience viral culture online, a creator must understand the process of image development, the audience that will see it, and the best method for its distribution. Computer Graphics is designed to give students an introduction to the world of graphic design and digital image creation. Throughout the semester students will have the opportunity to create visual sculptures, visual stories, internet memes, and animated GIFs. Students learn the ins and outs of pixel-based and vector designs through the use of software like Adobe Photoshop and Vectr and 3D design using OpenSCAD.

Social Media Marketing
The power of social media cannot be understated. A technology that started being used only by a niche youth population has now infiltrated all generations and demographics as it plays an ever-present role in communications and commerce. Posting to Instagram, Snapchat, or TikTok can develop a brand following more quickly than any combination of billboards or television commercials. Social Media Marketing is a class that looks at the effect social media has had on culture around the world through analysis and actions. Students will work with production groups to create brands and use social media outlets to promote them. Through real-world interactions, students will become conscientious social media producers and managers.

Advanced Media Arts
Advanced Media Arts is a studio-based technology class in which students work on a project that is outside of the scope of a traditional computer technology class. Interested students propose a project to the instructor. Upon approval, the student attends class once a cycle to showcase the project's progress, learn about other projects, help troubleshoot any issues he or she may be having, and discuss the viability of the project's real-world application. At the end of the class, students are encouraged to showcase their work to the community. Advanced Media Arts is for students who are interested in honing a specific media or technology skillset and believe they can create high level work. Students are required to take an introductory computer technology class as a prerequisite for Advanced Media Arts. Enrollment requires permission from the instructor.

Advanced Programming *Pre-requisite: Introduction to Programming*
The line between programming and becoming a programmer is a blurry one that most creators struggle with until they have reached an abundance of success. What these digital inventers fail to realize is that most programmers working in the industry today are self-taught. This course is intended to help students transition from being casual programmers to active creators through a series of activities that will put student work on display in both physical and digital locations. Students will learn advanced programming tactics in the Scratch and Java languages and explore creative coding principles using the Processing language. Students will also be responsible for their own mini-computer and are expected to regularly learn new content outside of the classroom.

English

English classes at MPH combine seminar discussions, group collaborations, independent in-class writing, quiet reflection, and other sorts of experiences that allow students to explore literature creatively and analytically. Through survey courses, electives and Advanced Placement offerings, Upper School students explore a culturally diverse range of fiction, nonfiction, drama, and poetry, as well as journalism, art, film, and music. Our students assume increasing responsibility for their learning as they design projects, work collaboratively, evaluate their work, and reflect on the connections between classroom experiences and their own lives. The English Department provides additional learning opportunities through school publications such as *the Pebble*, MPH's student news and culture magazine, and the MPH yearbook.

Courses for Graduation Credit

World Literature 9
World Literature 9 builds a foundation of content and skills essential to all US English courses. In this course, students practice and refine analytical and narrative writing skills such as generating thesis statements, integrating and analyzing quotes to support an argument, organizing paragraphs, and establishing coherence and unity throughout an essay. A wide range of ancient and modern sources serve as the content and context for developing these skills. Students read texts from the two pillars of Western literature, the Biblical tradition and the Ancient Greek tradition, including stories from the Hebrew Bible and Christian scriptures, Sophocles' *Antigone* and *Oedipus Rex*, and Homer's *Odyssey*. Throughout the year, more modern readings in poetry, nonfiction, and fiction balance the older texts. This combination of readings induces students to appreciate and examine long-held ideas about character and culture, and to explore how the individual can find meaning within a larger world.

World Literature 10
In tenth grade, students encounter voices from around the world, as well as ones often overlooked here at home, in modern short fiction, novels, plays, poetry, and essays. Some of the book length readings are *The Metamorphosis*, *Flight*, *Othello*, *Like Water for Chocolate*, *Beowulf*, and *The Woman Warrior.* With each text, students consider the historical and cultural contexts (both the writers' and their own) that contribute to the layers of meaning available in the literature. Students practice writing in many modes – analytical, creative, descriptive, satirical, and more – often using the texts they have read as models for their own work. While exploring and experimenting with new perspectives and writing styles in World Literature 10, students think deeply and critically about these new experiences as well as their own assumptions and habits of thought.

American Literature 11
The English 11 curriculum, traditionally focused on literature of the United States, celebrates the strengths of our writers and recognizes the unique ideas and important styles arising from our cultural seedbed. Students will read slices of every literary and cultural era from the Puritans' to our own. We'll take the measure of those authors who've told the greatest stories (from Poe's tales of horror to Twain's transformation of the vernacular to Vonnegut's fiction of the fantastic), the poets who reached for new forms of expression (including Dickinson in her ruminations on life and death and Plath and her dissection of the mental state of motherhood), and the essayists from Thoreau to Coates who have wondered at the cracks in this country's soul. This year, while learning the themes and obsessions that drive our citizen-writers, students will not only write about those authors but will themselves explore those themes in their own writings, discussions, and presentations.

AP Literature and Composition
This course, intended for 11th graders, gives students a chance to reflect on the decisions made by authors, cultures, and audiences as they all work to create literature. Students will read novels, short fiction, poetry, and drama from both American and international authors and seek to gain experience thinking as both critics and creators of literature. Special attention will be paid to both the formal elements of literature and the ways in which culture shapes and is shaped by its storytellers and poets. Students will also prepare for the AP Literature and Composition exam, which will be administered in May.

English 12
In English 12, students will read fiction, longform nonfiction, journalism, and academic writing to examine how personal and cultural beliefs are formed. This discussion-based class will also include a series of writing assignments that aim to acquaint students with the expectations of a college classroom. As the year progresses, students will bring the expertise and enthusiasm they have learned throughout their time at MPH to bear on their Senior Thesis Project.

AP Language and Composition
This course aims to give 12th graders a taste of the atmosphere and rigors of a college seminar class. Our focus throughout the year is on rhetoric: What conscious or unconscious decisions do authors, advertisers, political administrations, and anonymous citizens make about how they express themselves? How do those decisions limit or liberate the power of communities to change their behavior? Students will read a variety of nonfiction texts, both contemporary and historical, that touch on topics of national and global relevance. Students will also prepare for the AP Language and Composition exam, which will be administered in May.

Elective Courses

First Semester

Publications Workshop
With this course's focus on writing and design, students are responsible for the production of our three major student publications: The Pebble Magazine, thePebblemag.com, and the MPH Yearbook. Subject matter for these publications is driven by student interest and includes a variety of genres, such as news stories, profile pieces, creative writing and opinion pieces. In addition to producing the written content, students gain skills in the areas of interviewing, photography, layout, design, and promotion.

The Family Myth: Skeletons in the Closet
This course draws on the theories of psychology and sociology to explore the concept of family through literature and film. In psychology, the family systems theory views the family as an emotional unit and uses the idea of a system to analyze the complex interactions of a family, which lead to intense and emotional connections. We explore how the idea of the family has been celebrated in American culture and how it has changed through the years. Readings encompass theoretical texts with companion fictional works. In analyzing the fictional works, students will use psychological terms and concepts to examine characters' motivations, actions, behaviors, and relationships.

Short and Shorter
The short story is an infinitely malleable, as well as relatively new, literary form. How have writers played with it since Poe penned his tales of the macabre and Chekhov observed the moral challenges of ordinary people? Short stories, according to John Edgar Wideman, are like the visible part of an iceberg, a piece of something larger that lies submerged. As such, writers experiment with how much to withhold, how short a story might

be, and what rules of traditional storytelling might be twisted or thrown aside to present a sharp, crystalline, mysterious experience. This class analyzes how short (and shorter) fictions achieve their goals as well as how to discuss stories that leave so much hidden. The readings will inform their work, as students try their own hands at crafting fiction.

Second Semester

Aesthetics and Politics: The Arts in a Changing World
Students in this course will explore the intersection of two enduring questions: What is art? How can we best live together? As they navigate these questions, students will examine the intentional and unintentional political implications of the arts around the world, across history, and in a range of political systems. Tragic, Classical, Romantic, Modern, and Post-Modern works of art will receive special attention, as will debates concerning traditional approaches to art in contrast to works that challenge artistic traditions. To gain a deeper understanding of the meaning of both art and politics, students will view paintings, photographs, and films; attend at least one theatrical production; read literature and philosophy; and listen to music. Assignments will include creative and analytical options.

Encountering the Other
From the earliest stories in the Western tradition, such as the tales of Odysseus finding himself washed ashore on one strange island after another, authors have explored those moments when a character encounters something new and strange. Whether through a door in a wall or a portal to an alternate reality, the points when characters and readers alike cross the line from the familiar to the unfamiliar provide a source of endless invention for writers. What do we expect to find? How might something new, in fact, reflect what we already know? In this class, we'll discover what these stories tell us about ourselves and our culture, how empathy moves us and fails us, and how our fears and assumptions trail us no matter where we go.

Publications Workshop
With this course's focus on writing and design, students are responsible for the production of our three major student publications: The Pebble Magazine, thePebblemag.com, and the MPH Yearbook. Subject matter for these publications is driven by student interest and includes a variety of genres, such as news stories, profile pieces, creative writing and opinion pieces. In addition to producing the written content, students gain skills in the areas of interviewing, photography, layout, design, and promotion.

Health and Wellness

At Manlius Pebble Hill, our students' health, safety, and well-being is our priority. Instruction on health and wellness is rooted in the interactions of the various components of each individual's life: social, emotional, physical, occupational, intellectual, and spiritual. In these course offerings, and across our academic curriculum and co-curricular programming such as Advisory, students learn about and reflect on the many factors that influence their health and wellness, including behavior, environment, relationship, decision making, critical thinking skills, and knowledge based on current research.

Course for Graduation Credit

First or Second Semester

(The semester this course is taken is determined when schedules are created.)

Health and Wellness 10

This course emphasizes the consequences, both positive and negative, of personal choices, decisions, and behaviors. Students learn about the impacts of controllable factors on long-term health and wellness, and they improve their understanding of the external influences on their ideas and opinions. The study of nutrition, exercise, sleep, hydration, reproductive health (including discussion and activities related to contraceptive methods and abstinence), stress management, and healthy relationships form the core of the course. As the course progresses, students gain an appreciation of how the health of the mind, body, and spirit reinforce one another. On occasion, speakers from health-related community agencies present to and facilitate the class. Students acquire CPR/AED certification through this course.

Required Course

First Semester

Upper School Seminar 9

Upper School Seminar aims to help ninth graders feel positively about themselves and live a healthy lifestyle while learning effectively in the Upper School. In doing so, it exposes ninth graders to the strategies, skills, habits, and mindsets that can help them gain more control over their Upper School academic experience. In this course, students practice and reflect on keeping track of and prioritizing assignments; planning ahead; exercising self-awareness as learners (metacognition); asking good questions and contributing to class; independently expanding their knowledge base; and recognizing their potential for growth. In once-a-cycle class meetings, a key point of emphasis involves redefining appropriate academic goals for Upper School students by giving more attention to the process by which they go about learning and less attention to specific outcomes.

History

The History Department prepares students to critically examine the human condition from pre-history to the contemporary world. We foster empathy and citizenship in our students, exploring individual and group identities through a myriad of views. A particular emphasis is placed on doing the work of a historian: research, analysis, criticism, perspective, narrative, and argument. To clearly articulate our understanding, we emphasize clear, concise historical writing, all to better understand contemporary socio-political issues. MPH History students engaged in the historical process, marked by an atmosphere of respect, become informed global citizens.

Courses for Graduation Credit

Ancient World History 9: Hubris in the Ancient World
This course examines major historical developments in selected regions of the world during ancient times through the conceptual lens of *hubris*. Broad conceptual components include the development and decline of ancient civilizations, states, and empires; the role of religion and philosophy in ancient civilization, and their impact on society; the development of technology and trade; and the exchange of cultural ideas and practices. To illustrate these concepts and enhance our understanding of the ancient world, four civilizations (two western and two non-western) will be examined in detail over the course of the year. The major forms of assessment are quarterly projects that focus on a specific historical skill (research, historical writing, textual source analysis especially primary sources), and a long-term annual biography project that combines all these skills. These major assignments are supplemented with smaller writing projects, note-taking exercises, and oral presentations.

Modern World History 10 or World History Intensive
Modern World History 10
This course explores the development of the modern world from the mid-fifteenth century to the present day, prioritizing a depth of understanding by examining case studies of major themes and eras. Primary assessment includes, but is not limited to, papers, historical fiction, short films, or performative presentations.
World History Intensive
This course prepares students to sit for the Advanced Placement World History Exam, which spans ancient and modern history. The course prioritizes the writing of AP-style argumentative essays, primary source document analysis, and the importance of building a broad body of knowledge.

United States History 11 or Advanced Topics in American Studies or Advanced Placement United States History
United States History 11
This course examines the pre-colonial period to modern times through a thematic format, with emphasis on key moments in American history and examining concepts such as fundamental American documents, the development of an American identity, American political systems, slavery, the growth of business, and America's role in the world in the 20th and 21st centuries. Students are expected to complete written papers of varying length, and to participate in class discussions, debates, and oral presentations.
Advanced Topics in American Studies
This course provides students with an opportunity to navigate US history through an interdisciplinary approach, examining the development of the United States through a social-cultural lens. While this course will investigate the social, political, economic and cultural trajectory of the US over time, it will do so using voices that have often been marginalized in the national story, such as women, enslaved Americans Native Americans, and immigrants. The readings of this course will include modern historical scholarship and primary sources, which will be supplemented with works of American literature, poetry, photography, and film. Students will have the opportunity to produce research-based historical writing, oral presentations, and documentary filmmaking, as well as engage in college seminar-style discussions of the texts.

Advanced Placement United States History
This course provides students with the deep analytic skills and content knowledge necessary to deal critically with the problems, issues, and events in American history. This course examines US history thematically, with an intensive focus on broad content coverage from pre-contact to the 21st century, while also including deep investigation of major issues and moments. In preparation for the AP exam, students learn to assess historical materials — their relevance to a given interpretive problem, their reliability, and their importance — and to weigh the evidence and interpretations presented in historical scholarship. To enhance this learning, college-style seminars are used to expose students to complex historical scholarship and have them examine these perspectives orally. This course emphasizes student-directed learning of the material, as one would expect in a college course.

Elective Courses

Full Year

Advanced Placement European History
This course prepares students for the Advanced Placement European History exam by combining the model of an intensive introductory survey course with that of a thoughtful and reflective college seminar. Students build a substantial body of knowledge on developments in European warfare, politics, philosophy, art and literature, and cultural and social change during the modern era. From a variety of angles, student analysis of key issues is supported by critical reading, class discussions, and argumentative writing.

First Semester

Abraham Lincoln's America
Abraham Lincoln lived during a period of rapid economic growth and social change in America. From the dawn of the Jacksonian period of Lincoln's childhood until the end of the Lincoln administration in 1865, discussions over slavery, abolitionism, women's rights, and territorial expansion took on consequential layers of significance. In this course, political and cultural topics will predominate, but we will also study social, military, diplomatic, and religious questions, and perhaps engage in some local history. Students will produce work in a variety of styles, from formal papers to more creative pieces, and the use of technology in graded work will be encouraged.

Dynamics of Political Leadership
This course employs an academic approach to understanding what makes great political leaders. While the course will look at political leadership across history, it will also take a more theoretical approach similar to a college political science course. The goal is not only to learn about great leaders that that have transcended history, but also to think more critically about the function of leadership in modern society. Beginning with a broad examination of leadership qualities, styles and the effect of political constraints, the course will then focus on the American presidency. With the 2020 presidential election, this is a fantastic opportunity to examine the American presidency in "real time," taking the analytical lenses we will develop to assess and evaluate the presidential candidates as they compete for the White House. After the excitement of the election, we will look at other leaders in other political systems around the world, before finally doing our own qualitative leadership analysis of a leader of your choice.

Global Citizenship
In the twenty-first century, networks of trade, information, and migration crisscross the globe. As a result, people make everyday choices that stem from and impact the lives of others in distant territories. Although national governments are responsible for official political decisions, globalization has politicized a host of

choices that stretch beyond the recognized borders of nation-states. This course examines the roles and responsibilities of the average person as a citizen of the world in the twenty-first century. Students will learn to inform themselves about global issues by using a variety of traditional and non-traditional media, and they will produce a diverse array of scholarship to convey their mastery of the course's skills and contents.

Macroeconomics
The economy as a whole is the subject of this course. Students learn the many ways by which we measure aggregate economic activity in the United States, with frequent comparisons to other nations. They study the business cycle and its effects from a historical perspective as well as with reference to current economic activity. Students also examine aggregate supply and demand, inflation, unemployment, the U.S. banking system, interest rate fluctuations, currency, and the creation of money in the banking system. An important topic in this course is the role that government plays in moderating the extremes of the business cycle through the administration of monetary and fiscal policy.

Model United Nations
This course allows students to represent assigned countries at Model United Nations conferences. To prepare for those conferences, the course has regular lessons on international economics and law, parliamentary procedure, public speaking, current events, political science, and research skills. Students are required to attend a specified number of local or regional conferences. In order participate in those conferences, students write resolutions proposing solutions to global problems, and they submit those resolutions for consideration at conferences. This course requires extensive research, refinement of ideas, and writing. MUN can be taken in multiple years.

Second Semester

Citizenship in America
The job of the United States citizen is no easy task. While democracy empowers us to freely discuss, advocate, and act, citizens must be informed and grapple with the responsibilities of political action. In the age of tweets, blogs, and polarizing media figures, we must navigate a colossal amount of information, discern its validity, and apply it to our own personal values. This course attempts to help students do just that. After a review of the workings of American democracy, students will examine critical, contemporary U.S. issues, and citizen participation at the local, state, and federal levels. An experiential component may provide opportunities to participate in activities ranging from working with veterans to challenging social injustice.

Entrepreneurial Studies
Entrepreneurial Studies is a challenging, experiential class that teaches entrepreneurship skills through hands-on scenarios. To foster core entrepreneurial skills like planning, communication, and decision making, students will participate in experiential projects connected with small, local businesses. As a capstone project, students will also work in teams to create a product and transform it into a sustainable business or non-for-profit organization.

Introduction to Psychology
This class will explore the many ways psychology influences our lives. We will explore the history of psychological thought, important figures in the history of psychological theory, and current modalities of clinical use. We will look at the ways psychology can be used in a variety of workplace settings. Guest lecturers will discuss their methods of counseling and class interaction will be an important aspect of this experience.

Microeconomics
How can an individual maximize his or her level of satisfaction? The study of microeconomics tries to answer this question by examining how individuals and firms make the most of opportunities in the marketplace. The foundation of this subject is the theoretical behavior of the individual consumer as an economic individual.

This course begins with the concepts of supply, demand, market equilibrium, and free trade. The course also discusses the individual firm's behavior in various market structures, such as perfect competition, oligopoly, and monopoly. The business firm's primary motivations, which include the maximization of profits, will receive some attention as well.

Museum Studies

Students enrolled in Museum Studies will learn the basics of museum curation through exploring the history of, and building a museum for, the Manlius Pebble Hill School. MPH has a rich history dating back to 1869, when it was established as a military academy. Many of our continuing traditions, including Red and White Day and the opening day Handshake Ceremony, began at our predecessor schools. Students new to the course will engage in the practice of history by identifying artifacts, conducting primary source document research, and alumni outreach. Returning students will continue with research but will also study museum design and other advanced topics. All students will then begin selecting artifacts around which to build the MPH narrative and continue the long-term project of building and maintaining a living museum for Manlius Pebble Hill. The course will have local field trips and, potentially, field trips to larger museums in cities on the east coast. Finally, we will be partnering with faculty from universities, and with alumni, to enhance of understanding of the field.

Mathematics

Manlius Pebble Hill math classes are multi-grade level to allow student to complete an appropriate three-year sequence of college preparatory mathematics. Most students take four years of math in Upper School. Whenever possible, we utilize a five-point approach to presenting material: numerically, algebraically, graphically, descriptively, and concretely (through an activity or with a picture). Teachers blend the best of traditional pedagogy with proven contemporary teaching practices, including frequent collaborative projects and open-ended investigative activities. Students are encouraged to take intellectual risks by raising questions and formulating conjectures using mathematical argument. As part of the School's support of writing for life, students are required to express mathematical concepts in clear, coherent prose in their math courses. Accelerated courses are designed for students who embrace conceptual challenges, function independently, and enjoy delving into problem solving.

Courses for Graduation Credit

Algebra 1 *Pre-requisite: successful completion of Math 8*

In this course students review traditional topics of algebra: solving equations and inequalities, linear functions and graphing, and rational numbers. New topics include systems of linear functions and inequalities, operations with polynomials, quadratic equations, and irrational numbers. The course pays special attention to algebraic manipulation skills, communication of ideas, and the use of the graphing calculator.

Algebra 1 AC *Pre-requisite: teacher recommendation required*

This accelerated (AC) course is offered to 7th, 8th, and 9th grade students recommended by their teacher. This course is for students who embrace challenges, function independently, and enjoy delving into how and why mathematical concepts work. Students pursue traditional topics of algebra: solving equations and inequalities, linear functions and graphing, systems of linear functions and inequalities, operations with polynomials, quadratic equations, rational and irrational numbers, and logic. The course devotes special attention to problem solving skills, written communication of ideas, developing the relationship between algebraic models and graphs, and the use of the graphing calculator.

Geometry *Pre-requisite: successful completion of Algebra*

The second course in this mathematics sequence introduces the student to geometric concepts. Students examine topics in plane geometry using algebra as a foundation for each unit. Euclidean geometry is introduced as an axiomatic mathematical model founded on postulates. Theorems and definitions are used to justify equations for solving problems focused on segments, angles, triangles, parallel lines, quadrilaterals, and circles. Activities are used to explore the properties of geometric shapes using hands- on explorations, including constructions with the compass and straight edge.

Geometry AC *Pre-requisite: successful completion of Algebra 1AC*

The second course in the accelerated (AC) mathematics sequence is offered to students who have successfully completed Algebra 1AC. This course introduces Euclidean geometry as an axiomatic mathematical model founded on postulates, and students experience its development through the proof, exploration of theorems and properties, and applications of algebra. Students focus on creating two-column proofs for triangles, parallel lines, quadrilaterals, and circles. Activities using the compass and straight edge are used to explore the properties of geometric shapes.

Algebra 2/Trigonometry *Pre-requisite: successful completion of Geometry*

This course stresses algebraic manipulations, problem solving, exploring rational, radical, and quadratic equations. Students continue their study of algebraic structures, including the real number system. The course begins the development of function theory. Algebraic manipulations involving whole number, integral and fractional exponents are examined. Trigonometric functions are introduced from the viewpoint of the unit circle and students explore their graphs and applications. The graphing calculator is used to explore and solve equations, to check solutions, to discover properties of functions, and to simplify calculations.

Algebra 2/Trigonometry AC *Pre-requisite: successful completion of Geometry AC*

This course stresses algebraic techniques, problem solving, and exploring rational, radical, and quadratic equations. Students continue their study of algebraic structures, including the real and complex number systems. The course introduces the theory of functions. Trigonometric functions are introduced from the viewpoint of the unit circle, then explored through graphs and applications. Exponential and logarithmic functions are introduced. The graphing calculator is used to solve and check equations, and to discover the properties of all the functions studied.

Advanced Courses

Meet 3 credit graduation requirement.

Pre-Calculus *Pre-requisite: successful completion of Algebra 2/Trigonometry*

This course is for those students who would like further practice with algebraic manipulations and the study of functions. Topics include a review of algebraic manipulations, linear and quadratic equations and inequalities, characteristics of functions, and manipulations with linear, quadratic and higher degree polynomial functions, rational, exponential, and logarithmic functions. The unit circle, right triangles, graphs, and applications of trigonometry are also studied. The calculator plays an integral role in discovering mathematical concepts.

Pre-Calculus AC *Pre-requisite: successful completion of Algebra 2/Trigonometry AC*

Pre-calculus AC builds on the skills developed in the accelerated Upper School mathematics sequence. It places a strong emphasis on problem solving. Sound manipulative algebra skills are necessary. Students analyze the relationships between numeric, algebraic and graphic representations of linear, quadratic, exponential, logarithmic, polynomial, rational, and trigonometric functions, along with the special characteristics of each function. The graphing calculator, Calculator Based Laboratory (CBL), various probes, programs, computer software, and applications provide a variety of ways to explore and create mathematics. Algebraic proofs are discussed to provide a greater understanding and appreciation of our mathematical system in preparation for Advanced Placement and college level math courses.

Advanced Placement Calculus AB *Pre-requisite: successful completion of Pre-Calculus AC*

Calculus allows us to analyze the behaviors of functions by relating limits to differentiation and integration. Using derivatives to describe rates of change of one variable with respect to another or using definite integrals to describe the net change in one variable over an interval of another, enables students to understand change in a variety of contexts. The relationship between integration and differentiation as expressed in the Fundamental Theorem of Calculus is a central idea in AP Calculus AB. Using definitions and theorems to build arguments and justify conclusions are a major emphasis. This course includes comprehensive preparation for the AP examination.

Advanced Placement Calculus BC *Pre-requisite: successful completion of AP Calculus AB*

The second year of calculus covers topics unique to the Advanced Placement Calculus BC curriculum and numerous applications of calculus. Topics include vector and parametric functions and their derivatives, polar coordinates, rigorous definitions of limits, advanced integration techniques with improper integrals, and an extensive treatment of infinite sequences and series. Using definitions and theorems to build arguments and justify conclusions are a major emphasis of the AP course. The course includes a thorough preparation for the AP Calculus BC exam, including a demanding review of Calculus AB from an advanced viewpoint.

Advanced Placement Statistics *Pre-requisite: successful completion of Algebra 2/Trigonometry*

AP Statistics focuses on the analysis of data with an emphasis on observing patterns in data and the departures from those patterns. Students produce models of data using regression analysis, probability, and simulation in order to anticipate and predict patterns beyond the measured data. They observe the normal distribution and learn how to mathematically describe variations from the norm. Students study the process of sampling and sampling distributions to produce a confidence interval and to make an inference about a population based on the sample. The binomial and normal distributions provide good models for inference. Students use several tests of significance to make inferences, including the "z," "t," and Chi-Square tests. The course includes a thorough preparation for the AP Statistics exam.

Elective Courses

First Semester

Explorations in Math *Pre-requisite: successful completion of Algebra 2/Trigonometry*

Students will dive into a variety of mathematical topics typically not covered in core classes. Topics include, but are not limited to, paradoxes, proof by induction, properties of infinity, and mathematical fluency. Additional topics may be added based on the mathematical interests of the students. At the end of the course, students are expected to research a topic of interest to present to the class.

Financial Algebra *Pre-requisite: successful completion of Algebra 2/Trigonometry*

In this introductory course to personal finance and decision making, students apply what they have learned about functions to understand income taxes, credit and debt, loans, banking practices, starting a business, car and home ownership, personal budgets, retirement planning, and the stock market. This course is designed to provide students a strong foundation in financial problem solving that will enable them to make informed decisions regarding matters of money and finance in their daily lives.

Probability & Statistics *Pre-requisite: successful completion of Algebra 2/Trigonometry*

This course offers a hands-on introduction to the study of statistics and probability. This course aims to give students an understanding of the main ideas of statistics, as well as useful skills for working with data and evaluating the results of studies. Topics include exploratory data analysis, experimental design, basic probability, and methods for statistical inference. Practical examples based on reliable data are used throughout the course. Students will plan and conduct experiments or surveys and analyze the resulting data.

Second Semester

Accounting *Pre-requisite: successful completion of Algebra 2/Trigonometry*

This course introduces students to the basics of financial accounting. Students learn the rules for tracking debit and credit as well as the structure and preparation of a General Journal and a General Ledger. The content of the course includes the preparation of a worksheet from which the students write a business's financial statements. Students study cash controls, the maintenance of a checking account, and various special journals to make the recording of repetitive transactions more efficient. Students prepare year-end adjustments, write the financial statements of a corporation, close the books at the end of a fiscal period and study payroll accounting.

Explorations in Math *Pre-requisite: successful completion of Algebra 2/Trigonometry*

Students will dive into a variety of mathematical topics typically not covered in core classes. Topics include, but are not limited to, paradoxes, proof by induction, properties of infinity, and mathematical fluency. Additional topics may be added based on the mathematical interests of the students. At the end of the course, students are expected to research a topic of interest to present to the class.

Innovative Math with Coding *Pre-requisite: successful completion of Algebra 1*

The TI-Innovator Rover helps introduce students to coding and robotics. The simple programming language is built into the TI-84+ graphing calculator and makes it easy to program the system, run it, and trouble shoot to correct or fine-tune performance. With the TI-Innovator Rover, students will roll over roadblocks to learning by experiencing – not just seeing – math. The physical representation creates an entry point to problem solving that connects math, coding, and movement. Students will learn basic coding and use their algebra and geometry skills to solve various challenges.

Performing Arts

The Performing Arts Department fosters an environment within the MPH community where students express themselves creatively through movement, music, and drama. MPH's student performers learn that creativity requires careful intellect, meaningful purpose, and thoughtful collaboration.

Every year we send performers into the community as members of All-County and All-State ensembles, and students have graduated from MPH to attend prestigious performance programs such as Juilliard, Boston Conservatory, NYU Tisch School, Eastman, Purchase College, and the Crane School of Music. Students taking part in our ensembles and programs move forward with an increased appreciation of the arts and fond recollections of their experiences here.

Courses for Graduation Credit

1 credit alone or in combination with Visual Arts.

Full Year

Music Theory
Music Theory is designed for those students who want to learn more about the inner workings of music. We explore the areas of rhythm, melody, harmony, notation, compositional technique, and analysis. Students are introduced to the rudiments of sight singing, and practice the aural skill of melodic, rhythmic, and harmonic dictation. An instrumental or vocal background and the ability to read music are required. It is strongly recommended that students in Music Theory also be enrolled in a performing ensemble. This is a core academic course and counts as one of the five core courses each Upper School student must enroll in per semester. Students enrolled in Music Theory also have the option to take the AP Music Theory Exam at the end of the year.

First and Second Semester
(Selecting 2 semesters of ensemble classes is preferred for continuity and development.)

Concert Chorale
The MPH Concert Chorale is an elective ensemble comprised of students in grades nine through twelve. Students rehearse and perform music of varying styles, languages and complexity, which they perform in concert several times a year. The Concert Chorale also performs at the annual Baccalaureate ceremony, and senior members of the group perform at Commencement. Students work to develop good vocal habits including good breath support, placement, intonation, diction, proper vowel formation, and blend. No prior singing experience is necessary for participation. Students are also given the opportunity to participate in the NYSSMA solo festival and audition for All-State and All-County Chorus. Students auditioning for these festivals are given additional vocal rehearsals in preparation for their audition.

Philharmonic Orchestra
Philharmonic is an opportunity to study orchestral literature while experiencing the joy and love of music. In the orchestra ensemble, students work together for a collective experience by appreciating and supporting one another's contributions. Philharmonic Orchestra offers students great variety and challenge in musical performance. Students will continue the advanced development of instrumental technique, music reading and comprehension skills, independent musicianship, style, critical thinking skills, and a deeper understanding of orchestral literature. In addition to performance skills, students will also study music theory and critical listening.

Students are encouraged to repeat this course in consecutive semesters and over multiple years to continue the development of both their overall musicianship and the orchestra as a group.

Wind Ensemble
Wind Ensemble is an instrumental ensemble featuring wind and percussion instruments. Members will rehearse and perform music in a variety of styles, while continuing the advanced development of instrumental technique, music reading and comprehension skills, independent musicianship, style, and critical thinking skills. The Wind Ensemble will study the art of instrumental balance, intonation, blend and musical style. This ensemble will perform at least two major concerts per year, in addition to impromptu performances for student audiences during the school day. Students are encouraged to repeat this course in consecutive semesters and over multiple years to continue the development of both their overall musicianship and the ensemble as a group.

Stagecraft
Stagecraft explores components of stagecraft for theatrical production (including scenery, lighting, costume, and sound) and how they are designed and utilized safely in the theatre. The course enhances the collaborative process of production through the planning, design, stage management, and stage crew support for MPH productions in the Coville Theatre. These productions include the MS and US plays, musicals, and dance concerts. This course may be taken more than once so that students can continue developing advanced skills.

First Semester

Dance Composition and Performance
This one semester course is designed for any student interested in exploring dance as a performing art and medium for artistic expression. The curriculum includes movement technique classes, improvisation, and the choreographic process, culminating with the Annual Student Choreography Concert. Student choreographers use class time to discover their own styles, develop choreography, conduct rehearsals, and engage in production planning. Students receive Performing Arts or Physical Education credit for this course. No prior dance experience is necessary for participation, and this course may be taken more than once so that students can continue developing their skills.

Second Semester

Dance History and Repertory
This one semester course introduces the legacies of great dance companies and choreographers of the 19th through 21st centuries. Students deconstruct and study historic original choreography, learning to recognize and understand the unique styles originated by dance icons. The semester culminates with the annual Repertory Dance Concert. Students receive Performing Arts or Physical Education credit for this course. This course may be taken more than once so that students can continue developing their skills. All students who study dance at MPH, the novice and the veteran, develop a high standard of theatrical production value, an understanding of the message of movement, and a critical insight into the art of dance.

Elective Course

Instrumental Lesson Program
The MPH lesson program continues the small group study offerings found in both the Lower and Middle Schools, allowing students an additional avenue for pursuing their interest in music and developing their individual technical skills. A minimum of four 30-minute lessons each quarter is required. Lessons are graded on a "Pass/Fail" basis.

Physical Education

The main point of emphasis of the Physical Education Department is to instill healthy, lifelong fitness habits in our students. The department is committed to providing the knowledge and tools necessary for all of our students to become lifelong learners in cutting edge physical fitness practices while finding physical activities that are not only age-appropriate, but activities that they actually enjoy performing and can regularly participate in well beyond graduation.

The Physical Education Department wants to ensure that all Upper School students have the chance to participate in activities that interest them. The school offers a range of physical fitness options for students to choose from in order to obtain the proper Physical Education credits that are required for graduation. Students can choose from a wide variety of sports, opt for a Physical Education independent study, or participate in a robust dance elective. In addition, students have the choice to do a combination of these options to meet the proper credit requirements.

Graduation Requirement

Each student is required to complete one credit per year, for a total of four credits, by graduation. Students have several options to meet this criterion during each academic year.

Options

Participate on Two Athletic Teams
The sports that are offered at MPH are boys and girls alpine skiing, boys and girls basketball, boys and girls cross country, boys and girls soccer, boys and girls tennis, boys and girls track and field, boys golf, and girls volleyball. In addition, we combine with other schools to offer boys baseball, boys lacrosse, and girls softball.

Participate in Dance
Students may take dance for an entire school year or for one semester when combined with another option.

Independent Study
Students can choose to pursue a physical activity or multiple activities of their choice to participate in outside of school. Examples of previous independent studies include gymnastics, martial arts, swimming, and rock climbing. Each student is required to document their physical activity with their Physical Education advisor throughout the course of each academic quarter.

Participate in a combination of two of the three options described above.

Science

The Manlius Pebble Hill Science Department believes students, in order to be informed members of our global community, must achieve a scientific literacy that enables them to weigh disparate ideas, facts, and opinions before making ethical decisions. Recognizing such competencies as a set of thinking skills, the department is committed to hands-on and inquiry-driven learning that allows students to experience the natural world first-hand. Rather than present facts about the world, the Science Department teaches students first to formulate questions from their own observations and then to answer their own questions in a systematic way.

At MPH, science is presented as an open-ended process. Opportunities are available for students to work both individually and as part of a team to develop the skills to test questions using the scientific process. That process involves researching a question, designing and carrying out an experiment, solving problems, analyzing data, drawing conclusions, and communicating findings. In this way, the study of biology, chemistry, and physics builds a foundation of lifelong learning.

Courses for Graduation Credit

Biology
Introductory topics include biological chemistry, cell biology, genetics, evolution, ecology, the diversity of living things, and human biology. Unifying themes stressed throughout the year are evolution, energy transfer, the relationship of structure to function, interdependence in nature, and regulation. Laboratory activities help students to understand that science is a process, and to develop important skills in scientific expression and qualitative and quantitative analysis. Biology challenges students to think critically in order to understand the larger significance of the details they are learning.

Advanced Placement Biology
Advanced Placement Biology is the equivalent of the general biology course usually taken during the first college year. Topics include biological chemistry, cells, energetics, heredity, molecular genetics, evolution, the diversity of organisms, the structure and function of plants and animals, and ecology. The course aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology. All students in the course will take the College Board Advanced Placement exam in biology. Prerequisites include the successful completion of Biology and Chemistry.

Chemistry
This introductory course covers the basic concepts of inorganic chemistry. The major units are: matter and energy, atomic structure, the periodic law, chemical bonding and reactions, stoichiometry, solutions, gases, and the reactions of acids and bases. The course encompasses both the conceptual aspects of chemical theories, and the application of mathematical formulas to the course concepts. Involving both quantitative and qualitative methods, laboratory exercises reinforce the course content and allow hands-on experience with each of the topics.

Advanced Placement Chemistry
This college-level course emphasizes chemical calculations and the mathematical formulation of principles. It also emphasizes the development of the students' ability to think clearly and express ideas with clarity and logic in essays, in calculations, and in oral communication. Topics include atomic theory, stoichiometry, thermochemistry, gas laws, kinetics, solution equilibria, qualitative analysis, acids and bases, oxidation-reduction, electrochemistry, and an introduction to organic and nuclear chemistry. All students will take the College Board Advanced Placement exam in chemistry.

Fundamentals of Physics

Fundamentals of Physics is a survey course of physics that emphasizes both a conceptual understanding of the material and a practical demonstration of knowledge through laboratory experimentation. Topics include motion, energy, properties of matter, thermodynamics, electricity and magnetism, sound and light. The history of physics and its impact on daily life provide the framework for the course, and the science behind everyday objects will be the focus of the labs. Some algebra will be used throughout the course. Enrollment is limited to students who will be concurrently enrolled in Algebra II/Trigonometry or the preceding classes. This one-semester course must be combined with Topics in STEM to fulfill the physics graduation requirement.

Physics
Physics is a rigorous, in-depth study of physical phenomena. The topics covered include vector analysis, mechanics, electricity, magnetism, waves, optics, heat, thermodynamics, and modern physics. Physical problem solving is emphasized throughout the course, and laboratory investigations reinforce concepts and develop analytical skills. Because the course is highly mathematical and requires familiarity with algebra, trigonometry, geometry, and graphical analysis, students must have completed Algebra II/Trigonometry or the equivalent before enrolling in Physics. Physics students must be concurrently enrolled in an advanced math class such as Pre-Calculus, Pre-Calculus AC, or AP Calculus.

Advanced Placement Physics C: Mechanics
The Advanced Placement Physics C course forms the first part of the college-level sequence that serves as the foundation in physics for students intending to major in the physical sciences or engineering. Strong emphasis is placed on solving a variety of challenging problems, many requiring calculus. The primary emphasis of Advanced Placement Physics C is on Newtonian mechanics. Use of calculus in problem solving, derivations, and in formulating principles increases as the year progresses. Topics include the laws of motion; work, energy, power, and conservation of energy; momentum; rotation and rolling motion; simple harmonic motion; and gravitation. AP Physics is taught as a first-year course; although prior enrollment in physics is not required, enrolled students must have the approval of the Advanced Placement Physics instructor.

Elective Courses

Full Year

Advanced Placement Physics C: Electricity & Magnetism
Advanced Placement Physics C: Electricity & Magnetism provides a thorough grounding in the laws of static and dynamic electric and magnetic fields. It forms the second part of the college-level sequence that serves as the foundation in physics for students intending to major in the physical sciences or engineering. Differential and integral calculus are used throughout the course. Topics include electrostatics, electric fields, Gauss's law, electric potential and potential difference, capacitance, Ohm's law, circuits, Kirchhoff's rules, sources of magnetism, Ampere's law, induction, Faraday's law, and Maxwell's equations. Successful completion of Advanced Placement Physics C: Mechanics and the instructor's permission are required to enroll in this course.

First Semester

Geology
Over the last 435 million years, nature's work has created an intriguing array of landscapes and topographic features in Central New York. Evidence of a saline sea, glaciers, and tectonic activity can be found throughout the area. Investigations of Chimney Bluffs, Labrador Hollow, Clark Reservation, Green Lakes State Park, and the Tully Valley exemplify the concepts presented in class. Significant group and individual projects are

expected. For final projects, students design and execute models of mastery regarding a specific content area of the course.

MSON Genetics & Genomics
This course will emphasize classic Mendelian genetics, molecular genetics, and population and evolutionary genetics. The topics include structure and function of genes (and the genome), biological variation, and regulation of gene expression. Subsequently, the course will explore current genome analysis methods, and genome manipulation technologies such as CRISPR. We will also discuss the implication of our use of this information in society. Topics include recombinant DNA technology, mathematical models, and statistical methods for data analysis. Papers from the current and classic literature will supplement lecture materials.

Second Semester

MPH Goes CSI – Forensic Science
Have you ever wondered how DNA can be manipulated to prove guilt or innocence? Did you know that lipstick left on a glass can be evaluated and then linked to a specific brand and, perhaps, person? Are you interested in learning how to lift fingerprints left on an object? This forensic course will apply some new and some well established lab techniques to the evidence left at a staged crime. The course is a series of experiments that lead a team of investigators to decide upon a possible perpetrator from a field of suspects. The final project involves solving a crime staged in the classroom with faculty serving as suspects.

Topics in STEM
Topics in STEM is an exciting course offered by the Science Department to students in their junior or senior year. This course can be an elective for students who want to explore their interests in science, technology, engineering and math. For students enrolled in Fundamentals of Physics, it forms the second semester of that course to meet the physics graduation requirement. All students design, implement, and present their own STEM-related projects. Throughout the course, students acquire or improve their problem-solving skills, critical thinking skills, collaboration skills, and communication skills. Previous projects include building a rocket that can be successfully launched, designing and building mini models of world monuments, and making a magnifying glass. This inquiry-driven and project-based course opens many pathways to scientific exploration.

Independent STEM Projects
The Science Department offers the exciting opportunity for students to continue the thread of independent science research started in Middle School through to their Upper School years. The Department designed a timeline and benchmarks to support interested students in their quest to complete independent STEM fair projects culminating with participation in the MPH and Central New York Science and Engineering Fairs. Interested students enroll in the third quarter class and meet on an as needed basis with a mentoring member of the Science Department. Over the years, participating Upper School students have enjoyed great success with their independent science research.

Visual Art and Design

The Visual Art and Design courses are built on a foundation of five key pillars that encourage students to be intelligent, independent, and creative thinkers and makers who are unafraid of creative artistic risk. Aspects of these pillars inform each class.

Intelligent and Technical Aesthetic Decision Making: Students are trained to create and understand technically strong and visually striking work, where craftsmanship is emphasized.
Understanding Their Creative Process: Based in metacognitive practices, students are challenged to understand, critique, and improve their actions and decisions during their creative process.
Articulate Visual Communication: Students learn to use Art and Design as modes of communication and to consider how and what their work communicates. Students strive to be articulate visual communicators.
Individual Experimentation: Student are provided with the encouragement, opportunity, and support to experiment and create based on their own interests, skills, and creative pursuits. They are encouraged to take creative risk, try something new, and play.
Community: Students are encouraged to be a part of the larger MPH art community and find peers who can help them further their artistic learning.

Courses for Graduation Credit

**1 credit alone or in combination with Performing Arts.*

First Semester

Introductory Courses

Introduction to Photography
This class introduces students to the basic technological, compositional, and editing skills necessary to be a successful photographer. Through a series of games, field trips, and photoshoots, students learn everything from shooting in manual and decisive moment, to influential photographers and designing a photo shoot. Students frequently collaborate with one another to generate ideas and craft photo shoots. The primary learning is centered around control of the camera, understanding of light, value and composition, collaborative skills, and building creative confidence. In addition, students gain a strong working knowledge of Adobe Photoshop. This is a very active class, and students will frequently engage in activities that require considerable movement. Students would benefit from access to personal cameras, but they are not required. This class is highly recommended as a basis to further studies in Art and Design.

Elemental Studio *Can be taken multiple times*
Elemental studio is a 2D (two-dimensional) intensive class that deeply dives into technical skills and idea generation. Through a series of exercises and projects, students build their speed, confidence, and quality of art production. The primary learning for Elemental Studio is the development of technical skills and an introduction to reflection. Students are provided with the opportunity to experiment with different mediums and materials. Major assignments are student driven with a significant element of critique and reflection. Students are introduced to the art elements, design principles, and post-modern art principles. This class is highly recommended as a basis to further studies in Art and Design.

Advanced Course

Advanced Portfolio Preparation *Can be taken multiple times as a Junior & Senior*

Students work with their instructor and their peers to develop a portfolio of work based on their particular interests and skill set. Students work heavily with creating work that explores a particular concept. The Portfolio Preparation class experience is specifically tailored to the individual student's goals and abilities. Assignments vary based on student needs and goals. Students will also have their work critiqued by college admissions professionals and university professors. Students will also travel to National Portfolio Day to gain insight and feedback on their work and creative process. The portfolio can be submitted to colleges or universities for Art and Design majors, or as a supplemental to colleges or universities for non-majors who wish to show colleges another aspect of their dedicated interests and abilities. Students may also enter their portfolio in competitions.

Second Semester

Introductory Courses

Art History

In a March Madness bracket-style competition, students will evaluate the work of pivotal artists. Students will learn about the biographies, art practice, and movements of each artist. The class is designed as an interactive experience that allows students to explore art history through games, lectures, and a competitive bracket. Students will understand the historical and stylistic implications of the artists and their movements by analyzing and interpreting works of art through the lens of the artist and the time period in which they lived. In addition, students will compare and contrast the brackets of art and the different art movements to encourage a deeper understanding of how different types of art came to be.

Introduction to Design

Students are introduced to the basics of design and design thinking. Students are challenged to creatively solve problems and create useful or desirable products. Students work collaboratively as a design team to find and solve unique problems with the end user in mind. Students do everything from build a boat, to walk on water, to design and sell t-shirts. The primary learning is rooted in design thinking and collaborative problem solving. This is a very active class and students will frequently engage in activities that require considerable movement and collaboration.

Advanced Courses

Advanced Studio Concentration *Can be take multiple times*

Advanced Studio provides opportunity for students to experiment with different mediums and test different ideas in an environment that supports experimentation and creative risk taking. This class is independently driven, and assignments differ by individual based on particular student needs. Students will engage in a series of exercises to further develop reflection, idea development, and experimentation. In addition, students are challenged to consider not only how their work is made, but how their work is experienced. Students will engage in "Coffee and Conversation," a salon style conversation that offers students the opportunity question the larger artwork. Primary learning is centered heavily in reflection on work, process, and creative risk taking.

Photography 2 *Can be taken multiple times – Pre-requisite: Introduction to Photography*

Photography 2 builds on the foundation of Introduction to Photography. Students dive deeper into camera control, editing, controlling the quality of light, and photoshoot design. In addition, students will learn studio lighting, how to use professional grade equipment, and how to measure light to make the best aesthetic decisions to fit your idea. The class will also create larger photographic series with an emphasis on both concept and technique. Students will practice careful editing and have ample opportunity for creative experimentation. This is a very active class and students will frequently engage in activities that require considerable movement. Students would benefit from access to personal cameras, but they are not required.

World Language

At MPH, we believe that proficiency, and ideally, fluency, in a world language is the gateway to global citizenship. We value the study of languages not only for the immediate practical benefits, but also for the way in which learning a new language enables the student to learn a new culture, and thereby see their own more clearly. MPH offers instruction in French, Latin, Mandarin Chinese and Spanish. Students often pursue their language of choice through the Advanced Placement level, and many also take advantage of our international travel and immersion programs.

Small classes are essential to MPH's excellence in language instruction. Students are immersed in the cultural products of the countries whose language they are studying. They may do as the Romans did, prepare a Spanish meal, read a French magazine, or watch a Chinese film. Because the study of a world language entails a progressive acquisition of linguistic skills, our program is intentional in its vertical articulation. Our students' progress over time from beginners to truly fluent speakers and connoisseurs of the culture, and many choose to master more than one language.

Graduation Requirement

Every student must take at least three years of a world language in the Upper School and complete one language to Level III (or its equivalent). These graduation requirements are supported by level 1 – 4 instruction in French, Latin, Mandarin Chinese and Spanish.

Advanced Courses

French

French IV – Pre-AP
This course is for students who have completed French III successfully and want the preparation needed for AP French Language and Culture. With practice in advanced composition and conversation, students develop ease in oral and written expression through expanding advanced vocabulary, refining pronunciation, and practicing grammar concepts. Students will learn vocabulary, idioms, and colloquial language that appear in current French publications, ads, newspaper and literary excerpts. Extensive oral practice of verb tenses, moods, and grammatical structures improves students' ability to use them naturally and at a normal speaking rate. The course will focus on current events in a historical perspective. Some of the topics include medicine, technology, discrimination, education, culture and the world heritage, peace and war. Throughout the course the students will analyze, compare, agree, disagree, organize, and argue.

French Theater, Cinema and Culture
This class is for students who have successfully completed French III or above and want to develop their mastery of spoken French in a relaxed and friendly atmosphere. In this conversation course, students will learn about French history and culture from the Middle Ages to the present, read and discuss excerpts of francophone literature, and watch films that illustrate our class conversations. A series of important historical developments (including The Crusades, the French Revolution, and industrialization and consumerism) will be the backdrop for the literature and cinema we will explore together. This course does not prepare students for AP French Language and Culture.

Latin

Advanced Latin Literature
The Advanced Latin Literature course is set up to complete the entire required reading list as shown in the old *AP® Latin Literature Course Description* and it will follow the syllabus for the Latin Literature Advanced Placement Exam given by The College Board at (apcentral.collegeboard.com). Students review Latin grammar and develop skills in reading Latin passages from Catullus' and Horace's lists of works. Skills include the ability to translate, analyze, interpret, read aloud, and scan the meter appropriate to the text. The course places a strong emphasis on the historical, social, cultural, and political context of Catullus and Horace. Also, students learn how Latin literature has influenced the art and literature of the modern world and culture.

Ancient Greek
Ancient Greek introduces students to the rudiments of Attic-dialect grammar, syntax, vocabulary, and accents of Greek words. Class time is spent on the explanation of grammar, short practice exercises, translation from Greek to English and from English to Greek, and on the discussion of student work. The course uses the reconstructed pronunciation and devotes additional time to the study of Greek culture. Students must have completed Advanced Latin Literature or receive permission of the instructor.

Mandarin Chinese

Introduction to Mandarin Chinese
Introduction to Mandarin Chinese develops the students' basic communication ability by learning language structures, functions and related cultural knowledge as well as by training their listening, speaking, reading and writing skills. This course focuses on the beginning level proficiency in phonetics, characters, basic daily life conversations and grammar. Classes consist of a variety of activities including classroom lecture and practice, cultural enrichment activities, multimedia presentations and field trips.

Advanced Mandarin Chinese
The Advanced Mandarin course is aimed at helping students express themselves with longer and more complex sentence structures. Students will build on interpretive modes of communication developed in the previous year and practice accessing those skills in personal and professional environments. The topics we cover will overlap with standard materials and course outcomes seen in the AP Chinese curriculum, which focuses on cultural perspectives, linguistic knowledge, and exposition. By the end of the course, students will be able to write in a short essay format and speak in a 2-3-minute presentation. Students should be able to take the HSK level 3 test at the end of their 4th year of study.

Spanish

Spanish IV – Pre-AP
This course is for students who have completed Spanish III successfully. With practice in advanced composition and conversation, students develop ease in oral and written expression through expanding vocabulary, refining pronunciation, and practicing grammar concepts. Students learn vocabulary word groups that reflect the interests of the class members, as well as vocabulary, idioms, and colloquial language that appear in current Spanish publications. Students refine pronunciation by developing a command of the allophones of Spanish and their distribution. Extensive oral practice of verb tenses, moods, and grammatical structures improves students' ability to use them naturally and at a normal speaking rate. Students also read two modern Spanish dramas.

Spanish Theater, Cinema and Culture
This course is for students who have successfully completed Level III or Seniors who have completed Level IV. The class is conducted entirely in Spanish. Students strengthen their conversational skills by watching and discussing movies and plays from Spain and Latin America. Students will learn idiomatic expressions as well as current slang. We will discuss the current issues and trends of the Spanish-speaking world, and we will also

discuss technology and its effect on traditions. At the end of the year, students will work together to plan, write, and produce their own movies.

Advanced Placement Spanish Language and Culture
The AP Spanish Language course is designed for fifth-year students who have demonstrated proficiency in grammar, composition, and conversation. The course prepares students to comprehend formal and informal spoken Spanish, to acquire vocabulary and a grasp of structure, to allow the easy, accurate reading of newspaper and magazine articles as well as modern literature in Spanish, to compose expository passages, and to express ideas orally with accuracy and fluency. Course content reflects intellectual interests shared by the teacher and students (the arts, history, current events, literature, sports, etc.). A personal tape recorder with a built-in microphone using standard size tapes is required. Materials include recordings, films, newspapers, magazines, grammar texts, and works of literature.

Elective Course

Second Semester

West Meets East: A Comparative Cultural Perspective
This survey course on East Asia introduces students to regional culture, economics, and politics. Students will learn through comparative case studies, reflecting first on what they know about their own customs and values, and then applying those insights to examine the traditions and aspirations of people in China, Japan, and South Korea. Our case studies will contrast many terrains – including the hip (American vs. Korean pop), the lucrative (Amazon vs. Alibaba), and even the savory (burgers vs. sushi) – and our discussions will aim to build bridges by focusing on commonalities in language, markets, and geography. This course does not have any prerequisites, but students with a regional language background are encouraged to enroll.